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**Preservice Teacher Action Research:
Making Meaning and Generating Knowledge Through Inquiry**

A DISSERTATION

Submitted to the Faculty of
Montclair State University in partial fulfilment
of the requirements
for the degree of Doctor of Philosophy

by

Rachel Ginsberg

Montclair State University

Montclair, NJ

January 2022

Dissertation Chair: Dr. Monica Taylor

MONTCLAIR STATE UNIVERSITY
THE GRADUATE SCHOOL
DISSERTATION APPROVAL

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Making Meaning and Generating Knowledge Through Inquiry
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Graduate Program:
TETD

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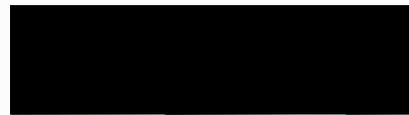


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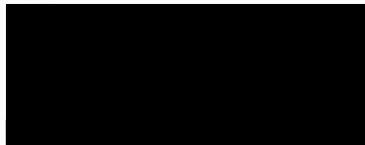
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Dr. Jeremy Price

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Abstract

This qualitative study, situated in a large state university, investigated how the experiences of preservice teachers conducting action research in their full-time clinical placements as part of a seminar course in a teacher education program fostered a critical teacher inquiry stance. I examined how action research allowed preservice teachers to generate personal and educational knowledge and how their inquiry influenced the ways in which they thought about how teachers make meaning and generate knowledge. Using critical teacher inquiry as a framework allowed a critical lens that prioritized the need and importance of viewing teachers' inquiry in the classroom as a means of disrupting both the structures that uphold inequity in the classroom and pushing back against the hierarchy that values scholarly generated knowledge over teacher generated knowledge for education. The findings of the study supported the notion that action research is a valuable vehicle for preservice teachers to enact, develop, and make meaning of their classroom inquiries and a means by which to develop a critical teacher inquiry stance. Participants experienced a change in their relationship to knowledge and reconsidered the ways they approached their teaching, student learning, and their role in generating knowledge for education. Additionally, action research supported relationship strengthening and building between preservice teachers and students. Finally, this study extended the call to arms to include not only teachers, but preservice teachers, along with university scholars, as the driving force behind knowledge generation, innovation, and improvement in teaching and learning.

Keywords: action research, critical inquiry stance, generating knowledge, inquiry, meaning making, preservice teachers

Acknowledgements

To my participants, who began as my students and ended as my teachers, thank you for generously giving of your time to share your experiences, insights, thoughts, and wonderings with me. The experiences you shared were rich, astute, and provocative, which allowed me to arrive at findings that are dear to my heart and worthy of disseminating in this dissertation. Your confidence in me was humbling, your encouragement was priceless, and your time was invaluable. Thank you for sharing so much of yourselves with me.

My work at Montclair State University was guided and influenced by my advisors and mentors' consistent and nurturing hands, Dr. Monica Taylor, Dr. Emily Klein, and Dr. Jeremy Price. Each of you played a pivotal role in my journey, from the self-study on *Inquiry as Stance* I conducted with Dr. Price during my first summer in the TETD program, to Dr. Klein's generous offer allowing me to teach my first course as an adjunct professor in the undergraduate education program, to Dr. Taylor's incredible mentoring throughout my course work and dissertation. You have all supported me, guided me, challenged me, and helped me develop as an educator and person. Simply stated, there is no universe in which I could have completed this journey without you all, my gratitude is overflowing and unending.

In one of my first courses in the TETD program, I was asked to write about my thoughts on teacher quality, reflecting on some of the teachers I had over my lifetime. In the assignment I shared:

For me, she was the definition of what quality teaching looks like, sounds like, acts like, and feels like. She was the full package, the real deal, when it comes to the discussion of teacher quality. She was an expert in her field with a deep knowledge base in her content area and her pedagogical approach aligned with a student-centered, inquiry based,

democratic approach to learning. She was passionate about her content area, she lived her values clearly in her personal and professional life, she motivated her students to pursue their passions, and she encouraged and respected independent thought and questioning. And, she was one of the kindest, most caring, understanding, nurturing, compassionate, and supportive professors that I have ever had the opportunity to work with. She made us all want to be better teachers, professionals, and people. She was and still is the bar against which I measure all other teachers. Her work defines good teaching as well as successful teaching for me. (Personal Assignment, pp. 7-8)

Dr. Taylor, this excerpt was written about you after I was your student in TETD 804. At the time, the professor commented that he hoped I shared this with the teacher about which I was writing. I knew then that I would share this with you at the end of my dissertation, as it encapsulates everything that makes you, you. Thank you for everything you have done to help and support me in getting to this point, you are a dear teacher, mentor, and friend.

A tremendous thank you is owed to another dear friend, Dr. Barbara Listhaus. She generously shared her office space with me, allowing me a quiet respite to run away to during the dark days of Covid, as I was writing this dissertation. Getting out of my house, eliminating the distractions, and being able to focus on my work all got me through this long and arduous process. Barbara, your example of kindness, generosity of spirit, and open-heartedness has taught me so much, I will always and forever be grateful to you.

Friends are the family we choose, and I chose well. The overwhelming support and encouragement my “girlies” offered throughout every stage of this dissertation buoyed my spirits when I was struggling and built my confidence when it was teetering. You all know and

understand more about action research than you ever imagined you would, as you listened to the details of my work. Being loved and supported by all of you is a gift I treasure every day.

And finally, to my family, who never doubted I would arrive at this point. Your faith in me was endless, you believed in me from day one, which helped me believe in myself. Thank you for all the groceries, clean up, carpools, and errands you did to free me up to work. Thank you for your understanding when I was stressed with deadlines, and your compassion when I had none left for myself. But most of all, thank you for your unconditional love that sustains me every day and your reassurance that inspired me to complete this dissertation. You are the air I breathe, you are my world, and there is nothing I hold closer to my heart than you all. Daddy's fourth baby was Chester, mine was this dissertation, thank you for walking every step of the way with me. And always know, life is about constantly reinventing who we are, growing, challenging, improving ourselves, and moving forward, never get stuck, there are too many possibilities out there for you.

Dedication

This dissertation is dedicated to my parents, Jacob and Deborah Hiller, who always instilled in my dear sisters and I the belief that we could accomplish anything we put our minds too, even becoming a doctor. Well, you were right, and I did! I love you and am grateful for your example of how to love unconditionally, give wholeheartedly, support with uncompromising loyalty, and put good into this world. You are the models we shape our lives after.

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Chapter 1: Introduction

Within the educational field, a longstanding hierarchy exists between knowledge generated by educational scholars and academics and knowledge generated by practicing teachers. Traditionally, research and knowledge produced by university scholars are privileged over teacher research and inquiry as the source of educational knowledge (Cochran-Smith & Lytle, 2009). Like Cochran-Smith and Lytle (2009), Britzman (1991) held that from the university perspective, “the work of teachers is viewed as technical rather than intellectual” (p. 39). Furthermore, Britzman asserted that there is a commonly held view among universities that teaching is only secondary to scholarly work, which is considered the real work in education. This view established the production of educational research and theory as a site of struggle between scholars and teachers. Rethinking this hierarchy and the hegemonic hold universities and scholars have over educational knowledge has the potential to alter the relationship of knowledge, power, and practice in the field of education as it suggests a new, valued, and unique way of knowing about teaching (Cochran-Smith & Lytle, 2009). Cochran-Smith and Lytle asserted that teacher inquiry and practitioner research serve to establish classroom teachers as “brokers of knowledge and power” (p. 86), repositioning them as generators of knowledge as opposed to recipients of university generated knowledge. They predicted teacher research to be a source of conflict, as disenfranchised teachers shift themselves into the role of knowledge generators, making decisions about how that knowledge should to be interpreted and applied.

Within this study, I argue that teacher education programs should play a part in the disruption of this knowledge hierarchy through a shift away from traditional approaches to teacher education towards an approach that positions preservice teachers as knowledge generators. Teacher education programs should seek, value, and integrate knowledge generated

by preservice teachers in their local contexts into the coursework and requirements of their programs. Preservice teachers need to experience the productions of knowledge and learn to value the meaning they construct for themselves if we hope to see classroom teachers position themselves as problem posers and generators of educational knowledge alongside, not subordinate to, scholars and universities. This kind of transformative experience enables preservice teachers to envision themselves as leaders, setting them on a course to becoming activists who advocate for a moral and equitable education for all students.

Conducting action research is one way teacher education programs can create opportunities for preservice teachers to inquire into their teaching, construct personal meaning, and generate knowledge about teaching and learning. Incorporating teacher inquiry in the form of action research into teacher education programs helps preservice teachers develop the agency to push back against established boundaries, power differentials, and constructs of knowledge embedded in teaching and learning. Furthermore, conducting teacher inquiry serves to disrupt and alter the current wave of deprofessionalization gripping the field of education, as it restores the control over classroom decisions back into the hands of teachers who are equipped to systematically identify and solve the daily problems of practice they encounter in the classroom.

Background

In my early career, I taught in an elementary classroom for over 15 years. As I grew in my practice, I was frustrated by problems to which I did not have solutions. As I inquired into different areas of classroom life, seeking out opportunities to systematically investigate various problems of practice, I began to view my work through a new lens and developed the agency needed to meet the needs of all my students, supporting them as they worked through issues they encountered in various realms of their academic, social, and personal lives. When I shared my

inquiry with colleagues, their desire to inquire into their problems of practice was evident. We developed a community of teachers who systematically and intentionally inquired into our teaching practices together. This investigation not only energized and sustained me, it kept my teaching generative and inspired, as it opened up a new way of knowing and learning about the complex, incredibly messy, and non-linear dance of teaching and learning.

Throughout my experience in the classroom, I produced an extensive canon of knowledge through teacher inquiry and reflective practices. My work as a classroom teacher inspired me to become a teacher educator, wanting to share my experiences and the resulting wisdom of practice generated over my years in the classroom. In line with Dewey's (1938b) notion that "all genuine education comes about through experience" (p. 25), I believe that my work and experiences as a classroom teacher were educative in nature for myself and potentially for other educators.

Like many researchers, it was only in the process of thinking about my personal connection to teacher inquiry that I came to understand how much my experience influenced my choice of research topic for my dissertation. In their article on emotional work within qualitative research, Dickson-Swift et al. (2009) posited that often researchers draw on life experiences, particularly issues that are left unresolved or remain problematic, when setting a course for research. In questioning from where my interest in teacher research stemmed, I realized that teacher inquiry is something I felt was missing in my work as a classroom teacher. Upon reflection, I understood why I held a very specific positionality regarding my research, that of champion and proponent of teacher inquiry and research and the belief in the positive potential that incorporating the teacher inquiry experience into teacher education programs holds. As I wrote in my research journal:

I also believe I had authentic knowledge to add to the field. I could have contributed my wisdom of practice in different ways. I did it in taking leadership positions, mentoring new teachers, but I could have pursued practitioner research if I knew more about it.

(Reflective Journal, 9/19/19)

I can hear the regret in my words, having missed out on the opportunity to pursue teacher research, because I was not exposed to it in my teacher education program and did not have any knowledge about it as I grew in my career. My missed opportunity created a desire to help preservice teachers seize the opportunity through the incorporation of action research into the work I am doing with preservice teachers. In this sense, my research stance was an enactment of Dewey's (1938a) theory of experience, highlighted in my research journal by the statement, "There are traces of our previous work in everything we do" (Research Journal, 9/15/19).

Exploring Action Research

The purpose of this study was to investigate and build understanding of the roles teacher research and inquiry play in preservice teacher education and how teacher inquiry, in the form of action research, supports knowledge generation and meaning making of preservice teachers. Action research is defined in a variety of ways, depending on the different traditions and approaches in teaching or various contexts; however, for the purposes of this proposal, I define action research as a "form of self-reflective inquiry undertaken by participants in a social setting in order to improve their own practice, their understanding of these practices and the situations in which the practices are carried out" (Zeichner, 1987, p. 568). Within the education field, action research is a systematic investigation by practitioners into their teaching for the purpose of understanding or improving practice (Dodman et al., 2017; Lattimer, 2012; Levin & Rock, 2003; Ulvik & Reise, 2015). This methodology involves a series of iterative inquiry cycles, beginning

with the identification of a question or concern. Data are gathered to inform a planned action which is enacted and observed. Reflection follows to understand the impact of the action and finally, meaning is made from the experience and applied to the next inquiry cycle (Faikhamta & Clarke, 2015; Kennedy-Clark et al., 2018; Lattimer, 2012). Echoing Kennedy-Clark et al. (2018), action research has two key tenets—addressing localized problems through the construction of practical outcomes and developing new understandings. Action research attempts to try out ideas in practice with the goal of constructing knowledge and improving practice (Hansen & Nadler-Godfrey, 2004).

Teachers who are students of their craft, who spend their careers in pursuit of questions that arise in their classroom, in their teaching, and in their interactions with students, are teachers who create environments where students can thrive. I hold the belief, grounded in Dewey's (1904) notion of teacher inquiry, that teachers can learn from their own experiences far more effectively than from any textbook or article they read. Action research was incorporated into teacher education curriculum as a tool that enabled and supported the development of the mental habits of reflection and "self-monitoring" (p. 119) in preservice teachers to build capacity to learn from their teaching experiences and improve their practice throughout their careers (Gore & Zeichner, 1991). The inclusion of action research into students' clinical work is aimed at helping preservice teachers develop "further as reflective, serious practitioners who view themselves as agents for change for the betterment of public education" (Syllabus for Advanced Seminar in Inclusive Pedagogy, Montclair State University, 2019). Action research asks preservice teachers to examine challenging classroom experiences in the hopes of learning from their own experiences, creating learning opportunities embedded in their personal experiences and contexts and requires preservice teachers to bring to bear their sense of curiosity, wondering,

and critical questioning of their experiences, their world, and how they exist in it in order to act upon it. I posit that action research in teacher education programs can support preservice teachers in the development of a new way of knowing and thinking about teaching and learning that can improve teaching practice and contribute to and expand the field of education.

The goals for incorporating action research into preservice teachers' experience are many. The first goal was to cultivate and support the development of an inquiry disposition in preservice teachers. As Hinchey and Konkol (2018) posited, "The work of the classroom is to explore real world problems that students identify in their own experience and to devise strategies to alleviate them" (p. 72). This concept aligned with the work undertaken in action research. By exploring the real problems faced in clinical placements, preservice teachers developed their inquiry muscle, their desire to question and confront, and their need to change and improve. Action research helped preservice teachers construct the habits of the mind to question, research, and look for solutions to the problems they encounter in their classrooms.

The second goal of incorporating action research was to support preservice teachers in building the skills they need to make meaning of their experiences, to learn from them, and to exact educational knowledge from them. Action research in preservice education illuminated the ways in which preservice teacher experiences can lead to contributions and support of colleagues, help them bridge theory and practice, extend educational theory, and add to education knowledge and understanding. Britzman (1991) argued, "That student teachers rarely have the space and official encouragement to consistently theorize about their lived experience further distances theory from practice and diminishes student teachers' capacity to theorize about the sources of their pedagogy" (p. 49). Including action research in teacher education curriculum intentionally provides preservice teachers with the space and authority to theorize about their

experiences and build the skills needed to help them make meaning and learn from their experience.

The third goal was grounded in the desire to have preservice teachers experience inquiry and exploration as a fundamental learning pedagogy. It is an opportunity to enact “problem-posing education” (Freire, 1970) so preservice teachers can experience, from the student perspective, the opportunity to learn through personal problem-posing. If students do not experience inquiry-based education, how can we expect them to bring it to life in their own classrooms? Action research creates room for instructors to model the type of democratic pedagogy preservice teachers will hopefully attempt as they move into their own classrooms and schools. Waff (2009) advocated for this type of teacher education when she pointed out, “Unless teachers experience something other than the banking model of education in their own learning, they cannot create educational environments that foreground inquiry and exploration as key learning processes” (p. 323).

Lastly, action research arms teachers with the skills and disposition necessary to bring about change in themselves, their classrooms, and their schools. Freire (2000) echoed these goals in his discussion on teacher education, suggesting that, “To learn is to construct, to reconstruct, to observe with a view to changing” (p. 67). What the quote alluded to is the need for preservice teacher to develop agency. For that to occur, preservice teachers need to “emerge from their unconscious engagement with the world, reflect on them, and work to change them” (Dimitriadis & Kamberelis, 2006, p. 122). Freire (2000) argued that preservice teachers must not simply focus on acquiring skills but also developing and maintaining a critically reflective and politically engaged awareness in order to educate every child they teach.

Through my dissertation study, I attempted to “name the world differently” (Apple, 1996, p. 21), as I contended that knowledge generated in the classroom by teacher practitioners is as valuable, reliable, authentic, and powerful as the knowledge generated at the university level. Thus, my research attended to the incorporation of teacher inquiry through action research in teacher education programs in the hopes of empowering our next generation of teachers to see the possibilities in their teaching, in their ways of knowing and learning about education, and in their ability to transform and disrupt existing hierarchies that define educational knowledge production.

By exploring the experiences of preservice teachers engaged in action research, I learned how the action research experience influences preservice teachers’ understanding of teaching and learning. This study was guided by the following overarching research question: How does the experience of action research for preservice teachers foster a critical teacher inquiry stance? More specifically, I was interested in understanding how action research influenced the ways in which preservice teachers thought about how they made meaning and generated knowledge as teachers. Furthermore, I sought to develop an understanding of how action research allowed preservice teachers to make meaning and generate knowledge for themselves and the educational field.

Problem Statement

There are two overarching problems related to teacher inquiry that speak to the importance of this research. The first problem is situated within the dichotomy and structures of power that validate scholarly knowledge while devaluing teacher knowledge. In the current educational landscape, knowledge is disseminated to teachers from scholarly research in universities. Lytle and Cochran-Smith (1992) supported this claim when they posited that,

“knowledge that makes teaching a profession comes from authorities outside of the profession itself” (p. 449). Adding to this argument, Villenas (1996) described the ways in which researchers who do not question their own privilege and assume their own authority objectify their research subjects and colonize those they research. University scholars are the gatekeepers and generators of knowledge, knowledge which is often inaccessible to those who the research is purported to support. Teachers are expected to be the consumers of academic and scholarly knowledge; however, they are excluded from opportunities to generate that knowledge, the very knowledge used in their teacher education courses and the teaching profession (Villenas, 1996). In this way, some university researchers are complicit in the colonization and marginalization of teachers, and the domination of research for education.

The power differential between university scholars and teachers is a problematic structure that requires investigation and ironically, research. As an academic researcher, I realized that I was both part of the problem and possibly part of the solution. I stood with a foot in both worlds, crossing the boundaries, wanting to simultaneously disrupt this power differential while contributing to it. I related to the tension articulated by Villenas (1996), in feeling like both the colonizer and the colonized, a tension I come back to later in this study.

The second overarching problem is the effects of the neoliberal agenda and policies on the teaching profession. In our current political climate, fueled by neoliberal ideology, the paradigm of student-centered education is being eroded as a result of a climate of accountability stemming from No Child Left Behind (NCLB, 2002) and the scrutiny of teacher quality that permeates our educational landscape (Sleeter, 2019).

Tracing back to *A Nation at Risk* (Gardner et al., 1983), the goal of education has shifted to preparing highly skilled workers to meet the new demands of the current global economy, in

the hopes of keeping America economically competitive on the global market. Since the late 1990s, neoliberal educational policies worked to create competition to achieve this goal, through the privatization of education with increased choices, better educational opportunities, and lower costs (Dumas, 2016). Much in line with the messages of *A Nation at Risk* (Gardner et al., 1983), neoliberal discourse views education from a business model perspective, framing schooling as a “private commodity rather than a public good” (Sleeter, 2019, p. 232). According to neoliberal ideology, the goal of private business is to maximize profit and when applied to education, the goal is to maximize student test scores to remain competitive in our new global economy (Sleeter, 2019). The main goals of neoliberal policies are the primacy of preparing workers for the economy, the reconfiguring of public education to the private for-profit sector through deregulation, and the redistribution of wealth to the ruling class (Zeichner, 2010).

During the late 1990s, U.S. states established content standards and developed curriculum that correlated to new testing measures (Sleeter, 2019). Under the Obama administration, the standardization of curriculum intensified with the emergence of the Common Core State Standards (National Governors Association Center for Best Practices & Council of Chief State School Officers, 2010). The Common Core State Standards codified U.S. curriculum and regular testing measures were established to evaluate mastery of this standardized curriculum. Simultaneously, as the neoliberal agendas of the late 1990s took hold, student test scores drove the evaluation of teachers, literally calculating teachers’ worth through a “value-added model” scoring system (Darling-Hammond et al., 2012). Ball (2010) argued in her discussion of performativity resulting from the neoliberal policies attempting to deregulate education, that what appears to be policies of deregulation are simply “processes of re-regulation” (p. 217), in which teachers are under a new form of control, where they are, “encouraged to think about

themselves as individuals who calculate about themselves, ‘add value’ to themselves, improve their productivity, strive for excellence and live an existence of calculation” (p. 117). According to Sleeter (2019), with this intense pressure, teachers shifted back to a paradigm of “test-driven teaching” (p. 232) in the hopes of protecting their jobs and substantiating their value.

The neoliberal standardization and accountability movements led to the deskilling of the teaching profession, repositioning teachers as technicians, complying with prescribed curricula, obsessive oversight, and constant quantifying of student achievement (Ball, 2010; Britzman, 1991; Sleeter, 2019). It changed the current teaching culture to one characterized by performance and competition rather than collaboration and professional judgement.

This standardization movement affected teacher education as well, with the introduction of the Educative Teacher Performance Assessment, or the edTPA (edTPA National Conference, n.d.) as a lever in teacher certification and licensure. Teacher education departments are now concerned with how preservice teachers perform on the edTPA, incorporating supports into coursework, curriculum, and hiring staff to support preservice teachers as they work towards success on the assessment.

As an adjunct professor in the Department of Teaching and Learning at Montclair State University, I struggled to mediate the classroom space to both meet the needs of the preservice students as they prepare for this consequential and intimidating assessment, and to safeguard our shared learning space to make room for authentic, educative, learning experiences. This was never more apparent than after a class session in my Seminar in Inclusive Pedagogy course on crafting the central focus of a lesson, something that preservice teachers complete for the edTPA. One student astutely observed, “So this is you basically teaching towards the test.” His comment was jarring, in that it made me reflect on the competing priorities I held as the instructor of

record. I experienced the tension that student-centered teachers across the U.S. have experienced, between the feelings of having my teaching co-opted by the need to ensure success on a test rather than creating opportunities for my students to inquire, develop critical thinking skills, construct understanding from their experiences, and question and contemplate without, as Hirsch (2014) described, “the hard press to summon an immediate answer before the clock runs out” (p. 406).

I am a teacher’s teacher. I passionately believe that teachers, who view their students as individuals, care about the life stories and experiences they bring to the classroom, and center learning around their students, are the linchpin of education. Many educators, from preschool educators to teacher educators are looking for spaces in which they can view students from a holistic perspective, where efforts can meet the needs of students on individual, academic, cultural, social, and personal levels (Buchanan et al., 2019; Hirsch, 2014; Lees & Velez, 2019; Marinho & Delgado, 2019). The policies of compliance that educators are being forced to incorporate into their work is robbing them of the time, energy, and resources to do so.

The action research conducted by preservice teachers in this study was in and of itself a critical act of resistance against the oppressive pressures of neoliberal forces that bear down on our education system. Preservice teachers were asked to question why, drawing from and inspired by Freire’s (1970) notion of problem-posing education, in which he stated, “Problem-posing education does not and cannot serve the interests of the oppressor. No oppressive order could permit the oppressed to begin to question: Why?” (p. 67). It allowed preservice teachers to, “savor the curiosity and insight that comes from asking and thinking about questions that matter to them whether or not they will be tested on the answer” (Hirsch, 2014, p. 406). Action research in preservice teacher education is more critical, essential, and necessary in an age of

neoliberalism. It can play a role in creating a critical teaching force, serving to fortify beginning teachers, as they resist the barrage of standardization, accountability, and scripted curricula and attempt to create spaces that view and value all classroom members as knowers and knowledge generators as opposed to receptacles of outsider knowledge.

My study was designed to investigate the following question:

- How does the experience of action research for preservice teachers foster a critical teacher inquiry stance?

More specifically, I was interested in understanding the following:

- How does action research influence the ways in which preservice teachers think about how they make meaning and generate knowledge as teachers?
- How does action research allow preservice teachers to make meaning and generate knowledge for themselves and the educational field?

In chapter two I provide an introduction to and explanation of the theoretical framework “critical teacher inquiry” that guided this proposal. I then describe the literature review, giving a brief history of action research and reviewing the literature on the experiences of preservice teachers engaging in action research, drawing on critical teacher inquiry to frame the analysis. The literature review helps develop a deeper understanding of the ways in which preservice teachers inquire into their clinical work through action research and illuminates how preservice teachers make meaning of their work. In chapter three I outline the methodology of the study and the methods I used to collect and analyze data to arrive at my findings. Chapter four shares the findings I arrived at based on data analysis. In chapter five, I discuss the conclusions I drew and the implications this study holds for preservice teacher education, teacher educators, and professional and in-service teacher development.

Chapter 2: Theoretical Framework and Literature Review

The theoretical framework that guided my study was one I termed critical teacher inquiry. The tenets of critical teacher inquiry drew from Freire's (1970) notion of problem-posing education and Cochran-Smith and Lytle's (2009) work on practitioner research. Merging these two frameworks allowed me to develop a synthesized approach to teacher inquiry, as critical teacher inquiry viewed teacher inquiry through a critical lens, prioritizing the need and importance of viewing teachers' inquiry in the classroom as a means of disrupting and pushing back against the current paradigm of teacher-as-technician and the hierarchy that exists between scholarly generated knowledge and teacher generated knowledge. Furthermore, critical teacher inquiry granted teachers the authority to question, pose problems, and develop a critical stance, which is essential in an era dominated by scripted curricula, high-stakes testing, and the de-skilling of teachers.

Critical teacher inquiry positions teachers as knowers, problem posers, and knowledge generators both inside and outside the classroom. The tenets of critical teacher inquiry are based on five principles: (a) Critical teacher inquiry is a purposeful, systematic, intent-driven investigation into classroom work and school life conducted by teachers to improve teaching and learning; (b) Knowledge is arrived at through the struggle of inquiry with one's world and with one another; (c) Critical teacher inquiry is a reorientation of knowledge production; (d) Critical teacher inquiry is a means of disrupting the scholar/teacher hierarchy; and (e) Teachers, not policy makers, should control the decisions in classrooms, rejecting current paradigms of "teacher as technician." Each of these five tenets are discussed further in the next section.

Critical Teacher Inquiry as Purposeful, Systematic, and Intent-driven Investigation

I defined critical teacher inquiry as a purposeful, systematic, intent-driven investigation into classroom work and school life conducted by teachers to improve teaching and learning. Much like Lytle and Cochran-Smith (1992), I conceptualized inquiry as a disposition of teachers, a habit of the mind, wherein inquiry is one of the many ways of coming to know and learn as a teacher in an educational setting and in educational practices. Critical teacher inquiry is a way for teachers to make sense and meaning of their work, and in doing so, adopt an openness or learning stance that improves classroom practice, life, and school experiences. It is a way for “teachers to know their own knowledge” (Lytle & Cochran-Smith, 1992, p. 452) and purposefully improve teaching and learning. In this way, critical teacher inquiry provided an essential approach that guided teacher judgments and decision making and became an integral part of a teacher’s practice.

Generating Knowledge Through Critical Teacher Inquiry

Critical teacher inquiry speaks to notions of how teacher knowledge is arrived at in a classroom. Within the framework of problem-posing education, Freire (1970) asserted that “Knowledge emerges only through invention and re-invention, through the restless, impatient, continuing, hopeful inquiry human beings pursue in the world, with the world, and with each other” (p. 53). Thus, according to Freire (1970), knowledge is arrived at through the struggle of inquiry with our world and with one another. Furthermore, Freire (1970) seems to be pointing to a social component in the development of knowledge, in that knowledge is developed in situ with others, not in isolation. Much like Freire’s (1970) theory of problem-posing education, critical teacher inquiry shifts traditional approaches to teacher knowledge production as it positions all members of a classroom as “knowers,” who arrive with personal knowledge based on their lived experiences, and who have the capacity to question and produce new knowledge.

It is in the act of inquiry, the struggle to investigate, challenge, and reimagine our world with others, where knowledge is generated. Within this study, critical teacher inquiry supported the problematization of classroom life and work, placing the authority to question and investigate directly into the hands of classroom teachers in order to construct knowledge for teaching and learning arrived at through the struggle of inquiry.

Critical teacher inquiry opened the possibilities to a different and unique way of learning and knowing, wherein teachers come to know and make meaning through their own process of inquiring into the highly contextualized problems they encounter in their classroom. This conceptual framework helped shine a light on how teachers develop a new way of knowing about teaching beyond coursework, scholarly articles, and educational books. It allowed me to investigate how teachers make meaning, come to know, and ultimately develop knowledge based on their inquiry experiences.

Reorientation of Knowledge Production

Freire's (1970) model of "problem-posing" education shifts students away from being simply passive listeners to being "critical co-investigators in dialogue with the teacher" (p. 62). This model is centered around freedom of the mind, asking students to question and think for themselves as opposed to being told and accepting what to think, what to think about, and how to think about it (Hinchey & Konkol, 2018). When applied to teacher inquiry, problem-posing education offers a new paradigm of knowledge production, where teachers have the freedom to think for themselves, pose problems, and generate knowledge through their inquiry into those problems. Teachers no longer play a passive role, receiving scripted curricula to enact, simply transmitting content from curriculum guides to students. They are critically inquiring into their actions, student experiences, and classroom practices as individuals who can generate knowledge

through their inquiries. Freire's (1970) problem-posing education allowed for a reorientation of knowledge production, shifting teachers from recipients of educational knowledge to generators of educational knowledge.

Dating back almost three decades, Lytle and Cochran-Smith (1992) began the conversation about educational knowledge, arguing that, "research by teachers is a significant way of knowing about teaching" (p. 450). They posited that teacher inquiry can play a role in the reconceptualization of notions of knowledge for teaching and learning, articulating a different and new epistemology towards ways of knowing and knowledge production in education. Cochran-Smith and Lytle's (2009) work supports the same reorientation of knowledge production that Freire's (1970) work inspires, shifting teachers from knowledge consumers to knowledge generators.

The above arguments are the basis for the third tenet of critical teacher inquiry, as they call for a reorientation of knowledge production in teaching. Critical teacher inquiry is structured around opportunities to explore authentic problems teachers encounter, stemming from their histories and experiences in their daily lives towards solutions to ameliorate them. Critical teacher inquiry empowers preservice teachers in this study to think systematically about the ways in which they live in their world, to view the world in terms of possibilities rather than as a static reality, and to see the possibilities for transformation and change through inquiry. The goals of critical teacher inquiry share the goals of Freire's (1970) problem-posing education and Cochran-Smith and Lytle's (2009) work on teacher inquiry, to place the power of inquiry into the hands of teachers so they can use it to exercise control over and improve the practices and conditions of their classrooms while generating knowledge about teaching and learning.

Disruption of the Scholar/Teacher Hierarchy

Stenhouse's work strongly critiqued the inequality in the relationship between teachers and research, and posited that two cultures existed, the scholarly research culture, "who are served by research" (Rudduck, 1988, p. 36), and the teaching culture, "that are ruled by research" (Rudduck, 1988, p. 36). He critically analyzed those structures that controlled knowledge generation for education and the rights associated with the research process. His goal was to bring research and inquiry into the teachers' world and create a role for teachers in the production of educational knowledge (Rudduck, 1988).

Critical teacher inquiry offers legitimacy to the knowledge teachers generate as they inquire into their own practice, challenging and disrupting the academic and scholarly hegemony of knowledge generation, as it shifts the locus of expert knowledge to encompass teachers and schools. This change has the potential to reimagine and disrupt the current flow of knowledge that dominates the scholar/teacher relationship. Critical teacher inquiry creates the possibilities for educational knowledge to be more reciprocal, flowing back and forth, from scholar to teacher and teacher to scholar, because the knowledge teachers need to create positive learning opportunities within the classroom cannot be completely generated by researchers situated outside of classrooms and schools (Lytle & Cochran-Smith, 1992). This supports the renegotiation of boundaries that exist between authentic teaching practice and research, restructuring and building a partnership, rather than a hierarchy, between local schools and universities to bring about social and education change.

Freire's (1970) theory of problem-posing education permitted me a different vantage point in thinking about the persistent hierarchy that exists between educational knowledge developed by scholars at the university level and educational knowledge developed by teachers. In Freire's (1970) argument, students are not objects in the narrative of others but subjects in

their own narratives and lives. This notion supported the disruption of the hegemonic hold scholarly research has over teacher educational knowledge. Just as students should not be the receptacles of knowledge from teachers, teachers should not be receptacles of knowledge from scholars. Rather, teachers should be established and accepted as knowers, whose knowledge is valid and can contribute to current educational thought and theory alongside the research of scholars and academics.

This hierarchical structure was disrupted through critical teacher inquiry within this study, as it is an inquiry disposition and inquiry experience that challenged long held notions and values of knowledge, both in the classroom and in the realm of educational knowledge. Critical teacher inquiry was a way of pushing back against this established structure, as it attempted to reorient the boundaries between scholar and teacher knowledge and understanding. This framework spoke to the possibilities and the unimagined and unrealized ways in which teachers can contribute to educational knowledge, theory, and practice and toward the dismantling of the current hierarchy of knowledge production.

Teachers as Decision Makers, A Rejection of “Teacher as Technician” Paradigm

In Freire’s (1970) “banking” model of education, students are viewed as objects, containers to be filled by their teachers’ narratives, reducing education to an act of depositing and storing content in students. The range of students’ actions then consist of “receiving, filing, and storing the deposits” (p. 53). Freire (1970) argued that this model is devoid of inquiry, and thus knowledge is considered the gift conferred on students, who are considered ignorant, by teachers, who are considered knowledgeable. This misguided system serves the subjects—teachers—who dominate the educational relationship, by suppressing students’ creativity and critical thinking.

In our current educational climate, predicated on the paradigm of “teacher as technician,” teachers are viewed much the same way students are viewed in the banking model of education, as objects of educational policy and scripted curriculum, where they are told what to teach, how to teach it, and even what to say in their enactment of teaching. Knowledge is conferred unto teachers by means of educational reforms, policies, and curriculum, positioning teachers as ignorant technicians who transmit knowledge in a prescribed manner. This system serves those who dictate policy, author scripted curriculum guides, and enforce educational reform from outside the classroom while it subjugates teachers and students in the classroom.

Both problem-posing education and critical teacher inquiry seek to cultivate agency, encouraging individuals to become more conscious of their engagement with their world, to reflect on their existence in this world, and to work to change it (Dimitriadis & Kamberelis, 2006). This model of critical teacher inquiry views the world as dynamic, with room and space to transform it through critical inquiry and reflection, drawing on Freire’s (1998) notion of the “unfinishedness of our being” (p. 52). As teachers build and acquire knowledge about teaching and learning, they have the power to use it to intervene and make thoughtful decisions about the current situations they find themselves in. Critical teacher inquiry rejects the stance of adapting to a prescribed world, rather it embraces creativity, critical thinking, decision making, and the act of understanding the work of education in order to change and improve it.

The idea that all are “knowers” was a powerful one in my study, one I was drawn to in thinking about preservice teachers engaged in action research. This knowledge paradigm allowed me to re-envision notions of knowledge production within the context of this study, and prompted me to ask such questions as: How is knowledge generated? Who creates knowledge? Who owns knowledge? Whose knowledge is valued? Engaging in critical teacher inquiry

allowed teachers to explore these ideas about knowledge and supported the reimagining of how knowledge is produced and arrived at, what relationship preservice teachers have with knowledge, who has the authority to produce knowledge, and who ultimately holds authority for decision-making in a classroom. Next, I turn to the recent literature on preservice teacher action research, using the above outlined critical teacher inquiry framework to guide the synthesis and understanding of the experiences of preservice teachers as they engage in action research.

Literature Review

As early as the 1950s, preservice teachers commonly engaged in action research as a tool to nurture reflection skills, problem-solving abilities, an inquiry disposition, and the capacity to learn from personal experiences to inform and improve teaching practices (Gore & Zeichner, 1991; Kizilaslan & Leutwyler, 2012; Price & Valli, 2005). More recently, with its inclusion in the National Council for the Accreditation of Teacher Education (2010) standards for its potential in helping preservice teachers meet the needs of their students, action research is a common component in teacher education programs today (Davis et al., 2018; Dodman et al., 2017). In the literature, there are many benefits to conducting action research with preservice teachers, such as (a) the opportunity to question long held assumptions and beliefs (Kitchen & Stevens, 2004; Stern, 2014); (b) to bridge theory and practice (Hulse & Hulme, 2012; Kizilaslan & Leutwyler, 2012; Lattimer, 2012; Mok, 2016; Smith & Sela, 2005); and (c) to develop confidence, self-efficacy, risk taking, empowerment, and awareness of self (Adams, 2016; Dodman et al., 2017; Faikhamta & Clarke, 2015; Hulse & Hulme, 2012; Klein et al., 2015; Lattimer, 2012; Smith & Sela, 2005; Stern, 2014; Stevens & Kitchen, 2004). Many teacher-education programs incorporate action research as a capstone endeavor or a semester-long course; however, the models used, and the approaches taken to the work of action research differ

significantly. This review of the literature synthesized the multiple ways in which preservice teachers engaged in action research in teacher education programs both in the United States and across the globe and examined and analyzed the differences between programs, approaches, change in preservice teachers, and the resulting meaning-making that occurred when preservice teachers engaged in action research.

Literature Review: Methodology

This review analyzed both empirical and non-empirical literature published on how, for what purposes, and in what ways preservice teachers engage in and think about action research in their teacher education programs. I began the search using the EBSCO search engine. To ensure that the articles aligned with my purpose in conducting this review, I used the search terms “preservice,” “teacher,” and “engaging in action research” and limited the search to English language and peer-reviewed articles. The search on EBSCO yielded 147 articles of which I was able to eliminate 117 articles based on the titles and abstract, leaving 30 articles for review. Only articles relevant to preservice teachers engaging in action research were included. Articles discussing action research at different points in the teaching continuum were excluded in order to keep the review focused. Based on the above parameters, 25 articles were viable and were read closely. I created a table (N=25) to organize and compare studies, recording the details of the study or review, the authors’ various definitions of action research, the challenges preservice teachers encountered, the outcomes of the study, and the themes presented. Additionally, as I read the articles, I sought oft-cited articles I came across in the texts, which I located, read, and added to the table, resulting in a total of 31 (N=31) articles that were closely read and recorded. The body of literature for this review consists of 27 qualitative studies, one mixed method study (Lattimer, 2012), and three literature reviews (Kizilaslan & Leutwyler, 2012; Manfra, 2019;

Zeichner, 1987). All studies involved preservice teachers enrolled in teacher education programs. Studies were conducted in a range of locations, including the United States, Norway, Canada, England, Turkey, Australia, Thailand, Israel, and Hong Kong.

Literature Review: Analysis

For each article reviewed, I recorded the definitions of action research, challenges preservice teachers encountered, outcomes of the study, and emergent themes. I used the critical teacher inquiry framework to frame secondary analysis of the studies and articles included in this review. Applying the tenets of critical teacher inquiry to the literature findings allowed me to explore how the research on preservice teacher action research discussed and examined different ways of knowing about teaching and preservice teacher meaning making. Additionally, I looked for evidence of knowledge produced through the struggle of inquiry and the development of an inquiry stance in the preservice teachers as they engaged in action research. Finally, critical teacher inquiry helped me understand the experiences of the preservice teachers as they engaged in action research as an emancipatory experience in and of itself. The action research gave them the power to ask why, problematizing actions, context, situations, and practices they experience while placing the authority to find solutions and make decisions in the hands of preservice teachers.

This deductive analysis yielded three larger themes: (a) Action research as a vehicle for change; (b) Personal meaning-making; and (c) Disrupting mainstream conceptions of knowledge. The above themes aligned with the principles of critical teacher inquiry as action research positions preservice teachers as learners who investigate their practice, commitments, and values. When preservice teachers engage in action research, they strive to experience liberation as a praxis, as they actively, purposefully, and systematically question why and search

for ways to improve and bring about change to traditional educational structures and practices that can limit an individual's potential.

Experiencing and developing the power to generate knowledge, understanding, and bring about change through action research has the potential to be a transformative experience for preservice teachers. Having experienced the “banking concept of education” due to the decades of high stakes testing and neoliberal agendas of accountability and standardization, recent preservice teachers have been raised on test-driven teaching (Sleeter, 2019). Within this study, empowering teachers to visualize teaching from a “problem-posing education” (Freire, 1970) or inquiry stance (Cochran-Smith & Lytle, 2009) in their future classrooms through their engagement in action research created access to the possibilities of emancipatory, student-centered education, where the focus is on the student making meaning of their experiences, contexts, interactions, and ways of being in their world.

The next section discusses the multiple definitions of action research offered in the literature, revealing the various approaches and epistemology of action research. The following section details the three themes, further identifying the interplay between the themes and the tenets of critical teacher inquiry. The final section of the literature review discusses the challenges encountered when preservice teachers engage in action research as well as critiques of teacher education.

Definitions of Action Research

Across the literature, there were various definitions and approaches to action research. Manfra (2019) contended that perhaps the discussions surrounding the different theories and approaches to action research are part of the broader process of attempting to legitimize action research within the academy, as its legitimacy is held in question by some critics. The disparate

definitions of action research motivate scholars to claim the territory of action research, attempting to define what counts as “legitimate” forms of action research. However, despite the differences, I found that some elements were common across many definitions of action research. Out of 30 articles, 12 included definitions of action research that were similar to Cochran-Smith and Lytle’s (1992) definition of teacher research, in that they viewed action research as a systematic inquiry into one’s practice, followed by actions taken to improving teaching and learning (Conner-Zachocki & Dias, 2013; Dodman et al., 2017; Faikhamta & Clarke, 2015; Hansen & Nadler-Godfrey, 2004; Kennedy-Clark et al., 2018; Kitchen & Stevens, 2004; Lattimer, 2012; Levin & Rock, 2003; Roulston et al., 2005; Smith & Sela, 2005; Ulvik & Riese, 2015; Zeichner, 1987). Additionally, seven articles specified recursive stages of planning, acting, reflecting, and revising as part of the action research methodology (Faikhamta & Clarke, 2015; Hansen & Nadler-Godfrey, 2004; Lattimer, 2012; Mok, 2016; Moran, 2007; Ulvik & Riese, 2015; Zeichner, 1987). These stages are aligned with Dewey’s (1938b) patterns of inquiry. Finally, similarly to Cochran-Smith and Lytle (2009), six definitions situated the research in the hands of teacher practitioners, as opposed to scholarly researchers, explicitly conveying the power of action research to shift those traditionally positioned as the subjects of research to be the conductors of research (Conner-Zachocki & Dias, 2013; Crawford-Garrett et al., 2015; Davis et al., 2018; Hohloch et al., 2007; Mok, 2016; Roulston et al., 2005). Resisting the stronghold that scholars and universities have on the generation of knowledge for the educational field and generating, contributing to, and expanding the knowledge base for teaching is an important inclusion in the definitions, as it shifts the teacher’s role from consumers of knowledge to generators of knowledge, a point that I explore further in this section (Crawford-Garrett et al., 2015; Davis et al., 2018).

Action Research as a Vehicle for Change

Change is implied in action research (Price & Valli, 2005). The methodology of action research revolves around changing action to address an identified problem. There is however a noted distinction in the action research literature that highlights the intent behind the change; action research can have either a practical intent or a critical intent (Manfra, 2019). Critical intent clearly aligns with the tenets of Freire's (1970) "problem-posing education," as it positions the work as an attempt at developing one's consciousness about the world they inhabit and how they exist in that world. Delving deeper into this notion of intent, Noffke (as cited in Price and Valli, 2005) described three dimensions of change: personal, professional, and political. Personal change refers to teacher development and teacher quality. Professional change indicates generation and production in teaching knowledge. Change in the political dimension specifies change that brings about greater equity, justice, and democracy. Thinking about the different issues that get problematized in action research helps us understand the various approaches, lenses, and distinctions in the intellectual traditions of action research.

Practical Action Research

Practical action research focuses on the development of the practical understanding of a problem and the subsequent practical knowledge that follows (Manfra, 2019). In other words, it is concerned with developing, enhancing, and generating pedagogical content knowledge (Shulman, 1986) to enhance outcomes and learning for students. The concern here lies with the effectiveness of the practice, situating the work in the personal and professional dimension of change.

Twenty-four of the 30 definitions of action research articulated in the articles expressed concern with the practical aspects of teaching. Examples of practical concerns within the

definitions of action research in this literature review can be seen in the work of Dodman et al. (2017) when they stated, “A question that a teacher or group of teachers are interested in that will somehow better student learning and expand their pedagogical knowledge” (p. 32). A second example of practical concern or focus is the definition Hansen and Nadler-Godfrey (2004) offered up, “Trying out ideas in practice as a means of increasing knowledge about/or improving curriculum, teaching, and learning” (p. 46). Lastly, Mok (2016) defined action research as “teachers as researchers engaging in practical enquiry in their classroom setting” (p. 61). Mok’s (2016) use of the word “practical” pinpoints the intent in her study, the development of practical knowledge, and served as a guiding principle for students as they developed their action research in the study. With the majority of the articles using a practical lens to approach action research, I was left wondering about the readiness of preservice teachers to engage in action research through a critical lens. From a developmental standpoint, are preservice teachers capable of enacting action research with critical intent and how does the framing of teacher education courses influence this development?

Critical Action Research

According to Price (2001), critical action research is concerned with issues of equity and social justice, widening the set of goals for action research, moving beyond simply changing and improving practice to employing action research as a tool for school reform. Thus, the purpose of critical action research is to bring about change in the political dimension, change that contributes to the elimination of injustice and inequalities prevalent in education and society (Gore & Zeichner, 1991). In situating their work in the social reconstructionist tradition, Gore and Zeichner (1991) contended that indeed, academic rigor and technical skills are surely

important points to be developed; however, these benefits need to be shared and experienced by all children, not just those positioned in the dominant social group.

Seven out of the 30 articles in this literature review defined action research as critical (Faikhamta & Clarke, 2015; Gore & Zeichner, 1991; Hulse & Hulme, 2012; Kizilaslan & Leutwyler, 2012; Klein et al., 2015; Price, 2001; Price & Valli, 2005). The definitions set a clear purpose for the action research, that of restoring justice, equality, and democracy to our educational institutions. Among these definitions, Price (2001, p. 43) and Klein et al. (2015) defined action research as “democratic in intent and process” (p. 2). Kizilaslan and Leutwyler (2012) described action research with preservice teachers as “a process of learning with community to think and act critically” (p. 155). Price and Valli (2005) cite the definition put forth by Carr and Kemmis (2009), focusing on the need to improve justice and equity in their practice, their understanding of their practice, and the context of their practice. Finally, Faikhamta and Clarke (2015) discussed the elements of action research that are systematic, emancipatory, and critically reflective. They clearly situated action research and framed the work they engage in with preservice teachers within the realms of social justice and equity, thus placing them in the critical action research tradition.

Despite the above distinctions and differences between practical and critical action research, these two intellectual traditions often overlap and become linked. Teacher change is not experienced in isolation, rather change in one dimension can support and impact change in a different dimension. Kizilaslan and Leutwyler (2012) developed this idea further when they stated that action research can “simultaneously improve teaching practice, student outcomes, and systems of schooling to be more just and equitable for all children and adolescents” (p. 155).

Manfra (2019) contributed to this argument when she asserted that “Teachers understand that teaching is complex and that it cannot be divided into practical and critical concerns” (p. 167). Teachers may begin researching a problem in the personal or professional dimension and move towards the political dimension over the course of the work. Within the gap between practical and critical action research lies the messy, complex classroom realities, the life and community of the classroom that contribute to the nuances of teaching and learning, at once practical and critical in concerns, problems, and needed actions (Manfra, 2019). Price and Valli (2005) claimed that knowledge and change arrived at through practical action research has the potential to impact wider social structures, inequities, and injustices, thus making it critical as well. For example, teachers who wanted to incorporate more hands-on, student centered activities into their elementary science class ended up investigating illegally dumped waste products in low-income neighborhoods (Manfra, 2019). In this way, critical action sprung from a practical action research project.

The definitions of action research found in the literature for this review highlight the divergent intellectual traditions of action research, that of practical action research and critical action research. The definitions helped to frame action research conducted by preservice teachers in their education programs. These definitions established the criteria, purposes, expectations, and objectives of the action research and served as a guide to the work preservice teachers engaged in. However, the complexities of classroom life play their part in action research as well, bridging the space between the practical and the critical, at times sending a researcher down a different road, inspiring the search for unintended answers and actions.

Preservice Teacher as Agent of Change

Across the reviewed literature, several authors articulated a vision of preservice teachers as agents of change and the ways in which action research supports this paradigm. Six articles discussed preservice teachers' development of agency and potential as agents of change for themselves, their students, classrooms, institutions, and profession (Crawford-Garrett et al., 2015; Gore & Zeichner, 1991; Klein, et al. 2015; Lattimer, 2012; Price, 2001; Price & Valli, 2005). Evidence of preservice teachers as agents of change who are developing agency in their work are described in the articles reviewed, including examples of both success and struggle. Different dimensions and domains of change within this paradigm are addressed as well, complicating the landscape associated with the notion of preservice teachers as agents of change.

Explicit discussions of preservice teachers as agents of change were found in Price and Valli's (2005) and Price's (2001) qualitative studies of preservice teachers engaged in action research during student teaching. Playing dual roles as researcher and instructor, Price and Valli's (2005) grounded the action research in terms of social and political change, drawing on critical traditions of action research and the construct of teachers as agents of change. They sought to understand what meaning preservice teachers made about change and change agency in their courses. Similarly, Price (2001) took the perspective that the goals of social justice and equity are integral to the action research process, widening the scope of action research so that it encompasses change on personal, professional, and political levels. Price (2001) explored the meaning preservice teachers made about their action research experiences, the key experiences that promoted learning, and the kinds of change preservice teachers embraced and imagined as they moved into a role as a novice teacher.

The four case studies in Price and Valli's (2005) and Price's (2001) research demonstrated different types of change across different dimensions. One preservice teacher

experienced change in her thinking about her role as a teacher from purely procedural to thinking about building on student experience. A second preservice teacher experienced change in her teaching practice from an authoritative approach toward a more democratic approach through the incorporation of writers' workshops to include more student voice in the classroom. Two preservice teachers attempted to bring about change on a structural school-wide level, challenging protocols that guide the school's pull-out programs. All four case studies highlighted different aspects and dimensions of agency and a preservice teacher's role as an agent of change. Though the preservice teachers' change were different in nature, these changes were situated in their personal experiences, positionality, contexts, and histories.

Price and Valli (2005) concluded that action research as a tool for educational change does not, and cannot, name the specific kinds of change that occurs, rather it is highly individualized and reliant on personal histories and lived experiences. Furthering this point, Price (2001) asserted that the change experienced by the preservice teachers in his study varied across the different preservice teachers depending on their disparate experiences and understandings of teaching and learning. Ultimately, the action research projects became the space in which the change occurred as preservice teachers began to view their teaching practices relative to the lived experiences of their students. However, the action research could not dictate what type of change took hold. Findings clearly demonstrated that preservice teachers' commitments to being change agents varied widely as was reflected in their choices and framing of their action research projects.

Taking up Price and Valli's (2005) stance on action research, Gore and Zeichner (1991) used van Manen's (as cited in Gore & Zeichner, 1991) theory of dimensions of reflection to argue that action research creates the opportunity for preservice teachers to reflect across all

three dimensions: technical, practical, and critical. Much like Price and Valli (2005), Gore and Zeichner (1991) maintained that preservice teacher education ought to be concerned with action research that seeks to eliminate and disrupt the structures that work to sustain injustice and inequality. Gore and Zeichner situated the preservice action research within a commitment to democratic practices and social justice; however, they deliberately resisted pushing preservice teachers' research towards the political dimensions of reflection in service to the belief that preservice teachers must own their teaching practices and decisions. Their analysis revealed that only a few action research projects included a clear moral or political concern. In line with Price's and Valli's (2005) conclusions, Gore and Zeichner found that biographical, situational, and cultural factors were presented to explain the lack of critical reflection in the action research projects. Additionally, Gore and Zeichner (1991) proposed that the topics preservice teachers explored were not necessarily the problem, the way preservice teachers framed their topic may have been, as they noted a tendency for preservice teachers to view the problem individualistically, through their own perspective as opposed to extending the problem to encompass issues of power, inequity, and injustice in schools and society.

Price (2001), Price and Valli (2005), and Gore and Zeichner (1991) all argued that in accepting multiple ideas and purposes of change, professors can maintain their social justice stance without requiring preservice teachers to take on their stance. This line of thought recognizes the continuum and the developmental path of preservice teachers towards becoming agents of change and creates the space for them to make their own way while honoring where they are on that path. Their conclusions aligned with Freire's (1970) notion that all individuals are knowers, arriving in educational settings with disparate lived experiences and knowledge that shape, contribute, and guide the learning in a community of learners. Ultimately, the action

research projects became the space in which the change occurred as preservice teachers began to view their teaching practices relative to the lived experiences of their students, however, the action research assignment could not dictate what type of change took hold.

Klein et al.'s (2015) and Lattimer's (2012) qualitative studies also attended to developing preservice teachers' agency when engaged in action research. As participants in Klein et al.'s (2015) study worked through the action research process, they began to grasp the power their actions had on improving their practice, their classrooms, student achievement, and students' lives. It was in the realizing and acknowledging of this power that agency developed for the participants. For example, one participant stated that action research gave him the opportunity to learn how to research and enact change within his classroom. A second participant reflected that action research motivated and supported the interrogation of his assumptions about teaching and learning and pushed him to think more critically about his life and those of his students. Some of Lattimer's (2012) participants attributed action research with helping them position themselves as agents for change and advocates for their students. One participant credited action research with strengthening her ability to be an agent of change among her professional community within her school. Another participant viewed action research as empowering and motivating her to move beyond replicating practices she observed to advocating for change within her classroom and school. The participants in these studies clearly acknowledge the role action research played in fostering a sense of themselves as agents of change.

There was evidence of critical teacher inquiry in Price and Valli (2005), Klein et al. (2015), and Lattimer's (2012) studies of preservice teacher action research. As the preservice teachers were given the space to question and ask why, they became empowered to understand their world more fully and generated knowledge through their struggle to inquire into their work.

Across the above three studies, the contexts, actions, and changes were varied, however across these preservice teachers' experiences, the action research process supported the cultivation of agency as preservice teachers developed into reflective practitioners and critical decision makers. The participants began to understand the power their teaching actions, decisions, and judgments had on the construction of democratic and just practices in their classrooms and on the lives of their students.

Types of Change

In many articles included in this review, researchers discussed what type of change occurred as a result of the preservice teacher action research. In Price (2001) and Crawford-Garrett et al.'s (2015) discussions of what kinds of change preservice teachers internalized and experienced through their action research, the researchers framed change along three different dimensions: personal, professional, and political, highlighting the ways in which preservice teachers' action research has the potential to support sophisticated and genuine engagement with equity issues while pushing back against the limiting images of teaching and learning depicted in neoliberal education agendas.

When asked about what change they experienced, all but one participant in Price's (2001) study noted that they experienced a change in how they understood students' engagement with knowledge and in what they themselves know and are able to do in a classroom, changes that lay in both the professional and political dimensions of change. All three participants in Crawford-Garrett et al.'s (2015) study used action research as a tool to problematize and disrupt classroom practices, positioning themselves as agents of change in their classrooms. In these preservice teachers' reflections on the change they experienced, there was evidence of critical teacher inquiry, as the preservice teachers highlighted change in the way they thought about student

knowledge, students' ability to produce knowledge, and their role in supporting that knowledge production. Within the context of the current policy environment that views teachers as technicians and undermines their decision-making abilities, Price (2001) and Crawford-Garrett et al. (2015) contended that preservice teachers ought to be positioned as agents of change and knowledge-generating practitioners, evidencing Cochran-Smith and Lytle's (2009) concept of teacher research as a way of knowing. Action research afforded preservice teachers the opportunity to ask questions, systematically test emerging theories, and enact practices that generate alternative portraits of teaching and learning.

Price (2001) took this line of investigation further by asking participants about the changes they would like to pursue in their first years of teaching. Almost all students responded that the changes were directly linked to the work they engaged in during the action research course. These responses point to the importance of action research courses for preservice teachers and their potential for opening the possibilities of generative and transformative inquiry and investigation into teaching and learning throughout their careers. Thus, what is learned in an action research course has implications for preservice teachers construct their notion of good teaching, view the work of teachers, change and develop their disposition towards teaching and the possibilities of carrying this change forward into their beginning years as teachers.

Problematizing Day to Day Classroom Practice

In much the same way that Freire (1970) advocated for classrooms where students could problematize and investigate the problems they identified in their own lives, Hulse and Hulme (2012), Crawford-Garrett et al. (2015), and Klein et al. (2015) advocated for action research as a means of creating the same opportunities for preservice teachers. Action research was used in these studies as a pedagogical approach. By asking preservice teacher to problematize classroom

practices through action research, preservice teachers were becoming, “co-investigators in dialogue with the teacher” (Freire, 1970, p. 62) developing the skills and power to “perceive critically the way they exist in the world with which and in which they find themselves: they come to see the world not as a static reality, but as reality in process, in transformation” (p. 64).

Hulse and Hulme’s (2012) qualitative study was situated in a master’s level teacher education program in England. The researchers asserted that action research engages preservice teachers in asking their own questions, inviting them to problematize their teaching practice, their learning, and their experiences. Similarly, Crawford-Garrett et al.’s (2015) qualitative case study revealed how Chrissy, a participant, supported students in discussions as they problematized certain relational ways of being and speaking with one another to develop a more dynamic perspective of individual students. In this way, the preservice teacher not only problematized classroom norms but empowered her students to do the same. Suzanne, a participant in Klein et al.’s (2015) study, sought to understand how to best help her students comprehend the content of the course. By asking students for feedback and reflections on lessons, Suzanne found that her students became empowered and developed a sense of ownership in the classroom which led to increased student respect and participation. Although Suzanne began by problematizing student understanding and success on standardized assessments, the action research moved towards problematizing student engagement and ownership of the curriculum, a far more critical than practical problem.

These examples indicate how preservice teachers developed a critical stance as they thought about their work in the classroom as a result of their action research. What was of particular interest to me was how these examples illustrated the complexities of the struggle of inquiry. In these examples of action research, there is evidence of both practical and critical

inquiry, indicating the difficulty in trying to label action research as definitively one or the other. Teacher action research was situated in the classroom and as such, involved at the onset practical concerns. However, developing a critical stance towards inquiry and an “epistemological curiosity” (Freire & Macedo, 1995, p. 53) seemed to have taken these preservice teachers into more critical territory as they developed the ability to problematize their practice, simultaneously revealing both practical and critical problems. The work of preservice teachers was neither linear nor prescriptive and an openness and a critical orientation often allowed the action research to span the practical and critical dimensions of inquiry. Critical thinking and critical practice were combined in critical praxis (Ginsburg, 1988). Preservice action research in the literature is often the enactment of this critical praxis as it merges a critical approach to thinking about and enacting teaching.

Lack of Agency

Across the articles reviewed, only three authors specifically noted a lack of agency embedded in preservice teachers’ action research projects (Choi, 2011; Dodman et al., 2017; Faikhamta & Clarke, 2015). All three articles questioned this lack of agency in preservice teachers’ action research and set forth various explanations for this lack.

In Dodman et al.’s (2017) study of preservice teachers in a master’s licensure program for elementary education at a mid-Atlantic public university, survey results indicated that action research helped preservice teachers recognize issues and ask questions related to student learning, with most questioning issues of effective instruction and student outcomes as opposed to questioning dominant power structures or challenging issues of equity and social justice (Dodman et al., 2017). Choi (2011) and Faikhamta and Clarke (2015) arrived at similar findings in that many of the preservice teachers’ action research questions were positivist in nature,

indicating that participants engaged in action research through the lens of student achievement and outcomes without contemplating the broader possibilities action research can afford the researcher. Roulston et al. (2005) argued that educational research definitions value causal questions that use experimental methods to arrive at conclusions, which only serves to further delegitimize action research methodology and may prompt preservice teachers towards more causal investigations rather than towards deep, sophisticated exploration of issues of social justice and democracy.

In their explanation of the lack of agency found in the action research conducted by preservice teachers, Dodman et al. (2017) posited that the culture and goals of the teacher education program, that of a social justice orientation and the development of an inquiry stance in preservice teachers, were not enough to foster the agency preservice teachers needed to contest issues of power, injustice, and inequity in their action research projects. Contradicting the above conclusions of Hulse and Hulme (2012), Crawford-Garrett et al. (2015), and Klein et al. (2015), Choi (2011) argued that engaging in action research in and of itself did not lead to changes in perspectives or stances for preservice teachers as the action research was adapted to fit into traditional positivist research traditions instead of fostering an inquiry stance. These perspectives indicate that there are more factors involved in supporting the development of a critical inquiry stance in preservice teachers beyond simply engaging in action research or stating goals for a teacher education program.

Personal Meaning Making

The second theme that emerged from a review of the literature was the ways in which preservice teachers personally made meaning through their action research, aligning with the second tenant of critical teacher inquiry whereby knowledge is arrived at through the struggle of

inquiry. Scattered across the literature are examples of teachers bridging theory and practice, shifting their focus from their teaching to student learning, and the influences the action research projects had on the way preservice teachers thought about knowledge production. As preservice teachers made meaning from their experiences conducting action research, they engaged in the inquiry process Cochran-Smith and Lytle (1992) referred to as a “distinctive and important way of knowing about teaching” (p. 447). Among the articles reviewed, there is evidence of preservice teachers producing varied types of educational knowledge. I would argue, as does Cochran-Smith and Lytle (1992), that this knowledge should be categorized by all educators as a valid and valued source of knowledge for education.

Owning the Research, Owning the Learning

Five out of the 30 articles reviewed discussed the importance of experience and ownership over the action research process and the resulting individual learning, development, and understanding (Hansen & Nalder-Godfrey, 2004; Hulse & Hulme, 2012; Kennedy-Clark et al., 2018; Smith & Sela, 2005; Stern, 2014). The findings in these articles focused on preservice teachers’ learning from their experiences, which served to align action research with a constructivist nature of knowledge generation (Stern, 2014).

One way preservice teachers make meaning is through experience. In Stern’s (2014) qualitative study of six graduate cohorts enrolled in the teacher education program at an American Jewish University, preservice teachers engaged in action research as part of the curriculum in a course on evaluation methods. Stern (2014) found that action research gave preservice teachers the space to make teaching decisions, live with and reflect on the outcomes of those decisions, and use the experience to guide next steps. This is a clear example of the way critical teacher inquiry places decision making authority in the hands of teachers, as the action

research equips them with the skills and knowledge to make sound and effective educational decisions.

Furthermore, Stern (2014) underestimated the power of the in-class experiences that her preservice teachers were having as a result of the action research, noting that in order for her students to internalize, learn from, and be able to apply the learning strategically, they needed to experience the process in practice. Preservice teachers made meaning out of the experiences of recognizing a misalignment between their goals and the pedagogy they enacted, as they grappled with the tensions between choosing to use student-centered pedagogy over teacher-centered pedagogy, as they tested theories from coursework within the realities of practice, and as they documented the action research cycles, articulating the evidence needed to overturn long-held assumptions and beliefs about teaching and learning. In these ways, not only did preservice teachers improve their practice and develop reflection skills, but they strengthened and developed their capacity to learn from their personal experiences (Stern, 2014). Stern (2014) asserted that the journey through action research was as important as the destination in that it supported the development of a research stance in preservice teachers and laid out a process for “self-vetting” (p. 48) problems of practice within the classroom to generate self-knowledge.

Dewey’s (1938a) theory of experience clearly guides Stern’s (2014) analysis of the work preservice teachers engaged in through action research. Dewey (1938a) posited that “every experience is a moving force” (p. 38) indicating that individuals’ experiences change the individual and affect subsequent experiences. Our experiences set us on our learning trajectory and it is only through experience that we can learn and move forward. The preservice teachers in Stern’s (2014) study learned through and as a result of experiencing action research. It was in their struggle to inquire about the problems of practice in their classrooms that they made

meaning of their work and generated new understandings. This meaning making and knowledge production is what critical teacher inquiry generates as teachers struggle to understand, grapple with, and generate solutions to the everyday classroom problems they encounter.

The personal and internal experiences that are described in the literature added to the argument that personal meaning making is inherent in action research. In Smith and Sela's (2005) qualitative study of preservice teachers conducting action research in their fourth year of their teacher education program in Israel, the authors argued that action research is in fact a tool for personal meaning making in that it empowers preservice teachers to develop their "personal practical theory of teaching" (p. 297). Much like Mia, a participant in Sterns' (2014) study, experienced, "I can observe myself and learn from myself for myself" (p. 39). Smith and Sela (2005) contended that action research is grounded in the firsthand experiences of examining one's practice and conducting personal research, allowing the learner to learn from herself.

Kennedy-Clark et al. (2018) furthered this line of thought in their qualitative study of four preservice teachers who conducted action research during their professional experience placement in an Australian high school. They posited that preservice teachers were becoming "stewards of their own professional development" (p. 52) as they addressed their concerns and problems of practice in their localized contexts. Kennedy-Clark et al. (2018) claimed that in this way, the action research is both an essential part of teaching as well as a developmental process of personal learning and change. Additionally, they pointed out the non-linear, fluid, and complex nature of the action research cycle, and considered the process to be responsive in that it is in dialogue with and influenced by the individual who is making meaning throughout the process.

Finally, several studies claimed that action research has the potential to support preservice teachers bridging theory to practice (Adams, 2016; Faikhamta & Clarke, 2015; Hulse & Hulme, 2012; Kennedy-Clark et al., 2018; Kitchen & Stevens, 2004; Mok, 2016; Stern, 2014). In this way, preservice teachers were making theories mean something in their practice. Action research was a way to test theories and make them personally meaningful by applying them in practice and possibly contributing to and expanding on them. It is in the testing of theories in the classroom where teachers constructed personal meaning about the ways students learn, grow, and develop, in response to thoughtful, purposeful teaching pedagogy.

Many studies pointed to the importance of ownership in action research work, specifically in terms of the questions asked, because the questions denoted what is meaningful and important to the preservice teacher (Gore & Zeichner, 1991; Hulse & Hulme, 2012; Kennedy-Clark et al., 2018; Kitchen & Stevens, 2004; Kizilaslan & Leutwyler, 2012). Ownership is clearly represented in the definitions of action research, many situating action research specifically in one's own practice, indicating the importance and essentialism of ownership within action research (Hulse & Hulme, 2012; Kennedy-Clark et al., 2018; Lattimer, 2012; Price & Valli, 2005; Ulvik & Riese, 2015).

Shift from Teaching to Learning

Various researchers noted a shift in preservice teachers' perspective as a result of conducting action research, specifically a shift in focus from themselves and their teaching towards their students and their learning (Gore & Zeichner, 1991; Kitchen & Stevens, 2004; Lattimer, 2012; Levin & Rock, 2003; Mok, 2016; Price & Valli, 2005; Smith & Sela, 2005). This shift in perspective and approach towards one's teaching marked an important step in making the transition from preservice to in-service teacher (Smith & Sela, 2005).

The focus in Levin and Rock's (2003) qualitative case study of five pairs of preservice teachers and their cooperating teachers collaboratively engaged in action research was about the benefits and costs to both the preservice teacher and the cooperating teacher. They found that preservice teachers experienced an improved understanding of their students as a result of the action research. Four out of the five preservice teachers reflected on the change in their insight into their students' needs and perspectives. They noted that engaging in action research provided them with increased opportunities to interact with students, which resulted in a deeper understanding of student motivation, student progress, achievement, and abilities (Levin & Rock, 2003). Levin and Rock (2003) observed that action research required preservice teachers to reevaluate traditional practices and implement innovative approaches and strategies while the teachers studied the impact of these new approaches on the learning of their students. This led to the construction of not only new teaching practices, but an increased understanding of the roles and responsibilities teachers have in the classroom, furthering preservice teachers' awareness of the need to not only focus on the teaching but the learning as well.

Price and Valli's (2005) study strengthened the argument that engaging in action research as a preservice teacher supported this shift from a focus on teachers and teaching to include a focus on students and learning. Gretchen, one of the participants from Price's (2001) course, articulated that her vision of teaching changed to include attention to the ways students interact and learn in her classroom. Irene, another participant in Jeremy's course, spoke about the change in her understanding of teaching from just a procedural process to one that required attention to the social and intellectual relationships with students. As reluctant as Irene was to engage in action research, the action research process helped her incorporate more student-centered pedagogy into her teaching such as cooperative group work and inquiry-oriented questioning.

Ultimately, Irene's action research supported her shift in focus and allowed her to investigate how assessment results could inform her understanding of not only her teaching practices but of her students' learning and growth.

Smith and Sela's (2005) qualitative study describe this change, from a focus on teaching to a focus on learning. Twenty-seven out of 29 participants stated that action research taught them not only about the topic they investigated but helped them understand and learn about their pupils. Some preservice teachers noted that action research strengthened their belief in their students, which pointed to the shift from themselves as teachers to their students as learners.

Gore and Zeichner (1991) and Kitchen and Stevens (2004) also referenced this type of change in preservice teachers. Gore and Zeichner (1991) stated that participants reported one of the three main impacts of conducting action research was an increased awareness of their students' thinking and learning. Kitchen and Stevens, (2004) reported that 66% of participants focused their action research on students' needs in the classroom. These examples from the literature indicated that action research has the potential to support the shift preservice teachers ought to be making from a focus on their teaching practices and themselves to a focus that includes their students, students' needs, and student learning.

Role Construction

The influence action research had on teacher role construction was considered in eight out of the 30 articles reviewed (Adams, 2016; Davis et al., 2018; Hulse & Hulme, 2012; Lattimer, 2012; Levin & Rock, 2003; Price, 2001; Price & Valli, 2005; Smith & Sela, 2005). In several articles, evidence was presented that indicated a change or shift for preservice teachers as they incorporated the role of "teacher as researcher" and creator of professional knowledge into their teacher responsibilities (Adams, 2016; Davis et al., 2018; Hulse & Hulme, 2012; Levin &

Rock, 2003). This shift referenced the tenets of critical teacher inquiry, in that teachers are experiencing a reorientation of knowledge production and are contributing to the disruption of the scholar/teacher hierarchy. With the inclusion of “teacher as researcher” into preservice teachers’ understandings of their role as teachers, it is possible that action research influenced preservice teachers in the political dimension, as the notion of “teacher as researcher” pushes back against and resists the educational policies and agendas of the current neoliberal ideologies.

Studies conducted by Adams (2016), Hulse and Hulme (2012), and Davis et al. (2018) reported similar findings related to a change in the way preservice teachers’ construct their role with reference to the concept of “teacher as researcher.” Set in a Canadian University, Adam’s (2016) qualitative study followed 20 preservice teachers engaged in action research during their final practicum. Preservice teachers in the study stated that they developed confidence in their ability to contribute to the expertise of the profession and could envision using action research as a tool for professional learning during their early years in the field. Findings suggested that there was an increase in preservice teachers’ ability to shift and construct the role of teacher to include ‘teacher-researcher’, as one who worked to bridge the gap between theory and practice. Adams (2016) argued that the experience of action research required a different mindset than typically required during preservice teacher education, a mindset of looking for and constructing professional understanding and knowledge and a move away from simply consuming professional knowledge. Ultimately, Adams (2016) contended that engaging in action research during the practicum experience was a “professionally transformative” (p. 32) experience as it supported a change in preservice teachers’ role construction and sense of responsibility towards the profession.

Hulse and Hulme (2012) furthered Adam's (2016) argument through their findings that engaging in action research contributed to a stronger sense of belonging within the educational community for preservice teachers as they felt that they made a significant contribution to professional knowledge as a result of their action research. One preservice teacher commented:

It makes you feel like you belong. You fit in somewhere because we have done this research and it's not just a pointless exercise . . . I have contributed to that school and I could contribute to any school I work in. It puts you on that step of 'I actually am a teacher.' (Hulse & Hulme, 2012, p. 323)

This participant clearly articulated how her vision of the role of teacher was impacted by action research and pinpoints the change in her feelings of belonging and confidence in contributing to the professional knowledge base of teaching. Hulse and Hulme (2012) suggested that the action research projects encouraged preservice teachers to transgress the boundaries of current educational practice to arrive at and develop new ideas and approaches to teaching. This notion of the continuous construction of professional knowledge supported nascent concepts of the role of teachers founded on the dynamic, fluid, accessible, and ever-evolving nature of knowledge generation and production.

Davis et al.'s (2018) qualitative study following novice teachers who conducted action research during their final semester of student teaching built onto Adams (2016) and Hulse and Hulme's (2012) work, contributing similar findings and arguments. Using surveys of 20 preservice teachers and conducting six case studies that included participant interviews and artifact collection, the authors explored the potential of action research to influence teachers' view of themselves as researchers. Surveys revealed that 10 out of 20 participants included 'teacher as researcher' as part of their teacher role. Laura, a fifth grade teacher, commented

during interviews that she considered herself a researcher in that she constantly reflected on what was working in the classroom and that conducting personal research in the classroom to improve how you are teaching and how students are learning was a part of teaching. Sarah, a secondary English teacher, noted that conducting research validated her contribution to the profession and expanded her views of teacher responsibilities beyond in class teaching. Additionally, conducting research helped Sarah think about the teaching field as dynamic rather than stagnant. For both participants, teacher research and the struggle to inquire into one's teaching practices became a part of the way they constructed their role as teachers. Findings from all three studies clearly traced the transformations to action research and point to the potential in action research to help preservice teachers view themselves as knowers, as teacher researchers capable of producing valuable knowledge to contribute to the field of education, as they disrupt the existing scholar/teacher knowledge hierarchy.

Lattimer (2012) and Price and Valli (2005) used the lens of disposition development and contended that the preservice teachers' action research had less to do with developing discrete teaching skills and more to do with developing a disposition of inquiry, reflectiveness, and for Price and Valli (2005), a disposition of agents of change. Lattimer (2012) argued that "dispositions address the gap between what teachers can do and what they will do" (p. 20). The choices and judgments teachers make are situated in their dispositions towards their teaching responsibilities and role. She found that the action research supported the development of dispositions of inquiry that guided teachers' decision making and problem solving, and supported teaching practices that are dedicated to the success of all students in all contexts. According to Lattimer (2012), dispositions played a large part in teacher role construction, with

action research having the potential to positively influence the developing dispositions of preservice teachers.

Price and Valli (2005) illustrated a clear example of a shift in teacher disposition through their case study of Irene. Initially, Irene's disposition was heavily entrenched in the content of her math field and did not encompass social or relational issues. Her main concern was "to learn how to teach well" (Price & Valli, 2005, p. 62). Through her action research work, Irene slowly began to see those discrepancies between student achievement and her understanding of student learning based on classroom discussions. Irene's vision of teaching responsibilities changed as she opened herself up to the importance of connecting students' lives to the content. This change was evident as she expressed the need to build on student experiences in her lessons and set aside time to get to know individual students. Irene went from a focus on the technical aspects of teaching to a focus on an inquiry approach to understand student learning. She expanded her vision of a teacher's role from simply the act of teaching to the need to intentionally struggle to inquire into what students are learning, what they are experiencing, and how the lessons connect to their lives.

Disrupting Mainstream Conceptions of Knowledge

The third theme to emerge from the literature on preservice teachers engaging in action research is the notion of teacher research as a disruptor of mainstream conceptions of knowledge. The notion of disruption of traditional concepts of knowledge lies at the heart of critical teacher inquiry. Traditionally, a hierarchical ranking of knowledge exists between the knowledge generated by academics as opposed to the knowledge generated by teachers, with academic knowledge claiming the higher, more valued positioning (Roulston et al., 2005). As teachers move into the position of researchers and knowledge generators, there is an inherent resistance to

the established hierarchy of knowledge. Across the literature there was support for this disruption, anchored in the critiques of the neoliberal agendas and approaches that led to the proliferation of scripted curriculums and “teacher as technician” views of teaching. However, beyond supporting this disruption, the studies pointed to evidence of the struggle teachers experienced as they attempted to push back against these demeaning and disqualifying views of teacher research and teaching. Fifteen articles explored this theme to varying degrees; however I focused on eight articles that featured this argument more prominently (Choi, 2011; Crawford-Garrett et al., 2015; Hulse & Hulme, 2012; Kitchen & Stevens, 2004; Kizilaslan & Leutwyler, 2012; Mok, 2016; Moran, 2007; Roulston et al., 2005).

Roulston et al. (2005) placed action research in context against the backdrop of the debate over the definition of educational research adapted by various initiatives in the U.S. such as the NCLB Act of 2001, a 2002 National Research Council report, *Scientific Research in Education*, and the What Works Clearinghouse. These initiatives cast research as legitimate if it is scientifically based with an emphasis on experimental design. These definitions therefore dismissed qualitative research, delegitimizing it as a valid method of scientific knowledge (Roulston et al., 2005). Roulston et al. (2005) made the case that based on these definitions, research that is valuable to teachers only answers a causal question using experimental methods. Action research is not meant to test hypotheses, be reproduced, or generalized to different populations, it does not align with the scientific research definitions and is therefore a marginalized and devalued method of research. Zeichner (1993, as cited in Roulston et al., 2005) argued this point since 1993, contending that action research has not been able to disrupt the power differential that exists between academic educational research and practitioner research.

Although some scholars have called for teachers to be included in the generation of educational knowledge, teacher research is not often included in academic literature (Choi, 2011). Instead, teachers are viewed as inadequate in terms of conducting educational research. Teacher research and knowledge are often considered less valuable than research conducted by academics. The validity and rigor of teacher-research is frequently questioned by scholars and is categorized as inferior research (Choi, 2011). Teachers are deemed the consumers while academics are deemed the producers, strengthening the hierarchical divide between teacher generated and academically generated knowledge (Roulston et al., 2005). Roulston et al. (2005) concluded with a powerful argument, “Teacher-research as a form of inquiry is still being defined as the illegitimate offspring of educational research” (p. 184), as it has yet to garner the value and respect afforded more scientific research.

Supporting this line of argument that teacher-research is not as rigorous as academic research, Choi’s (2011) self-study of her work teaching action research courses in a university setting illustrated the adherence of students to the scientific research paradigm over action research methodology. Preservice teachers in Choi’s (2011) study valued an experimental design and incorporated into their research designs. Preservice teachers failed to comprehend the foundational differences between action research and scientific research and they did not value the iterative cycles in action research, which promotes deeper analysis by the researcher as it complicates initial questions and wonderings. The preservice teacher positioned themselves as scientific researchers, situating their inquiries in traditional research definitions and approaches. In this study preservice teachers embraced the new paradigm of teacher research as a way of knowing but struggled to grasp the complexities of action research as they clung to traditional and positivist approaches to research. Choi (2011) hypothesized that this adherence to

experimental approaches to research may have been a result of a lack of exposure to and understanding of the epistemology of action research. She reflected that perhaps in her courses there was too much emphasis on research skills and insufficient emphasis on inquiry skills.

Hulse and Hulme (2012) took a different approach to the disruption of the knowledge hierarchy between teachers and academics. They argued that engaging preservice teachers in action research nurtured a view of themselves as “agentive creators of professional knowledge” (p. 324), fusing the notions of agents of change with the disruption of the traditionally held conceptions of knowledge. Hulse and Hulme (2012) contended that engaging preservice teachers in action research positioned them as disruptors who challenge long held assumptions, beliefs, practices, and the knowledge hierarchy. Preservice teachers in this study viewed professional knowledge as evolving rather than static, and saw themselves as contributors to the process of knowledge generation. Within this study, preservice teachers struggled to become knowledge generators as opposed to consumers which in turn nurtured agency to continue the struggle against the devaluing views of teachers and teacher knowledge. Their experience of struggle led to the generation of knowledge and the development of agency.

This argument is also taken up by Crawford-Garrett et al. (2015) in their qualitative case study of three preservice teachers engaged in action research during their student teaching practicum. They considered the ways in which teacher research can challenge the dominant paradigms in current educational policies, which offer a one-size-fits all approach to teaching and learning and to issues of inequities that plague our current educational system. Crawford-Garrett et al. (2015) called for a revisioning of the teaching profession starting in teacher preparation programs. They proposed the inclusion of frameworks by teacher educators throughout all education courses, not just as final projects or capstone projects, that positioned

teachers as intellectuals, researchers, and problem-solvers capable of innovating and transforming localized knowledge and practice through systematic investigation such as action research. This reinvention of teacher education could nurture the intellectual habit of inquiry among preservice teachers and disrupt the hierarchy of knowledge, privileging the knowledge generated by teachers equally with the knowledge generated by academics. Crawford-Garrett et al. (2015) concluded that treating teacher generated knowledge and academic knowledge equally has the potential to be a catalyst for an authentic professionalization of the teaching profession.

The remaining four articles discussed the notion of ‘teacher as researcher’ with the power to disrupt and reorient the traditional views of knowledge generation and production (Kitchen & Stevens, 2004; Kizilaslan & Leutwyler, 2012; Mok, 2016; Moran, 2007). In Mok’s qualitative study of preservice music teachers in a Hong Kong university engaged in action research in their clinical placements, analysis indicated that one of the many outcomes of the action research was the nurturing of a researcher’s disposition in the preservice students and the habits of mind associated with inquiry and research. The struggles preservice teachers engaged in influenced their dispositions towards knowledge generation and ways of knowing about teaching. Furthermore, Kizilaslan and Leutwyler (2012) argued that in their review of three teacher education programs in Israel, Australia, and America, where preservice teachers engaged in action research as part of their coursework, the notion of “teacher as researcher” was vitally important to the way preservice teachers constructed their teacher role. The choice to include action research across these varied contexts spoke to the view of teachers as “producers of knowledge” who reflected on pedagogical thinking and questioning, worked to integrate theory and practice, and had the ability to contribute and further theory based on their research. The authors pointed to the small conferences held at the conclusion of the courses, where preservice

teachers shared results and insights gained during the action research process. This conference was a clear indication that the universities valued teacher research, the knowledge that teachers generated as they engaged in action research, and the importance of sharing and disseminating that newly acquired knowledge. This conference was a clear indication of a shift in university perceptions of knowledge, taking on a view of teacher knowledge as valid and valued.

Set in an early childhood methods course, Moran (2007) used a case study methodology to follow preservice teachers as they engaged in cycles of collaborative action research that were focused on the implementation of long-term projects. The goal in the course aligned with the goals of critical teacher inquiry, to use teacher research as a means of shifting teacher knowledge from outside a teacher's world to inside that world. Moran (2007) found that the preservice teachers developed the desire to know more, share their practice with peers, and revise activities as they incorporated their new understandings and knowledge. A change took hold among the preservice teachers, one marked by the way in which they positioned themselves as holders and generators of knowledge as opposed to consumers who take externally generated knowledge and apply it to personal practice.

Finally, Kitchen and Stevens (2004) applied an emancipatory lens towards their analysis of preservice teachers engaging in action research. They articulated the position that teachers can research their own practice and apply their findings to further develop and build on educational theory and contribute to the professional knowledge base of education. They advocated for a change in the approach to knowledge generation traditionally held by universities, academics, and the teaching profession, which casts teachers as subordinate technicians rather than intellectual professionals and viewed the inclusion of action research initiatives in teacher education programs as an important step in bringing forth this change.

Within this theme of disrupting mainstream conceptions of knowledge, the notion of change is prominent. Across the literature, there was a call for change and disruption to the current hierarchy of knowledge production and research. However, what is interesting about this change is that it not only needs to take place within the structures surrounding education scholarship, but it also needs to occur in the structures of teacher education programs and within teachers themselves. Just as Cochran-Smith and Lytle (1992) sought change in educational approaches to ways of knowing and knowledge production through teacher research, these studies offered examples of attempting that change through the incorporation of action research in teacher education. This change is a reorientation of educational knowledge, of teacher research, and of the intellectual abilities of teachers. If we as teacher educators do not hold these views, how will we be able to nurture them in our preservice teachers? This change needs to occur multi-directionally, from the top down and from the bottom up.

Challenges

Across the literature, many challenges were noted when preservice teachers were asked to engage in action research. Time to conduct the action research was the most oft noted challenge stated in the literature, with 14 out of the 30 articles referencing this challenge (Adams, 2016; Davis et al. 2018; Faikhamta & Clarke, 2015; Gitlin et al., 1999; Gore & Zeichner, 1991; Hulse & Hulme, 2012; Kennedy-Clark et al., 2018; Lattimer, 2012; Levin & Rock, 2003; Moran, 2007; Price, 2001; Smith & Sela, 2005; Stern, 2014; Ulvik & Riese, 2015). With the demands of clinical work and coursework, preservice teachers routinely struggled to find the time to engage in cycles of action research. A second challenge frequently noted in the articles was issues with coherence, cooperation, and lack of support between and from mentors, universities professors, and cooperating teachers (Conner-Zachocki & Dias, 2013; Gitlin et al.,

1999; Kennedy-Clark et al., 2018; Lattimer, 2012; Levin & Rock, 2003; Price, 2001; Ulvik & Riese, 2015). Cooperating teachers did not always understand the goals and process of action research, the culture of the contexts that the action research was situated in was not always receptive to the work, and at times the lack of coherence between the stakeholders was a frustrating experience for preservice teachers.

Beyond these more typical challenges, two critical issues emerged that were specific to the work of preservice teachers engaging in action research. These challenges were issues of power found in the preservice teacher and cooperating teacher relationship and the dominant culture of teacher education programs. Both explicitly impacted the quality of the action research preservice teachers engaged in during their clinical placements.

Issues of Power

Price and Valli (2005) made a strong argument regarding the powerless position preservice teachers hold as they discussed the attempts of preservice teachers to engage in action research in various contexts. They acknowledged the problematic view of preservice teachers as agents of change, as their status as novices made it very difficult to bring about change in classrooms and even more so in school structures and climates. As preservice teachers, they struggled to view themselves as professionals, making the leap to agents of change within that profession that much more difficult (Price & Valli, 2005). Vanessa, one of the cases analyzed in Linda's class, was concerned about the pull-out program in her second-grade classroom, specifically the classwork missed during pull-outs and whether the work completed during the pull-out sessions was effectively tied to classwork. Beyond these concerns, Vanessa struggled as she felt her action research topic critiqued and criticized established school practices. Ultimately, Vanessa dropped this topic as she felt it was too controversial and "politically not correct" (p.

65). She felt presumptuous in her challenge of established school structures and felt that she was “stepping on other people’s toes” (p. 65). Her decision to abandon her topic spoke directly to the position of powerlessness Vanessa and most preservice teachers hold during clinical practice. Her positionality prevented her from becoming an agent of change regarding this school practice.

As stated in the title of the article, *Colliding Theories and Power Differentials: A Cautionary Tale of Conducting Action Research While Student Teaching*, Conner-Zachocki and Dias (2013) narrated a cautionary tale, highlighting the power struggles encountered by a preservice teacher who engaged in action research during her clinical placement. Danielle, the subject of the study, planned on implementing a new literacy approach in her fourth-grade classroom. As she began to share the details of her unit with her cooperating teacher, it was clear that her cooperating teacher was uneasy with the plan. Additionally, there was a second preservice teacher in the classroom, Tammy, who expressed concern over pushing back against the cooperating teacher’s advice and thoughts. Tammy felt her responsibilities were to her cooperating teacher and was concerned about how resisting her advice would negatively impact their relationship. Ultimately, Danielle felt overwhelmed by the tensions the action research brought to her clinical experience and abandoned the project. She did not have the power to push back against her cooperating teacher who held the power in the relationship by virtue of her status as evaluator, classroom teacher, and experienced educator. This power differential subsequently defined the course of the work Danielle sought to engage in and greatly limited her opportunities for inquiry, growth, and innovation in her placement as a preservice teacher.

Lattimer (2012) also discussed issues of power encountered by preservice teachers as they attempted to engage in action research in their placements. Students reported concerns related to the dynamic between themselves and their cooperating teacher and the lack of support

their work received within the relationship. Some preservice teachers encountered resistance to their action research work as they were not afforded the flexibility and space within the classroom to conduct meaningful action research. Stern (2014) supported this claim as she noticed that many of her students struggled to claim the space to conduct action research as a result of their “limited authority as classroom agents of change” (p. 29). As a result, Stern (2014) saw the need to expand the parameters of the action research moving to practitioner research and finally to practitioner inquiry. One preservice teacher from Smith and Sela’s (2005) study revealed what sometimes motivates the resistance from cooperating teachers in that she, “found it difficult to involve my colleagues: they wanted to ‘hide’ the problems” (p. 303).

When cooperating teachers are unwilling to interrogate their practices, are defensive about their teaching, resistant to deep reflection and analysis of their pedagogy, and strictly adhere to the prescribed curriculum and standards, there is little space available for innovation through action research. Because cooperating teachers serve as evaluators, are experienced teachers, and are in control of the classroom, preservice teachers do not have the power to push back against their cooperating teachers. Therefore, action research, inquiry, and change do not flourish and develop in this environment. This is a challenge that speaks to the structures of clinical work, the climates of the placements, and the positioning of preservice teachers, all pieces that need to be considered when asking preservice teachers to engage in action research during clinical placements.

Culture of Teacher Education Programs

Three articles across the literature focused on the challenge that the dominant culture of teacher education programs presents for preservice teachers engaging in action research (Choi, 2011; Faikhamta & Clarke, 2015; Stern, 2014). One of the three main claims that Choi (2011)

made in her self-study was that prevailing cultures of teacher education programs create resistance to the enactment of action research. Choi (2011) offered a harsh critique of the prevalent culture in teacher preparation programs when she posited that many teacher education programs “regard teachers as knowers, not learners” (p. 40). Here, Choi (2011) used Freire’s (1970) assertion that all are ‘knowers’ as a negative, juxtaposing it to the idea that all can be learners, thinking more about the acts that lead to knowledge and less about how knowing something positions the individual. Teachers are not asked to be inquisitive and therefore remain more comfortable answering questions rather than posing them. Typically, inquiry is not at the center of teacher education but floats around the periphery.

Similarly, Stern (2014) found that her preservice students were also conditioned to look for the ‘best’ or ‘right’ answers to their teaching questions after years in teacher education programs. They struggled with the uncertainties their action research brought them and the layers of complexities it revealed. Instead, they wanted clear cut solutions to their inquiries. The preservice teachers were accustomed to having the professor teach as the expert and they act as the learners. They found it difficult to shift from this traditional approach to learning to developing the capacity to learn from their own experiences. Stern (2014) found that generating a research question seemed to be the most challenging aspect of the action research project for some preservice teachers because they had not been asked to question, inquire, or critique throughout their preservice education.

Faikhamta and Clarke’s (2015) findings supported that of Stern’s (2014) and Choi’s (2011) in that the preservice teachers in Faikhamta and Clarke’s qualitative study struggled to move away from experimental designs of research to a more complex, qualitative approach. These preservice teachers also wanted to have their questions answered definitively; however,

experimental research is limited in that it can answer only questions related to educational practice and effectiveness. The preservice teachers in this study were entrenched in the process/product paradigm, creating challenges as their professors pushed them, through action research, to struggle to inquire into increasingly complex and multilayered questions and issues in the classroom. The culture of academic research as well as the culture of their teacher education program limited preservice teachers' capacity and desire to see beyond the 'right' answer and to pull the curtain back to reveal the intricacies, layers, and interconnectedness of the complexities of students' lives, learning, and development.

This challenge brings us back to our original discussion on the practical versus critical intent of action research. When professors ask students to engage in action research with a practical intent, the questions are casual in nature, looking at the effectiveness of the teaching. When professors encourage a more critical intent behind the action research, the questions appear to be more complex, more layered, and more connected to issues of equity and justice. Much of the action research preservice teachers engaged in appeared to hinge on the tenets of the education program they were embedded in and the work preservice teachers had been asked to engage in throughout their coursework in the program.

The apprenticeship model of teacher education emphasized imitation rather than asking preservice teachers to engage in the struggle to develop personal approaches and understandings to teaching through authentic classroom experiences and evidence of student learning. Furthermore, Choi (2011) asserted that often in teacher education programs, preservice teachers are socialized and conditioned to accept norms, imitate experienced teachers, and develop best practice. This culture limits preservice teachers' abilities and opportunities to engage in personally meaningful inquiry and rigorous, systematic investigation and analysis. Just as Hulse

and Hulme (2012) advocated for a shift in the teacher education programs towards the development of intellectual curiosity and approaching practice with intellectual rigor, Choi (2011) critiqued teacher preparation programs' conceptions of knowledge and intellectual struggle. Choi (2011) suggested a different conception of teacher knowledge, one based on the struggle of inquiry, the messiness and layers that define teaching and learning, and the skills teachers need to generate educational knowledge through systematic inquiry such as action research.

There is an untapped arena in teacher education, that of teachers as intellectuals, generators of knowledge, and critical consumers of knowledge. The methodology of action research, which asks teachers to struggle with classroom problems, generate personal learning experiences, and systematically construct professional knowledge to share with the educational profession, speaks to this untapped arena. Creating the space within education courses for preservice teachers to experience intellectually rigorous pursuits disrupted the dominant culture found in many teacher preparation programs while it promoted the notion of "teachers as researchers," members of a profession, who contribute to the canon of educational knowledge. By moving away from simple causal relationships within teaching and learning toward a more complex, messy, multidimensional way of thinking about teaching, programs can help preservice teachers become effective agents of change who inquire into their teaching and student learning as a foundational piece of their practice. Engaging in action research required preservice teachers to live with the complexities of a classroom, unearth the messiness of teaching and learning, and to develop the skills to uncover the layered realities of teachers and students. Many current teacher education climates do not support this approach to learning which presents a challenge to preservice teachers as they attempt to conduct action research in their clinical placements.

Literature Review Conclusion

Weaved throughout the pages of the studies included in this review were the tenets of critical teacher inquiry. Within these studies, preservice teachers purposefully and systematically inquired into classroom life with the aim of improving teaching and learning, albeit driven by varied intentions. In multiple studies there was evidence of the ways in which preservice teachers engaged in the struggle of inquiry to arrive at new understandings and knowledge about their students, their teaching, and educational structures. Many articles pointed to action research and teacher inquiry as a means of disrupting the scholar/teacher hierarchy, repositioning teachers as brokers and generators of teacher knowledge as opposed to consumers of teacher knowledge. Finally, the paradigm of ‘teacher as technician’ was clearly rejected within the literature on preservice action research, laying out a vision of teachers as capable decision makers who should drive curriculum, practice, and ultimately policy as a result of the knowledge produced through their contextualized experiences and inquiries. There were emancipatory qualities in action research that shifted and altered traditional approaches and epistemologies of knowledge. In our current climate of neoliberal politics and agendas, educational systems and structures exist that restrict and limit teacher knowledge, capacity, and potential. In many of the above studies, action research disrupted these limiting forces within education as it created a new way of knowing and new sources of knowledge production within the educational field.

The one principle of critical teacher inquiry that was left unexplored was the reorientation of teacher knowledge production. A gap in the literature exists surrounding this reorientation, which left me wondering what preservice teachers think about when they reflect on how they make meaning and generate knowledge as teachers. There are a multitude of examples across the literature of how teachers changed practice, from both a practical and critical perspective, as a

result of conducting action research. However, I was interested in understanding how their thinking changes and shifts with regard to how they produce knowledge as teachers and make meaning of their inquiry experiences. Critical teacher inquiry placed the authority to think, pose questions, and generate knowledge into the hands of teachers, repositioning them as sources of knowledge production. How do preservice teachers think about and experience this repositioning or reorientation as they begin to generate teacher knowledge through their action research?

Freire's (1970) "problem-posing" education paradigm is the foundation for action research. The act of asking questions and problematizing one's experiences and participation in this world, is what undergirds action research. Asking preservice teachers to engage in action research provided them with the opportunity to experience problem posing education in action and experience a shift in the traditional power differential between scholars and teachers as they generated authentic, valuable knowledge about teaching. Additionally, there was a shift in the traditional notions of teacher as holder of knowledge and power to a paradigm in which power, learning, and knowledge is shared between the teacher and the students. These shifts beg the preservice teacher to reconceptualize their understanding of knowledge generation and bring about a reorientation of the way educators think about knowledge production.

Freire's (2000) notion of the "unfinishedness of our being" (p. 52) is the battle cry of action research. As Freire (2000) so eloquently articulated, we are all becoming, changing who we are, what we believe, and how we live our lives. Action research is one tool preservice teachers can develop as they engage in the process of becoming, improving, and enhancing their teaching practices, student learning, educational hierarchies, and ultimately policies that currently stifle teacher creativity, questioning, decision-making, and knowledge production.

Chapter 3: Methodology

The purpose of this dissertation study was to investigate how the experience of action research in preservice teacher education fosters a critical teacher inquiry stance. I was interested in understanding how conducting action research influences the ways in which preservice teachers thought about how they made meaning and generated knowledge as teachers and how they developed as problem posers. In order to examine this experience, I conducted a qualitative research study which ultimately contributed to understanding how preservice teachers think about the ways in which they construct meaning and knowledge as teachers and how they develop a critical inquiry stance.

According to Taylor et al. (2016), “The term *methodology* refers to the way in which we approach problems and seek answers” (p. 3). The methodology of a study is shaped by a researcher’s assumptions, purposes, and interests, which all guide how a study is conducted (Taylor et al., 2016). As stated above, the purpose of this study was to develop a deeper understanding of the meaning preservice teachers made of their experience engaging in action research and the ways in which action research supported the development of a critical inquiry stance in preservice teachers. Thus, a qualitative research design was appropriate for this study as qualitative research methodology focuses on how individuals make and attach meaning to their experiences and activities in their social worlds (Merriam & Tisdell, 2016; Taylor, et al. 2016). Furthermore, the epistemological perspective that qualitative methods draw from is constructivist in that the purpose of the study is to describe, interpret, illuminate, and understand the meaning participants make of their lived experiences and constructed realities (Golafhsani, 2003; Merriam & Tisdell, 2016).

There are several characteristics that define qualitative research, which all align with the assumptions and purpose of my study. First, as stated above, qualitative research seeks to understand the meaning individuals attach to the experiences in their lives. Second, there is an inductive approach to understanding lived experiences and knowledge generation in qualitative methods as researchers arrive at insights and understandings based on data collection and analysis rather than using data to assess established theories, models, or hypotheses (Taylor, et al. 2016). Lofland (as cited in Taylor et al., 2016), described this inductive process as “emergent analysis” (p. 8), highlighting the creative and intuitive nature of the process. The intention that guided this research was not to test hypotheses or theory, instead I was looking to investigate preservice teachers engaged in action research to understand how preservice teachers think about the meaning and knowledge they make through their experiences and how that contributes to and influences the development of a critical inquiry stance.

Additionally, qualitative research is described as naturalistic because researchers interact with and observe participants in a natural, unobtrusive manner (Lincoln & Guba, 1985). According to Patton (as cited in Golafhsani, 2003), qualitative research is defined as “research that produces findings arrived from real-world settings where the, “phenomenon of interest unfold naturally” (p. 39). By listening to participants talk about their experiences, examining the documents they produce in their everyday lives, and observing people in their natural setting, qualitative researchers gain firsthand knowledge of their participants’ thoughts, experiences, and interpretations resulting in a close fit between the data and participants lived experiences (Taylor et al., 2016).

The real-world setting I researched was situated in a teacher education classroom in which preservice teachers conducted an action research cycle based on the work they were

engaged in during their student teaching placements. The work unfolded naturally, as the action research was an assignment embedded in the course curriculum and the course expectation was that all preservice teachers will conduct action research. There was no manipulation of the experience, rather I observed and analyzed the experience as it evolved authentically and in context. Therefore, in my attempt to better understand the meaning preservice teachers made of their highly contextualized work conducting action research, qualitative methods were appropriate for this study and supported this process.

Qualitative research also seeks out and values different perspectives and vantage points, deeming all points of view as worthy of investigation (Taylor et al., 2016). All perspectives, regardless of power and position, are valued, giving voice to those who hold power and to those who are powerless. I was drawn in particular to this characteristic of qualitative research, as the hierarchy of knowledge production was called into question throughout this study and the notion of valuing all knowledge, produced by all educational stakeholders, holds a place of prominence in my approach to and framing of this study.

Finally, qualitative research is viewed as a craft rather than a standardized set of rules to be militantly followed (Miles et al., 2014). There is a flexibility in qualitative methods, as the research drives the methods, as opposed to the methods driving the research (Taylor et al., 2016). The design of qualitative research responds to the changing conditions and progress of the study; it emerges alongside and in response to the research process (Merriam & Tisdell, 2016). This characteristic serves as another point of alignment with my research in that I approached the research with a sense of wonder, unsure of what I would unearth, opened to the surprises, discrepancies, and possibilities I encountered during the process.

In the following sections I describe the design and context of the study, how I recruited participants, the data collection methods I used, and my approaches to data analysis. I will conclude with a discussion of the validity and reliability of the study, my positionality, and the ethical considerations.

Design of the Study

The design of the study was inductive, with the researcher being the primary instrument of data collection and analysis (Merriam & Tisdell, 2016). This design served as a road map of how I expected to arrive at a set of conclusions to the proposed research questions. As Herr and Anderson (2015) stated, “The reality of how a study evolves is often not in keeping with the initial planning or vision a researcher has proposed” (p. 89). I engaged in this research from a stance of openness, flexibility, and willingness to follow where the study took me, anticipating that there would be needed alterations in response to the data, analysis, and overall research process.

Setting and Participants

The study was conducted at a large State University in Northern New Jersey in the Secondary and Special Education division housed in the Teaching and Learning Department. The teacher education program offered undergraduate and graduate teacher certification programs with certification in all content areas. The participants in this study were selected using a purposeful sampling. Purposeful sampling is done to ensure that the participants are typical, meaning they do not represent deviant or unusual samples. The sampling was purposeful to enable me to focus the study around a sample that would yield as much insight as possible (Merriam & Tisdell, 2016). The criteria for participant selection was all participants must be in a full-time student teaching placement and enrolled in the accompanying required course called,

Advanced Seminar in Inclusive Pedagogy, in which I was the teacher of record, to ensure that they would be conducting action research during the period of the study. Additionally, participants could not have held a position as a teacher of record, as that experience might have influenced how preservice teachers thought about their meaning making and knowledge production. Preservice teacher content area and grade level were not criteria as I did not believe these factors play a key role in developing a critical inquiry stance.

The number of participants that help determine an appropriate sample size are guided by the goal of reaching a saturation point so that data collected will become redundant (Merriam & Tisdell, 2016). Merriam and Tisdell (2016) suggested specifying a minimum sample size to ensure a reasonable amount of coverage considering the proposed study, knowing this number may need adjusting over the course of the study. I determined that a sample size of five preservice teachers served as an appropriate sample size, as I was not necessarily looking to achieve only a point of saturation, but was also interested in unearthing both similarities and differences, and the discrepancies between the two, in the preservice teachers' experience conducting action research. Ultimately, I secured eight participants that were willing to participate in the study and met the above criteria. The participants had diverse experiences with conducting action research and they thought about their experiences in a multitude of ways. I believe it is in these diverse voices that I arrived at rich and nuanced answers to my research questions.

The course that I was teaching and from which I was recruiting participants, Advanced Seminar in Inclusive Education, was a required seminar-style course which supported preservice teachers' final full-time student teaching placements in K-12 classroom in urban and suburban public schools across Northern New Jersey. The course was structured to support the

investigation of democratic classroom practices regarding planning and implementation of curriculum, instruction, and assessment of student learning. The course aimed to help students apply the skills and knowledge they developed in their program to their work in the classroom. A major component of the course was sharing critical incidents, or experiences they had in their placements, to build preservice teachers' ability to make professional judgments and decisions, which served as a foundation for the action research conducted during the last six weeks of the course.

Embedded in this course is an assignment that asks preservice teacher to engage in an action research cycle. These action research assignments create a space for preservice teachers to experience "problem posing education" (Freire, 1970) as they identified a localized and contextualized problem, researched ways to address the problem, took action, collected data, and reflected on the results. The action research cycle provided preservice teachers with a tool to systematically reflect on their work with the goal of improving and changing it. Although traditionally the action research process is iterative, participants only cycled through the action research once as a result of time restraints. Preservice teachers concluded their work with a class presentation of their action research and a reflection paper.

I sent out the initial recruitment email to all preservice teachers enrolled in the course at the beginning of the course, clearly stating that they had no obligation to participate and that I would not begin data analysis until after the semester concluded and grades were assigned. I explained why I was conducting this research, and outlined the purpose of the study. Additionally, the email stated the possible benefits to participating in the study and the commitments involved, such as: (a) Participation in a pre-action research focus group; (b) Audiotaping of action research presentations; (c) Submitting action research assignments as data

for the study; and (d) Participation in a focus group discussing their experience conducting action research at the end of the semester.

Prospective participants who expressed interest in the study were emailed a consent form to be read carefully by the participant. The consent form informed participants of all risks involved in participating in the study and stated that they can leave the study at any time. The participants, who are all adult respondents, signed the consent form, agreeing to participate in the study and submitted the consent forms to me via email.

Data Collection

Merriam and Tisdell (2016) posited that data collection is guided by the purpose and questions of the study, the researcher's theoretical orientation, and the sample selected. As the sample in this study was comprised of preservice teachers, the data sources created access to preservice teachers' voice and thinking. Critical teacher inquiry, one of the key tenets of my theoretical framework that guided this proposed dissertation study, was the valuing of teacher knowledge arrived at through experience. Therefore, my data sources honored and pursued the knowledge generated by prospective teachers as they engage in action research. I was interested in understanding my participants' experiences, "from their own frame of reference and experiencing reality as they experience it" (Taylor et al., 2016, pp. 7–8), thus, my data sources shed light on participants' views and provided firsthand accounts of the ways in which they framed and made sense of their action research experience. With the above in mind, I collected data in the form of transcripts from the pre and post-action research focus groups, preservice teacher writing assignments about their action research that included an action research proposal, research design, presentation, and final reflections, and the audio recording and transcriptions of action research presentations. Additionally, I maintained a researcher's journal to "capture your

thinking process while you are engaged in it” (Luttrell, 2010, p. 469) and documented the evolution of my thoughts and reflections throughout the study. These data sources enabled me to answer the above research question and sub questions as they supported an inductive approach to the research, and revealed preservice thinking and experience, and as they confirmed that the themes and patterns that emerged from the data resonated with participants.

Pre-Action Research Focus Groups

Data collection began at the start of the semester with participants engaged in a focus group discussion on Zoom, prior to engaging in action research. The questions that guided the discussion during the focus group consisted of six open-ended questions that focused on and were related to the notion of critical teacher inquiry, scholar/teacher hierarchy of knowledge production, and action research. The questions were structured in an open-ended format, to provide the participants with the greatest opportunity to, “define the world in unique ways” (Merriam & Tisdell, 2016, p. 110). The Zoom session was recorded, transcribed, and stored on a password-protected computer. See Appendix 1 for sample questions for the pre-action research focus group.

Documentation

The action research assignments that preservice teachers produced for the seminar course were valuable because they revealed their understanding of action research, the issues they chose to problematize, reflections on their experiences, and the ways in which they made meaning of their action research experiences. The assignments were also maintained in a password-protected computer. These documents are considered personal, meaning they, “refer to any first-person narrative that describes an individual’s actions, experiences, and beliefs” (Bogdan & Biklen, 2011, p. 133). These data sources exposed the ways preservice teachers understood their action

research experience, as they “can tell the researcher about the inner meaning of everyday events. Such data may yield descriptions of highly unusual or idiosyncratic human experiences” (Merriam & Tisdell, 2016, p. 166). Although these documents can be subjective, in that the preservice teachers placed importance on the specific aspects of the experience that they were writing about, they also were reliable accounts of the participants’ perspectives and thought processes (Merriam & Tisdell, 2016). Finally, these documents provided a record of the development of a critical teacher inquiry stance among the participants and tracked changes that took place during the action research experience.

Audio Recording of Action Research Presentations

My next data source was a Zoom recording of preservice teachers’ action research presentations which were transcribed. All transcripts were maintained in a password-protected computer. I recorded participants’ presentations and all follow up questions and discussion. These recordings were relevant to the research in that they captured how preservice teachers discussed their action research, revealing another layer of how they thought about and made meaning of their action research. What was of particular interest to me in the presentations was how preservice teachers articulated and expressed their role in the inquiry process, if and how they positioned themselves as problem-posers, and how they constructed their understanding and knowledge as a result of their action research.

Post-Action Research Focus Group

After the action research was completed, I conducted a second focus group discussion with all participants. This focus group was also held on Zoom, and was recorded, transcribed, and stored on a password-protected computer. The recording of the Zoom was deleted once transcribed. This focus group consisted of 11 questions that asked preservice teachers to reflect

on and share their experience conducting action research, their opinions on teacher knowledge production, the ways in which the action research influenced their teaching stance, and their thinking on making meaning in a classroom. One of the purposes of the post-action research focus group was to compare initial responses with these secondary responses, specifically looking for any evidence of the development of a critical inquiry stance and changes to the ways they thought about and valued the teacher knowledge they generated through their action research experiences. This data source served as a means of systematically requesting feedback about the data collected and the meaning and conclusions students drew about their action research experiences (Maxwell, 2010). During this focus group, participants shared their opinions about the action research process and expressed the conclusions and meaning they made about their experience. See Appendix 2 for sample questions for the post-action research focus group.

Researcher Journal

As the collection of data took place over the course of a 14-week semester, I needed to document my thought process throughout this period. Ortlipp (2008) noted that reflexivity has become a widely accepted approach to qualitative research and as such, researchers need to document their actions, choices, and experiences during the research process. Additionally, a researcher journal helps the researcher consciously acknowledge the assumptions, biases, and values she brings to the research process, revealing and owning the researcher subjectivities that exist and exert control over the researcher (Ortlipp, 2008). As I conducted this research, I kept a researcher journal and documented my thought processes, decisions, and ideas to myself and my reader to create a high level of transparency of the research process. This journal provided organization of my thoughts as it documented a, “research ‘trail’ of gradually altering

methodologies and reshaping analysis” (Ortlipp, 2008, p. 696). Table 1 outlines the data sources and the specific purposes of these sources.

Table 1

Specific Purposes of Data Sources

Data Source	Purpose of Data Source
Pre-Action Research Focus Group	<ul style="list-style-type: none"> • Understand how preservice teachers thought about the notion of critical teacher inquiry, scholar/teacher hierarchy of knowledge production, and action research before engaging in an action research cycle • Examine how preservice teachers thought about meaning making before engaging in action research • Understand what assumptions preservice teachers held with regard to teacher knowledge production before engaging in action research
Post-Action Research Focus Group	<ul style="list-style-type: none"> • Understand how preservice teachers thought about the notion of critical teacher inquiry, scholar/teacher hierarchy of knowledge production, and action research after engaging in an action research cycle • Examine how preservice teachers thought about meaning making after engaging in action research • Understand what assumptions preservice teachers held with regard to teacher knowledge production after engaging in action research • Gauge the way preservice teachers reflected on their experiences conducting action research • Examine the ways preservice teachers thought about teacher knowledge production after engaging in action research • Understand and evidence the ways in which the action research influenced their development of a critical teaching inquiry stance
Documentation Action research proposal, product, and presentation	<ul style="list-style-type: none"> • Gain a specific understanding of the action research work, the issues participants choose to problematize, and the ways in which they make meaning of their action research experiences
Documentation Final Reflection	<ul style="list-style-type: none"> • Reveal participants perspectives and thought processes on their action research work • Document a record of the development of a critical teacher inquiry stance among the participants • Track changes that took place to participant disposition, thought process, and understanding during the action research experience
Audio Recording of Action Research Presentations	<ul style="list-style-type: none"> • Document how preservice teachers talked about their action research, revealing another layer of how they thought about and made meaning of their action research • Examine how preservice teachers articulated and expressed their role in the inquiry process and if and how they positioned themselves as problem-posers

	<ul style="list-style-type: none"> • Understand how they went about making meaning from their action research experience
Researcher Journal	<ul style="list-style-type: none"> • Document my thought process throughout this research period • Understand how the assumptions, biases, and values I bring to the research process exerted control over the research • Make my thought processes, decisions, and ideas visible, creating a high level of transparency of the research process, and recording a research trail

Data Analysis

Although insight that emerges from the analysis during data collection can serve to direct next steps in the research process, as the process is iterative and dynamic (Merriam & Tisdell, 2016), I was unable to begin data analysis until the end of the semester as I was the professor of record for the course within which the data were collected. To ensure the protection and safety of participants, I did not begin analyzing any documentation or transcripts until the end of data collection. Once the semester was complete and grades were distributed, I analyzed the data sources inductively using the constant comparative method (Glaser & Strauss, 1967), looking for themes, categories, and patterns to emerge in the data.

Using the critical teacher inquiry framework as a lens, I used an open coding approach to make sense of the data from the focus group transcripts and the action research documents, as I wanted to maintain an open stance towards the possibilities within the data (Merriam & Tisdell, 2016). I looked for regularities and items of relevance to the study, breaking the data down into codes, assigning these codes to categories, then synthesizing these categories based on commonalities among the codes. This is referred to as axial coding as the codes are clustered around specific points of intersection or axes (Harry et al., 2005). I conducted a third analytical level of coding, referred to as selective coding, where I contemplated how the categories relate to one another, intuitively looking for the underlying themes or stories of the categories (Harry et al., 2005).

Additionally, Saldana's (2009) work on writing analytic memos informed my analysis as analyzing my researcher journal provided me with the opportunity to engage in conversation with myself about my data. Research memos are a researcher's, "private and personal written musings before, during, and about the entire enterprise" (p. 32), which allows the researcher to raise questions, make connections, problem solve, understand relationships, and generate understanding about the data collected. As I analyzed my researcher journal, I recorded researcher memos as a way to keep track of my thinking, questioning, wondering, and understandings about the way the data fits together. These memos were not conclusive, rather suggestive of the ideas and thoughts I had along the process of data collection and analysis. I used my research memos to begin to synthesize the data, which allowed me to think more critically about the relationships between the data, and develop more precise categories and emergent themes to answer my research questions.

Validity and Reliability

The goal of all research is the production of valid and reliable knowledge (Merriam & Tisdell, 2016, p. 237). Trusting in the findings and conclusions of a research study is particularly important in applied fields, as practitioners need to trust and have confidence in the results to apply them to their personal context. Qualitative research requires studies to be conducted rigorously and ethically so that the reader has confidence in the way the study was conducted to arrive at the findings (Merriam & Tisdell, 2016). The following section addresses what I did as a researcher to ensure the validity and reliability of my study.

In order to increase credibility and reliability, qualitative studies must include detailed description of the data so the conclusions can resonate with the reader who can conclude that the findings make sense based on the data presented. Further, the findings should reflect reality, in

other words, there should be congruency between the reality of the participants and the conclusions put forth by the researcher (Merriam & Tisdell, 2016). In order to increase the reliability and credibility of my findings in this research study, I collected rich data and employed the strategy of triangulation.

Rich data is defined as data that are detailed and sufficiently varied to capture and reveal a full picture of what is happening in the study (Maxwell, 2010). Participant focus group responses and verbatim transcripts of the action research presentations provided rich data in that they captured participants' constructed reality of their experiences conducting action research as well as a firsthand account of their reflections on the process of action research, their thinking about meaning making, and their understanding of knowledge generation and production. As the findings of qualitative research are not intended to be generalized or replicated, the objective of rich data is to describe and express the participants' interpretation of reality as they experience it (Merriam & Tisdell, 2016). The use of rich data increases the likelihood that the reader will agree, that based on the data presented, the findings are reliable and aligned with the data.

Triangulation is the process of "collecting information from a diverse range of individuals and settings, using a variety of methods" (Maxwell, 2010, p. 284). My data sources included a diverse range of data collection methods, sources, and settings which fit with the above definition of triangulation and allowed me to obtain dependable and consistent data. Using the transcripts from the focus group discussions, classroom documents, and transcripts of action research presentations, I triangulated and crosschecked the data from one source to another. I looked for converging evidence to corroborate or dispute the ideas and understandings in one data source with the ideas and understanding from a second data source, further substantiating

the findings and conclusions of the study and increasing the reliability and credibility of this dissertation study.

The validity of a study is concerned with a reader's ability to agree that the conclusions set forth are reasonable. According to Richards (2015), "good qualitative research gets much of its claim to validity from the researcher's ability to show convincingly how they got there, and how they built confidence that this was the best account possible" (p. 143). As such, I created an audit trail of how data were analyzed, how codes and categories were derived, how decisions were made, and how I arrived at my results throughout the research process. This audit trail was constructed using a researcher journal and researcher's memos, serving as the running record of my interaction with the data, my analysis, and my interpretations.

Finally, as stated above, I triangulated the data to increase the validity of the research. Golafshani (2003) argued that triangulation is a validity procedure that allows the researcher to search for convergence among the various data sources to arrive at themes or categories. As I triangulated the data, I compared the different voices, perspectives, and understandings, and looked for points where the data intersected to move my analysis forward. These points of convergence during the triangulation of the data increased the validity of the study.

Positionality

In my role as researcher, I was positioned as an insider because I was affiliated with the setting and participants of the study, as they were my students. Furthermore, my feedback and comments on participants' action research in the transcripts were studied within the context of this research. I taught this specific course four times in the past few years and was very familiar with the action research assignment embedded in the course. As a result, I had insider knowledge of the action research that has been conducted in the past, the typical demographic and

background of possible participants, and the contexts in which participants will be student teaching. I knew participants for six months prior to the commencement of the study as this course was structured as a sequenced, two-semester course. I also considered myself an insider because I was aware that every professor frames this action research assignment differently in their course, and I had full control over the way in which I constructed, framed, and presented the action research to the students in my class.

Additionally, I brought a certain level of bias or subjectivity to this proposed dissertation study. As I stated previously, I trust in classroom teachers' decision-making, problem-solving, reflecting, and knowledge-generating abilities, as I believe that teachers are the linchpin to educational success for all children. I acknowledge these beliefs as my researcher bias and understand how it affected the validity of this study. As I was the primary instrument for data collection and analysis, I understood that I brought a level of subjectivity to the research and had a responsibility to identify these biases, which I monitored and articulated clearly for my reader, and discussed how they influenced interpretation of the data (Merriam & Tisdell, 2016). I wrote myself into the pages of this dissertation, bringing to bear my subjectivities, my thoughts, and my perspectives, and making them visible through my audit trail, my researcher journal, and my researcher memos. I do not claim to be indifferent in this process; I do however want to approach the research process with integrity, transparency, and honesty.

Ethical Considerations

As this study includes human participants, I obtained approval from the University Institutional Review Board. Participation in the study was on a volunteer basis. Potential participants neither benefited from nor were penalized for agreeing or disagreeing to participate in the study and were free to leave the study at any time without consequence. As I held

authority over the participants as their professor, I did not begin data analysis until the end of the semester, after grades were submitted. I used pseudonyms in all writing associated with the data to protect participants' privacy and confidentiality. All action research assignments and transcripts were stored securely on a password-protected computer. Materials will be kept for three years after study closure and then destroyed.

Timeline

Data collection and analysis began during the fall 2020 semester. The recruitment email was sent out in September and all consent forms were collected by the end of the third week of the semester. The first focus group was conducted during the fourth week of the fall semester. The audio taping of action research presentations took place throughout the month of December. The action research assignments were collected during the second half of the fall semester. The second focus group was conducted after the completion of the semester. Data analysis continued through the following spring. I drafted the dissertation during the spring and summer of 2021 and will be defending the dissertation in the fall of 2021.

Chapter 4: Findings

This qualitative study investigated the work of preservice teachers engaged in action research during their final semester in a teacher education program at a large state university in northern New Jersey. I explored how engagement in action research as a vehicle for critical inquiry influenced the ways in which preservice teachers think about meaning making, generation of knowledge, and problem posing in a classroom. The primary research question that drove this qualitative study was: How does the experience of action research for preservice teachers foster a critical teacher inquiry stance? This overarching question led me to ask the following two more specific sub-questions:

- How does action research influence the ways in which preservice teachers think about how they make meaning and generate knowledge as teachers?
- How does action research allow preservice teachers to make meaning and generate knowledge for themselves and the educational field?

In this chapter, I present the findings along with a detailed explanation of the overarching themes that emerged as a result of the data analysis. Subthemes are explored within each theme and the relationship between themes are identified and analyzed. The guiding theoretical framework, critical teacher inquiry, was used as a lens to frame the analysis of the data and is woven throughout the exploration of themes and subthemes to ground the analysis and presentation of the findings. This framework allowed me to analyze the preservice teachers' action research experiences multidimensionally as they simultaneously developed, enacted, and made sense of their action research. The tenets of the framework drew my focus back to issues surrounding the struggle of inquiry, meaning making in the classroom, reorientation of knowledge, and the disruption of the scholar/teacher hierarchy that exists in education. This framework supported my understanding of the choices, decisions, interpretations, and meaning the preservice teachers gave their inquiry. The critical teacher inquiry framework was also used to analyze and interpret the critical aspects identified in the preservice teachers' action research, allowing me to determine how, when, why, and to what degree preservice teachers developed and took a critical inquiry stance in the work they undertook. The following is the story the data tell.

Themes: Developing a Critical Inquiry Stance, Making Meaning, Generating Knowledge, and Bridging the Space Between

As a result of conducting this study, I came to know and make meaning of the numerous ways in which action research is a vehicle for preservice teachers to develop a critical inquiry stance. These notions have shaped and guided data analysis and findings, as through the action research a space was created for participants to simultaneously enact, make meaning of, and develop, to varying degrees, a critical inquiry stance. Thus, the overarching theme that emerged from data analysis was that of preservice teachers *developing a critical inquiry stance*. All of the subsequent themes, *making meaning*, *generating knowledge*, and *bridging the space between*, contribute to this foundational theme in a multitude of ways.

Analyzing how preservice teachers made meaning of their action research inquiry allowed me to uncover what role their thoughts and meaning making about their inquiry played in their development towards a critical inquiry stance as some participants brought a critical lens to the meaning they made and others brought a far more practical lens. A critical lens is concerned with issues of equity, democracy, and social justice, whereas a practical lens is focused on strategies and ways to effectively improve teaching and learning. Engaging in the praxis of critical teacher inquiry and experiencing the generation of knowledge regarding teaching pedagogy, student learning, and educational theory, contributed to and nurtured the development of a critical inquiry stance in many of the participants. Finally, the theme of bridging gaps follows preservice teachers' thoughts and reflections as they moved from a more practical to a more critical lens of thinking about their teaching and student learning, which also indicated development toward a critical inquiry stance.

The findings, taken in their totality, evidence and narrate participants' journeys as they enacted and developed a critical inquiry stance, revealing the complexity of the work they engaged in, the variability of their experiences, and the disparate meaning they made of their

inquiry. As they enacted critical teacher inquiry, and incorporated critical thinking, reflection, and praxis into their approach and understandings of being an educator, they began to develop a critical inquiry stance.

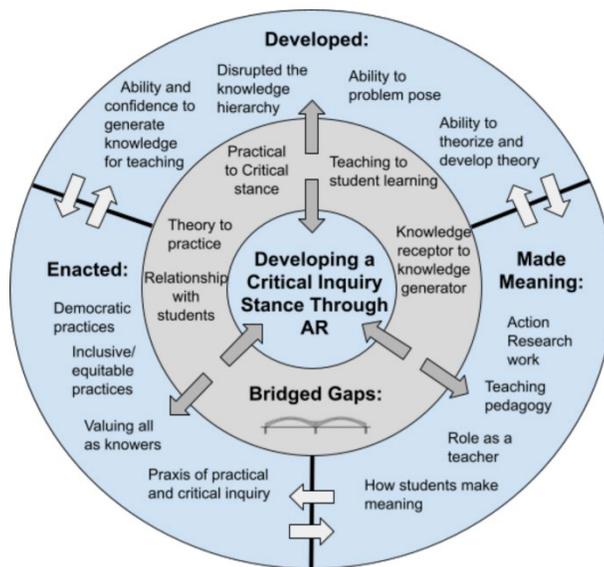
The circular model in Figure 1 presents the themes discussed in the findings section. The model is intentionally circular as the process of developing a critical inquiry stance is iterative, nonlinear, and quite fluid, much like the process of action research itself. Participants' processes of enacting, making meaning, and developing a critical inquiry stance occurred simultaneously, each process exerting influence over the other and contributing to the progression of each process, indicated by the arrows pointing in back-and-forth. As participants enacted action research, they pursued various pedagogical approaches, such as democratic and inclusive practices, which allowed them to move fluidly between practical and critical inquiry. As they enacted action research, they made meaning of the action research process, of their pedagogy, of their responsibilities as a teacher, and of how their students made meaning in their classroom. This meaning making supported the development of participants' abilities to problem pose in contextualized teaching settings, develop theory, and generate knowledge for teaching, which stood as a disruption to the long-established hierarchy of scholarly knowledge over teacher knowledge. As they generated knowledge, they came to make meaning once again of their role as educators, their understanding of who has the power to produce knowledge in a classroom, and not only what pedagogy is effective, but why it is effective.

These three simultaneously occurring processes, enactment, meaning making, and development, allowed preservice teachers to bridge gaps that previously existed in their professional work, between theory and practice, in their relationships with students, between being positioned as knowledge receptors to knowledge generators, and between their teaching

and student learning. As they bridged these gaps, they experienced their inquiry move fluidly from moments of practical inquiry to moments of critical inquiry, depicted by the broken arrows moving between the processes, across the experience of bridging gaps, and finally towards the development of a critical inquiry stance. Figure 1 illustrates the multiple ways in which participants developed a critical inquiry stance through action research, which stands as the core that anchors the subsequent findings. Each participant’s experience was unique, each with its own set of challenges, stumbling blocks, and successes, and each guided by participants’ lived experiences and positionality.

Figure 1

Developing a Critical Inquiry Stance



Description of Action Research in My Course

The data for this study were collected in a seminar I taught in the Department of Teaching and Learning at a university in Northeast United States. The goals of the seminar were to support full-time preservice teachers as they applied the knowledge and skills developed

throughout their educational coursework to their clinical work. As part of this course, I assigned an action research project which asked preservice teachers to identify a problem of practice in their placement, generate an action to ameliorate or respond to the problem, collect data to reflect on the outcomes of the action or intervention, analyze data to arrive at conclusions, and finally, generate new questions based on the completed action research cycle. When presenting the assignment, I deliberately framed the action research as a disruption to the commonly held understanding of the generation of knowledge for teaching by university scholars and researchers, arguing that teachers also had the potential to contribute educational knowledge through the meaning they constructed of their classroom experiences.

There were four written assignments that accompanied the action research project. Students submitted their action research questions along with a narrative describing the context of the question. They submitted an action research plan, presented their action research to the class, and completed an action research reflection paper. These assignments structured the work and helped preservice teachers engage in and complete each step in the action research cycle. Below is a table describing the context, research question, and theme of participants' action research.

Table 2

Context, Research Question, and Theme of Action Research

Participant	Context	Research Question	Theme
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Jillian	9 th Grade Geometry	How does student achievement change when working in small groups?	Students learn from students when a group leader is appointed.
Felipe	Elementary Art	Will the use of visual aids, such as bar graphs created with in-class student data, help increase the frequency of students handing in their assignments?	Students struggle to submit work when learning remotely.
Justin	Middle School Social Studies	How can teaching to the lower middle still fulfill my high achieving students and bring up some of my lower achieving students?	Action research helps put theory into practice.
Alonzo	Middle School Dance	Will a daily journal help students stay on track with important ideas during lesson(s) and unit progression?	Students needed more direction to express emotions in their journals and connect them to their dancing.
Joshua	9 th Grade World History	Would assigning a current events assignment related to the topic I'm teaching further the students' understanding and enhance the relevance of it for them?	Including current events assignments related to unit topics increased participation in class discussion.
Mara	6 th Grade ELA	How do the preset backgrounds on Google Meet help and hinder our virtual experience in my target class?	Students used the backgrounds to be involved and "seen"
Amal	7th and 8th Grade TESOL	How does having students practice writing out their own answers without any advice until only after they have written their work, instead of before, influence English Language Learners' English writing skills?	Having students feel comfortable in your class make a significant difference in their learning.
Claire	11 th Grade Physics	How will my students' exam grades change if I give them a summative project instead of a test?	Increased student collaboration and peep to peer interaction and support

Throughout the course, beyond the action research project, I took a critical stance towards our discussions and work together, modeling the ways in which teachers can think critically about their teaching experiences. I intentionally infused our dialogue with critical questions, pushing preservice teachers to develop a critical lens when reflecting on and making

meaning of the work we engaged in during our time together. Additionally, each week, preservice teachers shared incidents from their placements in small peer groups. I purposefully termed this activity a *critical incident share* to explicitly highlight the moments and opportunities to think critically about our everyday classroom experiences. I presented, and preservice teachers applied, multiple frameworks that supported and strengthened their abilities to hold up a critical lens during these critical incident shares. Curriculum topics dealt with issues of equity, teaching for social justice, and democratic and inclusive teaching practices. A critical lens was threaded throughout the work we engaged in for this course and extended well beyond the assignment and framing of action research.

Developing a Critical Inquiry Stance

With Freire's (1970) assertion that, "Education is thus constantly remade in the praxis. In order to *be*, it must *become*" (p. 65), he called and set the stage for the development of a critical inquiry stance for teachers, which is the ability, drive, and disposition needed to regularly and systematically investigate personal teaching practices to improve upon them and engender equitable and accessible learning experiences for all students. The above statement suggests that it is in the "*becoming*," in the praxis of educational theory and pedagogy, that pedagogical learning develops. He argued that development happens simultaneously with praxis in that we develop and become critical inquirers while we enact and practice. Similarly, Cochran-Smith and Lytle (2009) posited that specifically through the practice of teacher research, teachers come to know, understand, and develop an inquiry stance. The authors defined an inquiry stance as, "a worldview and a habit of mind—a way of knowing and being in the world of educational practice . . . intended to challenge the inequities perpetuated by the educational status quo" (Cochran-Smith & Lytle, 2009, p. vii). They claimed that as teachers inquire into their problems

of practice, essentially, they develop a disposition that allows them to simultaneously generate knowledge about their specific educational context while establishing and nurturing the habit and desire to probe and examine their practice in order to understand, learn from it, and bring about more equity and justice in their teaching. Their arguments outline the notion that the practice of teacher inquiry occurs concurrently to the development of a critical inquiry stance.

The guiding idea that is threaded throughout the study is that of action research as a vehicle to develop a critical inquiry stance as action research is the praxis of critical inquiry. Preservice teachers' engagement in action research carved out the space for them to synchronously enact, make meaning of, and develop, to varying degrees, a critical inquiry stance.

At the conclusion of the study, preservice teachers were asked to participate in a focus group to reflect on their thoughts about their action research experiences. Participants were asked to share how action research influenced their teaching practices, understanding of how knowledge is generated in the classroom, and about their process of making meaning of their work. When asked about their current understanding of action research, Mara, a preservice English teacher, put forth the following definition, "The action should be specific, and be able to create some sort of change . . . it's the most cyclical and metacognitive exercise you can participate in as an educator" (Second Focus Group Transcript, p. 1). Mara's comments regarding her current definition of action research after the conclusion of her action research experience highlighted the three key processes in developing a critical inquiry stance. Her comment about action research specifically referenced enactment, her mention of metacognitive work points to the generative process of making meaning, and her inclusion of change indicates the development involved in the process. Mara's definition indicated the manner in which her

action research simultaneous prompted enactment, meaning making, and development towards a critical inquiry stance.

Equally striking was the definition of action research Joshua, a preservice social studies teacher, articulated in that it stressed how enacting action research is so integrally tied to the thinking, reflecting, and meaning making processes he experienced:

I think learning by doing. And not only learning by doing, but learning by making mistakes and realizing maybe that's not the right question that I should be asking. It's reflecting, learning by reflecting and reflecting by learning. Action itself is in the name but also thinking about why you're thinking and what you're thinking of and how you should be thinking about it differently. (Second Focus Group Transcript, p. 1)

Within his definition, he explicitly stated that the learning was brought about by the doing, in other words, the meaning making and development of a critical inquiry stance was brought about through the praxis of action research. What is clear in Joshua's definition is the interconnectedness of the enactment of action research, his thinking and meaning making, and the development of a habit of the mind to question what we are thinking about, why we are thinking about it, and how we can think about it differently. His definition points to the cyclical and non-linear nature of action research and the development of an inquiry stance.

Additionally, Alonzo, a preservice dance teacher, defined action research by focusing on the desire to address the issues that arise in one's teaching practice and make meaning of the action research to develop a new understanding of the identified issue. He defined action research as:

Really wanting to understand how to fix this problem that you may be having in the classroom, diving into it and then almost ripping it apart so that you can almost come at it

at a new angle, come at it with a new point of view, come at it with a new idea. (Second Focus Group Transcript, p. 1)

Within his definition, he alluded to the enactment, meaning making, and development of a critical inquiry stance by giving each process a physical manifestation. He articulated this vision of “diving” into the identified problem through enactment of the action research, “ripping” the problem apart as he engaged in the process of meaning making, and finally, developed a new way or “angle” to see the problem and address it. Here too, we can see all three components, enactment, making meaning, and development of an inquiry stance, in Alonzo’s definition of action research.

In the above examples, all three participants’ definitions reference a critical component to the action research but to varying degrees and in disparate ways. In Joshua’s description of thinking about, “why you're thinking and what you're thinking of and how you should be thinking about it differently” (Second Focus Group Transcript, p. 1), he aimed the critical lens at himself, critically evaluating his meaning making and possibly even his beliefs. Mara’s definition referenced “some sort of change” (Second Focus Group Transcript, p. 1), but was not specific. Change can be viewed as critical when it addresses systematic inequities, and injustices; however, it can be practical in nature as well. Change can be aimed at the individual, at pedagogy, or at institutions. It is unclear what kind of change Mara was referring to in her definition, but the inclusion of the notion of change speaks to the possibilities for a critical approach. Alonzo’s definition touches on a critical component of action research in that the goal is to, “come at it with a new point of view, come at it with a new idea” (Second Focus Group Transcript, p. 1) however, this is a much vaguer reference, more of an allusion to a critical component than an explicit one.

The critical component of a critical inquiry stance borrows from Freire (1970) and Cochran-Smith and Lytle's (2009) work, as both in distinctive ways believed that granting teachers the authority to pose problems, question, and make meaning for themselves is in and of itself a critical approach to inquiry. Freire's (1970) problem-posing education paradigm contended that those who are afforded the opportunity to question and interrogate the ways in which they participate in their life and interact in their world develop power and agency. It is precisely this power that Cochran-Smith and Lytle (2009) leveraged in their calls to disrupt the traditional hierarchy and power differential between scholars and teachers and the debate surrounding whose knowledge is valued. Thus, the act of engaging in action research can be viewed as critical from the onset.

For some participants, the critical aspect of action research was explicit and clear, and helped them frame the work they engaged in. For others, the critical aspect of action research was loosely embedded in their understanding of their action research experience but did not drive their work, and still for others, the critical aspect of action research was not included. As part of the seminar course requirements, preservice teachers were asked to submit a reflective assignment upon completion of their action research. The guiding questions prompted students to reflect on topics such as the themes that emerged during the research, how the themes influenced different aspects of their teaching, what might have been done differently to improve the research, and what they learned about action research. In Justin's response to the prompt regarding what he learned about action research, he explicitly highlighted the critical nature of action research when he shared:

One of my biggest influences in the philosophy of teaching is that of Paulo Freire, and action research and his theories on education fit synchronously. Action research is all

about posing problems, trying to understand the root causes of the problem, addressing it, collecting data through evidence, then going back to the drawing board to draw conclusions and pose more questions. This fits directly with Freire's problem-posing approach to education. (Action Research Reflection Assignment, p. 11)

For Justin, the connection between action research and problem-posing was clear, he was able to draw the lines between the two based on their critical nature and the power to question.

Whereas Justin's understanding of the critical component to action research guided his work, for some participants, the critical components emerged in hindsight, as they reflected on their experience conducting action research. Claire, a preservice physics teacher, noted a critical component to her work in her reflection assignment at the end of the semester. She shared:

I really think this research has given me a sense of progressive-thinking. I feel like my teaching style is a bit traditional, but I want to use this as a step towards using my experiences to change my instruction—constantly looking over what I have done and improving on it for my students. (Action Research Reflection assignment, p. 2)

She aimed the critical lens at herself and her teaching, much like Joshua did, as she critiqued her more traditional pedagogical choices and looked to change and transform them to meet the needs of all her students.

For Felipe, a preservice art teacher, the action research lacked a critical tone, he viewed it as a very casual exercise to determine the effectiveness of an action. He stated, "The assignment taught me how to figure out if things work . . . it gave me a way to have evidence behind it, I guess, instead of just saying, yeah I think this works" (Second Focus Group Transcript, p. 2), omitting any connection to a critical component to the work. He valued the systematic approach of action research, he valued action research as a tool to analyze teacher moves and judgements

but did not see the potential it held to bring about change, disrupt injustice, or engender moral and democratic pedagogy.

The critical aspects and components of the preservice teachers' action research can be nuanced. The moments of genuine critical thinking and inquiry are varied across the participants' experiences, revealing the complexity of applying a critical lens to inquiry. Some participants cast a critical lens inward, interrogating their own thinking, meaning making, and understanding. Other participants aimed the critical lens outward at their pedagogy, their students' achievement, and their classroom problems. Some participants used a critical lens to frame their work from the inception, letting it guide their choice of question and approach to the action research. For other participants, the critical thinking and inquiry was only brought to their consciousness in hindsight, after the completion of their action research, as they realized certain aspects of their teaching that required change. And finally, some participants' meaning making was shaped by a critical stance towards the work, some had several authentic moments of critical thinking and meaning making woven in various points of their works, while others rarely used a critical stance, lens, or approach at all.

In line with Price's (2001) findings that the change he observed in his preservice teachers as a result of their action research experience was varied and quite dependent on personal histories, experiences, and understandings, here too we see how varied the critical component is in the participants action research experiences. Just as in Price's (2001) study, action research could not dictate the type of change that took hold in preservice teachers, so too in this study, the action research assignment did not dictate the topic preservice teachers chose or the change that occurred. The action research experience alone did not determine the depth, type, or frequency of

critical inquiry; however, it was the vehicle within which the critical meaning making, moments of critical thinking and analysis, and development of a critical inquiry stance took place.

Teachers as Problem-Posers

An essential component in developing a critical inquiry stance is preservice teachers' ability to view themselves as professionals who have the authority and freedom to pose problems. Granting preservice teachers the space to question and problematize their practice, settings, and institutions as they engage in student teaching sends an explicit message to preservice teachers, that teachers are vital problem-posers. A current area of brain research, termed experience-dependent neuroplasticity, points to the brain's ability to grow new neural layers based on experience. Essentially, our experiences matter, as they leave lasting traces in the brain. Hanson (2013) explained, "the brain takes its shape from what the mind rests upon... Your attention is like a combination spotlight and vacuum cleaner: It highlights what it lands on and then sucks it into your brain" (paras. 8–9). This body of research underscores the importance of asking preservice teachers to engage in problem posing experiences, as these experiences shape the ways in which preservice teachers' minds develop and what they begin to habitually focus on.

Jillian, a participant completing student teaching in an urban high school geometry class, noticed that she was left with so many more questions after the conclusion of the action research than before. In the second focus group, Jillian shared:

There are so many... questions I can think of with groups alone. Who you put in what group? How you form the group? Are they forming the groups? How are, in an actual classroom, where are the groups in the room? I feel like all of those can have so many

different outcomes and I would love to do some action research in the near future, when we do have our own classrooms to really try that and figure it out. (p. 20)

What began as a question about grouping students for breakout math groups stimulated questions surrounding issues such as how to group students, equity in groupings, and who should have control over grouping students. As she began to focus on and identify a problem upon which she could conduct action research, her focus was drawn to thinking about other problems she could identify in her teaching and placement. What was highlighted in her action research then guided her subsequent thinking about her teaching and the learning of her students.

As teacher educators ask preservice teachers to focus their attention on specific problems they encounter in their practice with an eye towards solving them, they are guiding preservice teachers' focus, thus supporting their ability to notice disparate problems in varying contexts and settings, an integral part of developing a critical inquiry stance. In Jillian's reflection assignment, she reiterated the notion that the act of questioning stimulated a desire to question more often and the ability to generate a multiplicity of questions. She wrote:

Action Research has taught me that when you really dive into a provoking thought, you learn so many new things and create new questions and ideas for you to focus on . . . By researching just one question, not only do I have more questions, but it taught me more about how my students learn. (Reflection, p. 3)

In the enactment of questioning through action research, Jillian developed the ability and the agency to question and pose authentic problems, moving her further along the continuum towards the paradigm of teacher as problem-poser. She recognized how her primary research question helped her generate so many more subsequent questions, shifting her focus to

questioning with the intent of understanding educational issues on a more in depth and potentially generative level.

The teacher as problem-poser paradigm is foundational to the development of a critical inquiry stance. To understand the importance of teachers as problem posers, it is necessary to look at the current political climate, spurred on by neoliberal ideology, grounded in the standardization and accountability movements and the climate of obsessive oversight and constant quantification of student success and achievement. These movements position teachers as technicians who comply with pre-scripted curricula, district dictums, and focus on boosting standardized test scores. This paradigm has led to the deskilling of the teaching profession and stripped teachers of their decision-making abilities in the classroom (Ball, 2010; Britzman, 1991; Sleeter, 2019; Villenas, 1996). Both Britzman (1991) and Cochran-Smith and Lytle (2009) pushed back against this paradigm and asked teachers to do the same as they called for classroom teachers to position themselves as “brokers of knowledge and power” (Cochran-Smith & Lytle, 2009, p. 86), who pose questions and inquire into highly contextualized problems based on their experiences in the classroom and in turn move into the position of generators of educational knowledge as opposed to merely consumers.

Action research offers an alternative paradigm to the above notion of teacher as technician. The essence of action research is to pose problems of practice, of equity, of inclusivity, to rethink, to make meaning, and to generate knowledge. Action research creates opportunities for educators to become problem-posers (Freire, 1970), thinking about and investigating questions and problems that matter to them, to their students, to their schools and to their districts. Engaging in action research is one way to establish and nurture this new paradigm

of teacher as problem-poser, inquiring into the everyday problems they witness and struggle with in order to bring about positive change while generating solutions and educational knowledge.

Ultimately, the most effective way to understand what it means to be a teacher as problem-poser is to engage in inquiry. As teachers inquire into their practice, they embody this approach towards teaching, thus authentically make meaning of the teacher as problem-poser paradigm. For many of the preservice teachers, I observed the teacher as problem-poser paradigm begin to take hold towards the end of the semester after the completion of their action research.

A shift in their orientation and thinking about their work as educators began to occur, as they naturally started to look for and initiate questions that needed to be answered and explored, as they came to the realization that they actually had so many questions, problems, and wonderings that they sought to pursue and investigate in systematic ways. Jillian began her study by asking “what happens when I group students heterogeneously” and shifted as she conducted her action research to problematizing and questioning issues of power and control in the classroom. The authority to question one aspect of her classroom enlarged her teacher view, giving her permission to question and explore increasingly sophisticated and seemingly more critical problems. She expressed, “this action research opened my eyes to how much I can learn, and how many more questions I have, just by focusing on one idea” (Action Research Reflection Assignment, p. 4). Additionally, she stated, “It has taught me more about myself as a teacher and my students. By researching just one question, not only do I have more questions, but it taught me more about how my students learn” (p. 4). Jillian began to not only focus on the questions she had about her teaching but widened her view to include how her students learn. It appears

that the experience of questioning acted as the stimulus to further questioning and broadened her thinking to encompass not only her teaching but her students' learning as well.

Likewise, Claire, a participant completing her student teaching in a suburban high school physics classroom, described at the conclusion of her action research how the action research directed her to many more questions than she had thought of previously. It was in the act of questioning, in the freedom to question, that Claire came to deliberate a multitude of questions. During our second focus group, she shared:

There are 10 questions that I could think of right now that I could have enacted, some sort of action to change that I cannot do in a normal school year . . . And then on the flip side of that coin, there's also 10 questions that I could think of that would only work in a normal school year. (p. 20)

Claire began to explore and question the differences between remote and in-class learning, as she understood that the questions teachers ask themselves about remote learning are distinct from the questions asked about in-class learning because the dynamics, expectations, and ways of engagement are so drastically different. She demonstrated a strong understanding that questions are highly contextual as well as the need to problematize different issues in different settings. Her comment points to the complexities inherent in posing questions, as questions are shaped by context, settings, and structures, unique to every environment, population, and location. Additionally, the problem-poser's lived experiences, biases, and attitudes determine what questions they seek to investigate, increasing the complexity and layers of problem posing.

Furthermore, Claire envisioned continuing to work on her action research question and pursue the new questions that resulted from her action research. When Claire explained, "I would probably try out the same question that I did this time actually just to see if I can change it a little

bit, fix it, use one of my new questions I'd made from this assignment and see where that takes me” (Second Focus Group Transcript, p. 20), she indicated her intention to continue to pursue her action research question, delving deeper into the problem by applying what she learned during her first investigation. Claire’s response highlights the cyclical nature of inquiry and the notion that inquiry cycles are recursive, iterative, and inform the subsequent cycles of inquiry. Claire’s comments suggest that she is beginning to understand that inquiry is truly a stance and that there is no end or final answer when we inquire into our work as educators, rather it is an ongoing search for meaning and understanding.

As Jillian acknowledged the way action research has supported her growth as a new teacher, she profoundly alluded to the idea of *becoming* (Greene, 2007). She shared, “It [action research] helps because we’re new teachers, we’re always, we continue to evolve, every day, every year. So, I will definitely use action research again” (Second Focus Group Transcript, p. 21). While Jillian credited the action research with helping her evolve and grow as an educator and envisioned using it in the future to support continued educational growth, there is an awareness that she is experiencing a process of becoming, becoming a teacher, becoming a problem poser, becoming a life-long learner. According to Greene (2007), learning is, “to become, to become different. It is to continue making new connections in experience, new meanings” (p. 1). As Jillian engaged in her action research project, she saw herself *become*, through the connections and meaning she made of her action research experience. She saw the possibilities that lie ahead for her in the classroom, the learning that awaited her on a daily basis, a yearly basis, and imagined herself continuing to *become* throughout her career. She expressed a, “willingness to go beyond what is--to reach beyond mere facts to widening cognitive or intellectual possibilities” (Greene, 2007, p. 1) as she embraced the action research as a tool that

would support these possibilities and cognitive pursuits. Her self-view was not static but rather quite dynamic; she fully embraced the change and growth inherent in learning to teach and honored the developmental process of *becoming* a problem-poser.

As Mara reflected on her action research, she felt that action research had given her the tools she needed to inquire into her teaching practice and problematize the issues that troubled her. For Mara, it was the tool of action research that supported her ability to question and to pursue answers to problems she faced in the classroom. Her action research shaped the way she approached problems, giving her a lens to peer through as she investigated her classroom problem and attempted to make meaning from her investigation. Mara concluded, “Once I began Action Research, my question and what I noticed was constantly on my mind. Reflective time is now more structured through Action Research” (Reflection Assignment, p. 6). Mara indicated that through action research, she began to develop a habit of the mind, the habit of not only questioning but systematically thinking about and inquiring into the problems of practice in her classroom:

Engaging in Action Research has now given me a method to pursue my inquiries about classroom life. Whereas before, questions may have troubled me without being solved, I now can begin an action research cycle to see what kind of impact a specific action has through tracking the changes through various sources of data. (Action Research Reflection Assignment, p. 7)

Action research helped her develop the skills needed to become a problem-posing teacher while it allowed her to operationalize her reflection process. What was once unmeasurable and scattered reflection and thinking became focused and directed as her reflections were guided by the questions she posed. Mara recognized that the ability to systematically reflect on actions

taken to generate possible solutions to problems is equally as important as the ability to pose the problem. Action research supported her construction of a theoretical lens that guided her thinking, reflection, and meaning making surrounding problems in her classroom.

Finally, Felipe, a preservice art teacher, corroborated the above experiences of coming to further question and problematize classroom teaching and learning as he extended his research question beyond his own classroom to inquire about its validity across content areas. Felipe was exploring problems of engagement and completing schoolwork, a common problem across many remote classrooms during the Covid-19 pandemic. He was not content to merely explore this problem in his own classroom but questioned and wondered what happened when he asked the question in another content area. During his action research presentation Felipe reflected, “I’m also wondering how that would work out in another subject, like math for example, would that work in math or would it just blend into all the other graphs and numbers that they see” (Action Research Presentation transcript, p. 6). As he engaged in his action research, he began to think in broader terms of how and if this experience could apply to different content areas. Felipe developed the understanding that there are some problems that cut across different content areas and are worth pursuing and investigating alongside colleagues. He posed problems and inquiries that are larger than his classroom, demonstrating a different version of teacher as problem-poser.

Whereas Claire understood problem posing to be highly contextualized and situation dependent, Felipe saw the opportunity to generalize his problem posing. His expanded questioning illustrated how teachers can take the problems situated in their own classroom context and look at them through a more global perspective, thinking about how certain problems apply to many different contexts. Felipe was wondering how looking at a singular problem through a multiplicity of vantage points can shed light on the nature and characteristics

of a problem. Whereas some problem posing is highly contextualized, Filipe's version is more generalized, further complicating and revealing another layer of complexity to the teacher as problem-poser paradigm and landscape.

The paradigm of teacher as problem-poser fundamentally establishes the space for classroom teachers to actualize their ability to pose problems, inquire into those problems in order to improve them, and to generate educational knowledge. The preservice teachers in this study demonstrated and articulated how their action research widened their view of the problems in their classroom, awakening them to the multiplicity of challenges they face, the depth of the questions they have, and the wonderings they were engaged in. Action research simultaneously brought to their consciousness an awareness of the problems of practice they experienced as it granted them authority to question and pursue answers to improve the identified problems. It is in the combination of the power to question and the conscious awareness to unearth problems that these preservice teachers began to develop a problem-posing stance as educators.

The Praxis of Practical and Critical Action Research

Congruent with the literature on preservice action research, the participants posed problems that fell within both the practical and critical dimensions of action research, however what is striking in looking at what preservice teachers choose to problematize is the fluidity with which their thinking and questioning moved back and forth between the two. Manfra (2019) defined practical questions as those that dealt with effectiveness of practice, which constituted the majority of preservice action research questions described in the articles included in the literature review. Price (2001) asserted that critical questions were those that were centered around issues of equity and social justice and were democratic in nature while Faikhamta and Clarke (2015) focused on the emancipatory power of critical questions in action research.

Throughout the literature, there is evidence of the same fluidity demonstrated by the participants, indicating the complexity and interconnectedness of these two dimensions of problem posing in action research. In their practical application of action research, the participants found themselves weaving in and out of practical and critical inquiry at various points in their work.

Critical Praxis

Three out of the eight participants' initial action research questions were situated in the critical dimension of action research, posing problems that were critical in nature. Justin, Jillian, and Joshua's research questions probed issues related to the student achievement gap, lack of representation in curriculum, and grouping students heterogeneously, all issues centered around equity, justice, and democratic approaches to education. At the inception, these questions indicated a critical stance and intent towards their action research and allowed them to explore and make meaning of these problems from a critical perspective.

Joshua completed his social studies student teaching placement in an urban, lower-socioeconomic community, whose population was predominately students of color. He was unfortunately assigned to his placement very late in the semester due to the challenges Covid-19 and learning remotely presented to our educational system during the Fall of 2020. Despite his late placement, Joshua's passion for his work and his students was evident to me very early on in his placement. After one class session, he asked to speak with me after class and shared, almost in tears, that he was unable to contact one of his students since he began and just found out it was because the student was then homeless. The compassion with which he shared his story, the anger that he felt at the situation, and the injustice he railed against on behalf of his student, informed the critical stance he brought to his work as an educator.

Joshua's action research question was critical in intent and nature, and his inquiry led him to generate critical questions about his work as well as his thinking about his work. He questioned the curriculum and pointed to the lack of representation it encompassed, "the curriculum that was presented to me, it tends to be extremely Eurocentric, extremely male and extremely white" (Action Research Presentation transcript, p. 11). As Joshua talked about his work, he critiqued the curriculum he was told to work with and pushed back on the lack of representation by including current events articles that connected to and valued his students' lived experiences. Regarding the curriculum he was expected to enact, Joshua concluded:

In all these cases, it's centered upon white male Europeans and a student of mine, whose family is from Haiti or whose family is from Latin America, or whose family is from Nigeria, that student can deduce that my people and my culture, based upon the content here, had no effect whatsoever on the course of history, according to these topics. (Action Research Presentation transcript, p. 12)

In Joshua's analysis of the topics covered in his student teacher social studies curriculum, he problematized the inequity of voice and lack of representation, other than the white male European voice, that was included in the curriculum. In the above quote, he took the perspective of the diverse student body in his school and imagined what messages they were internalizing based on the topics covered in their social studies curriculum. He asserted that the message students of color receive through the curriculum was that their voices are not heard, considered, have value, or have any effect on world history, a message he desperately wanted to alter through his action research.

Joshua's action research question was, "Would assigning a current events assignment related to the topic I'm teaching further the students' understanding and enhance the relevance of

it for them?” (Action Research Presentation assignment, p. 30), as he was attempting to bring in more relevant and diverse voices so student could find themselves and feel represented in the curriculum. Joshua’s work as a preservice teacher in an urban social studies middle school contributed to the agency he brought to his practice. He described himself, “a soldier on the frontlines in the battle against the hidden curriculum, so that was my intent on this endeavor” (Action Research Presentation transcript, p. 12). He consciously problematized issues surrounding equity and democracy when he articulated, “this is the good fight that I try to fight every day, and I am excited to continue to improve my practice and my pedagogy in this fashion” (Action Research Question and Narrative Assignment, p. 2). Joshua’s stance as a teacher, even before he engaged in action research, was clearly critical in nature, he observed the systematic inequities and injustices in the classroom and worked to push back against them and the damage they inflicted on his students. His critical stance informed the issues Joshua problematized and the action he enacted in his action research.

As Joshua engaged in the praxis of action research, the practical and critical aspects of the work became enmeshed and intertwined. He combined his agency to push back on the injustices he observed in the curriculum with the need to engage his students in classroom discussion and work. He asserted that by addressing the inequities embedded in the curriculum, and making the curriculum more representative of his students’ lives, he could improve the practical challenges he faced, “I believe that the increasing number of students participating will directly correlate to the increased relevance and significance of the content as a result of the current events assignments” (Action Research Plan Assignment, p. 2). Thus, his action research crossed back and forth, from the practical to the critical, and back again, indicating the implausibility of being able to separate the critical from the practical in critical teacher inquiry as

ultimately it is situated in the messy realities of the classroom. Joshua used his action research as a vehicle to develop his praxis. His action research led him back and forth, from critical to practical praxis, as both were integral parts of the work and structure of action research. Because the action research took place in a live classroom, it mirrored the realities of that classroom, moving from moments of genuine critical praxis to moments of authentic practical praxis. The fluidity and complexity of the praxis of action research is evident in Joshua's work.

Justin, also a social studies preservice teacher, completed his student teaching in a suburban middle school. Justin struggled initially to generate an action research question, as his first attempts to problem-pose were very broad and overarching. His first iteration of his action research question was, "How can I rectify the achievement gap?" (Action Research Question and Narrative, p. 4). Justin was concerned with the wide discrepancy in students' writing and their ability to demonstrate understanding, for example, in the work they submitted for homework. Justin shared, "Some kids had homework that I thought to myself, 'wow a 7th grader seriously wrote this?' it was so good. Some kids I would say were writing at a 2nd or 3rd grade level" (Action Research Question and Narrative assignment, p. 4). He was also puzzled by the discrepancy between what he believed students learned during a lesson and what level of understanding their classwork reflected. He lamented, "I thought I was really getting through to the students and leaving an impact. When I began to review and grade classwork and homework, I began to notice the gaps in understanding" (Action Research Question and Narrative assignment, p. 4). Addressing the achievement gap, as described above, was too broad of a question, it did not include a specific action and needed refinement, but nonetheless, it set him up for a critical approach to his action research. He was aware of this struggle and reflected:

So, my question, it definitely took me a while to come up with this question and to revise it and kind of think about it . . . I brought up the idea of addressing the achievement gap which is something that every kind of teacher aspires to do, every teacher wants to be able to reach every aspect of the classroom. (Action Research Presentation, p. 15)

Justin was aspiring to create an inclusive environment where every student had access to success and achievement. Ultimately, Justin's question sought to understand if the needs of all students could be met in a middle school social studies classroom by centering instruction on the middle achieving students while challenging and supporting the lower-achieving students. He was grappling with how to structure instruction and create an inclusive environment from the onset that gave all students an opportunity to achieve success. Justin articulated his thought process regarding his action research noting, "So, can I take the approach of multi-level kind of teaching, teaching to a universal design to bring everyone together to, to raise everyone up" (Action Research Presentation, p. 15). In Justin's vision of an inclusive learning environment, he critiqued the one-size-fits-all approach to education, rejecting the notion that all students learn the same way and need the same supports.

At the conclusion of his action research, Justin had more questions than answers. He stated, "These questions and problems are not always solvable, as I found in my own research" (Action Research Reflection assignment, p. 12), which led him to the conclusion that creating points of access and opportunities for success for all students was far more complex and nuanced than he had originally imagined. His statement highlights the problems within our institutional structures and pushes back against the fallacy of the teacher as being able to combat the inherent racism and inequity entrenched in those structures. Much like Joshua, Justin framed his action research with a critical intent, looking through the lens of inclusivity and equity of access for all

students. It was in the praxis of this critical approach to his action research, that he found himself wading into the practical praxis of action research as well. What began as a critical inquiry into the paradigm of ‘access to learning for all students’ ebbed into practical inquiry as Justin evaluated the effectiveness of his action. Both of these participants’ action research are clear examples of what authentic inquiry looks like, there is a fluid balance between the critical and practical pieces of genuine inquiry that cannot be separated out as they each rely on one another in a dynamic relational manner.

In describing her high school geometry classroom, Jillian painted a picture of a very traditional educational setting, “When I came into this class, it was mainly a lecture-based class. A lot of just, the teacher teaching and a lot of independent work, a lot of students were failing” (Action Research Presentation transcript, p. 6). She looked to problematize this traditional pedagogical approach by asking, “How does student achievement change when working in groups?” (Action Research Question and Narrative assignment, p. 5). Her action, group work, was intended to be a more democratic and interactive in nature to create opportunities to engage with her students as well as support interaction between students. Jillian reflected that her action research question was based on her wonderings, “I wonder if there are activities in their workbook that can be done in groups, would this change student achievement?” (Action Research Question and Narrative Assignment, p. 5). Similar to Justin’s question, she grounded the question in achievement and the effectiveness of the instructional practice, a practical intent, as she looked to disrupt traditional instruction approaches by pivoting towards more democratic and student-centered pedagogy, bringing together her need for both practical and critical praxis to work through her action research.

Throughout her action research, Jillian grappled with issues of justice, inclusivity, and democratic education. She intentionally created heterogeneous groupings as she believed all students would benefit from being with a group of diverse peers, creating access to learning for all. She reflected:

My hope is that each student will learn, I hope that the high performers will better grasp the content by explaining it to those in the group that are struggling . . . and the low performing [students] could get their peers' insight on how they're thinking about these questions, rather than hearing from me. I thought it would be helpful for all students, if we had three levels in one group. (Action Research Presentation transcript, p. 6)

Jillian carefully considered the benefits of heterogeneous groups and disrupted and pushed back against the more typical use of homogenous leveled groups. Her intention was to create access to learning for all students by creating opportunities for them to engage one another as resources of knowledge in her lessons. Her emphasis on access to learning for all students is clear when she articulated in her Action Research Question and Narrative assignment, "I hope that all students can learn something by being in smaller groups to work on a task" (p. 5). She looked to create an inclusive environment, where all students felt a part of the class, where everyone mattered, where everyone was valued, regardless of what level of achievement one reached.

In line with the action research of Joshua and Justin, Jillian's action research question and work straddled both the practical and critical dimensions of action research. All three grounded their work in the investigation of the effectiveness of a particular practice, however their work sprung from the critical practice of wanting to address issues of equity, justice, and democratic values. Joshua's work dealt with issues of justice as he critiqued the curriculum for lack of representation of all students, Justin's action research was framed by his desire to create access

to learning and achievement for all of his students, and Jillian viewed her work through the lens of democratic practices and equity, as she introduced heterogeneous groups into her classroom. By definition, action research must be tied to the practical concerns of a classroom because it requires a specific action that can bring about change and improve an explicit problem. The *action* in action research necessitates a practical component to the work, which was evident in the above examples, however these three participants employed a critical lens to approach and problematized their concerns, actualizing a critical inquiry stance in their action research.

Practical Problem-Posing, Critical Meaning Making

The remaining five participants' action research questions were more practical in nature and approach however, to varying degrees, each of the preservice teachers found critical pieces to explore within the context of their action research. These moments the participants found to shift into a critical stance within their action research can often go overlooked and unrecognized but, these moments were very real and created the opportunities for preservice teachers to think critically about their work and explore ways they can envision bringing meaningful agency into their work as educators.

Claire, a preservice high school physics teacher, began her action research by posing a very practical problem—that of homework completion. Claire wanted to explore if assigning more conceptual problems, rather than mathematical ones would influence homework completion. Due to the challenges Covid-19 and remote learning presented, Claire felt that she was limited in her choices and scope of what she could accomplish in her action research. She explained, “I think it would be difficult and possibly disruptive to attempt something unconventional for my action research project this semester” (Action Research Plan assignment, p. 1). Further into the semester, the school where Claire was completing her student teaching

went through many changes and Claire decided to go along with the changes and align her question more closely to what was happening in her classroom. She stated in her action research presentation:

I had an original research question. It was how do my students' homework grades change if I ask conceptual questions rather than mathematical questions. I really liked this question, but some things happened at my school. We had to take in a few extra classes, things got crazy so I decided instead of trying to keep going with this change that they were going through, a lot of change already, we already decided due to COVID that tests were a little too stressful of an assessment. (p. 1)

Because of the change in the school's approach to assessment, due to the stressful nature of the fall semester, Claire changed her question and focused on what happens to students' grades when she assigns a summative project instead of a test. She asked, "How will my students' exam grades change if I give them a summative project instead of a test?" (Action Research Presentation, p. 3). She wanted to think about different pedagogical approaches to demonstrating understanding, beyond traditional testing. She wondered:

By taking away homework and labs and giving them a project to work on over time, were they able to put a lot more effort into it and really focus on it instead of, instead of cramming in the hour that they have to study a day, and then taking a test? (Action Research Presentation transcript, p. 1)

Although Claire's intent was practical in nature, in that she was exploring changes to assessment pedagogy, she began to take on a more critical stance, engaging in critical action research praxis, as she problematized traditional assessment approaches. In problematizing traditional assessment tools, Claire wanted students' focus to shift to the process in which they were engaged. She

wanted them to enact and live in the physics discipline, creating something based on the physics principles they were learning. She reflected, “By using a new form of assessment, I feel like students will focus less on the actual number that they get on their grade and more on the product” (Action Research Presentation transcript, p. 1). She wanted students to find motivation from their work as opposed to from their grade.

Furthermore, her action research question led her to problematize issues of equity between remote and in-class learning and explore issues of inclusion and democratic practices. Because Claire worked in a hybrid classroom, meaning some students were in class while others logged into class from home, she posed problems surrounding issues of equity between these experiences:

I wanted to make a more engaged environment for them, including my virtual students, I have students, because I'm hybrid, I have students that I've never met before, and they've never met their classmates, so I wanted that gap to be filled a little bit. (Action Research Presentation Transcript, p. 2)

She noticed the disparity between the two experiences and was concerned about the issues of equity in the structure of the course. She had a strong desire to address this inequity and structured her summative assessment to address some of these issues. She also demonstrated a sensitivity to students who are learning virtually, “I would also record my interactions with students over voice notes . . . but I did not feel comfortable recording student voices that were virtual when the rest of us were in-person” (Action Research Reflection assignment, p. 2). She recognized the equity issues that the hybrid structure engendered and worked to reduce the advantages the in-class students had. Additionally, she had concerns about the difficulties that students would have working in groups with students who were in class and virtual. She wanted

all students to be able to work together and play equal roles in the group, she explained during her action research presentation, “They never get to work really well in mixed groups with the online students. And one of my goals was that I wanted them to work together, and they seemed really okay with it” (p. 3). To Claire’s surprise, both virtual and in-class students were able to work together easily after a few “awkward” moments on the first day, which was a relief to Claire.

This success inspired Claire to continue to pursue this line of critical thinking, as she developed a new understanding and rationale for heterogeneous groupings, “The mixed groups allowed for a new kind of relationship building that has inspired me to get all of my students working with different people each assignment and building their own community that can support each other” (Action Research Reflection assignment, p. 3). She began to see the many benefits of heterogeneous groupings, beyond just equity, and concluded that it contributed to classroom community and an inclusive environment as well.

Claire’s thinking became progressively critical in nature as she investigated her action research problem. Through the feedback I offered on her submitted assignments and the way I framed questions from a critical perspective during class discussions of our action research, I intentionally encouraged Claire to hold up a critical lens to the work in which she was engaged. Her initial intent may have been supported by very practical concerns for her students around the stresses they were experiencing during the pandemic, however, her wonderings and thought processes shifted into the more critical realm as she widened the lens she looked through to encompass and engage with issues of equity and inclusion in a classroom.

Problem posing and inquiry require patience and flexibility, in that at times, questions need to emerge over time, requiring persistence and diligence until an authentic question

percolates to the surface. For Mara, her question took time to formulate, she showed restraint in that she did not pursue the first question that arose for her, but contemplated many questions before arriving at one that was meaningful and consequential to her context and her experience, one that she felt would help her grow as a teacher and bring about positive change in her classroom context. She understood the need for flexibility in inquiry, as she navigated the uncertainty of her student teaching placements and experiences.

The effects of Covid-19 had particular impact on student teaching placements in the Fall of 2020. Many students were assigned placements very late into the semester which limited the time they spent in classrooms and with their cooperating teachers. Most student teachers worked remotely, never meeting their cooperating teacher or students in person. Mara's student teaching experience was particularly impacted, as she was not assigned a placement until October. The cooperating teacher to whom she was assigned could not ultimately fulfill her commitment to work with Mara as she was completely overwhelmed by the set of specific circumstances she was experiencing due to the pandemic. Mara was reassigned to a new placement in November, which was a successful and educative, albeit limited, experience.

Mara attempted to begin her action research in her first placement. Her original problem centered around efforts to develop student voice through writing, a problem that falls within the critical dimension of action research. After attempting to discuss the action research with her first cooperating teacher and receiving significant resistance from her, Mara decided she did not hold enough authority in her placement to pursue that particular question and moved towards a more practical question involving taking specific action to help students submit homework on time, a problem that again, so many preservice teachers talked about as a result of the remote learning format. Because of her placement change in November, Mara pivoted to a third problem

which was grounded in the very real challenge of getting to know students remotely who have already completed two and a half months of the school year. She set out to investigate the following question, “How do the preset backgrounds on Google Meet help and hinder our virtual experience in my target class?” (Action Research Question and Narrative Assignment, p. 1). In Mara’s classroom, her cooperating teacher encouraged students to set their background screens on Zoom to anything they liked in an effort to engage students through the sharing of personal information and to incentivize them to keep their videos on so she could see her students. Mara was interested in understanding if something as small as setting a background screen could potentially impact students’ classroom experience. Although her question was practical in nature, she easily crossed over into the critical dimension of the work as she thought about issues of equity, inclusion, and student voice.

Mara was very explicit about critiquing the inequity she was bumping up against in her placement. She quickly problematized the disparity she observed between students in terms of their access to technology, familiarity with technology tools, and access to internet service. She recognized that some students did not have access to support in learning to use backgrounds and that others struggled with connectivity issues. During her action research presentation, she explicitly questioned, “How can educators address technology needs of students to promote equity of use?” (p. 3) and stated, “I’m really interested now in how can we continue to make technology, and all the tools that come with it, equitable to students?” (p. 3), demonstrating her very conscious crossover into critical issues in education. She also thought critically about those students who choose to protect their privacy, as the cameras intruded into students’ homes, becoming an unintended window into their private lives and worlds:

There's privacy issue there too, where you really might not want people to see the inside of your home, you know. I think that what I learned from students is that they find it easier to be on camera, when they have a background and then when we choose similar backgrounds, there's this aspect of like solidarity. (Action Research Presentation transcript, p. 3)

She problematized the technology and the breach of privacy it introduced and viewed the background as a solution to limit students' exposure and protect privacy. Even more specifically, she problematized the technology used in the classroom and framed it in the context of students' voice and being heard. She reflected, "Having mics on mute is helpful so all participants of the Google Meets can hear the speaker, but it means that students rarely feel comfortable unmuting to speak aloud" (Action Research Question and Narrative Assignment, p. 2). She extended the idea of student voice being heard and explored the importance of students being seen as well, specifically a factor during remote learning. She explained during her action research presentation, "I really wanted to see too about, who wanted to be on camera. Even if they didn't want to talk" (p. 2) demonstrating understanding of how in remote learning being seen on camera is a measure of inclusion. Mara thought critically about creating spaces where student voice is heard, valued, and encouraged and pointed out that some Google Meets features work against those ideals.

Mara's statement above touches upon the notion of inclusion and belonging as she believed that using similar backgrounds created a sense of solidarity. She concluded, "By going through an Action Research cycle that sought to foster connection, I learned about approaches to including students in a supportive classroom environment" (Action Research Reflection assignment, p. 6), highlighting the ways in which her thinking shifted from the practical

applications of computer backgrounds to critical thoughts about creating an inclusive environment in her classroom. She emphasized the importance of an inclusive environment when she stated, “Because it was not really about what was going on in class, it was about our connection together” (Action Research Presentation transcript, p. 3), underscoring the value she placed on inclusive environments and relationships with students.

Although Mara’s initial question was practical in nature, as it explored the use of backgrounds in a virtual classroom, she moved to a more critical direction as she reflected on her work and began to problematize issues of equity and inclusion that are brought to the surface in a remote learning environment. At times, she was explicit in her critical thought process, naming it as an issue of equity, and at times her critical thinking was more implicit, for instance when she probed issues of inclusivity and student voice.

As preservice teachers examined and analyzed specific pedagogy through their action research, their thinking became more critical in nature, pointing to a connection between the critical and the pedagogical, in that all teaching has critical elements to it. Amal, a preservice TESOL teacher, completing his student teaching in an urban middle school, posed the following practical problem, “How does having students practice writing out their own answers first on a website called Menti.com influence English Language Learners’ English writing skills?” (Action Research Question and Narrative Assignment, p. 1). His problem was very practical in nature in that he was trying to understand the effectiveness of using a technology tool to support English Language skills. However, as Amal worked through and reflected on his action research, he began to problematize and think critically about using democratic and inclusive practices in his teaching.

Using the tech tool, Menti.com gave students an alternative to orally responding to prompts because students anonymously responded to Amal's questions in writing. Amal noted that Menti.com gave students, "the flexibility of how they want to answer a question" (Action Research Presentation Transcript, p. 24) and that he wanted to use it to, "give more than one option" (Action Research Presentation Transcript, p. 24) in their responses. Here, Amal thought critically about creating an inclusive environment and incorporating principles of Universal Design for Learning (UDL) (CAST, n.d.) to create portals of access for all students. In his explanation, there is a critical element, aimed at the pedagogy he chose to change. He again took a critical stance when he reflected on his professional judgments through the lens of democratic practices. He stated in his Action Research presentation, "I don't really want to just pick on a random student and just tell them, you have to answer this question" (p. 22) and he reflected:

I have learned just how much and how often students are told 'What to think' instead of asking them 'What they think.' Students had a very surprised expression when I would I ask them what they think about something, it was as if no one had ever asked them for their opinion before a day in their lives until the day I did. (Action Research Reflection assignment, p. 5)

Amal critiqued the traditional power differential in the classroom and questioned why students do not share in the power in their own education and classroom life. He wrestled with enacting a more democratic approach to his teaching and problematized issues of power in the classroom. These questions and problems did not guide the majority of Amal's work, his work was predominantly practical in nature, however posing a very practical question did lead him to moments of genuine critical thinking, reflection, and enactment, contributing to the development of a critical inquiry stance. Incorporated into his action research is this connection between the

critical and the pedagogical as he critiques pedagogy multiple times throughout his work and intentionally chose pedagogy that he believed was more just and would bring about a more inclusive classroom environment.

Practical Problem-Posing, Practical Meaning Making

The two remaining participants, Alonzo and Felipe, preservice dance and art teachers respectively, posed very practical problems for their action research. They demonstrated fewer moments of critical thinking during their action research and reflected mainly on the practical aspects and outcomes of their action research.

Alonzo posed a problem of practice surrounding the opportunity for multiple reflection to better understand the big ideas in a lesson, a very practical question of instructional effectiveness. His work, for the most part, did not venture into the critical domain however, he did think about meaning making in the classroom and creating space for student expression. In thinking about meaning making in his classroom, Alonzo stated, “Who can create or who can find meaning? I want to say its everyone, I think the students have the opportunity to create their meaning, and I feel like the teachers have the opportunity to create the meaning (First Focus Group Transcript, p. 8), demonstrating a critical stance towards power and meaning making in the classroom. He also shared:

Action Research . . . gives me a chance to take a step back from the being the teacher and allows me to become the student. It gives me a chance to allow the students to tell me what they are seeing, what they are experiencing. (Action Research Reflection assignment, p. 10)

In Alonzo’s reflection and comments above, his critical lens was not explicit in his action research, as his critical thinking was related to topics that were peripheral to his action research.

His critical stance towards teaching practices and classroom life, although not the direct focus of his action research, once again highlights the notion that it is difficult to examine teaching practice and pedagogy without finding and engaging in moments of criticality. As compared to the other participants, Alonzo's thinking and questioning moved back and forth between the practical and critical dimensions in more subtle ways but as he enacted a critical lens, he demonstrated again the interconnectedness and fluidity between teaching practices and critical thinking.

Felipe's question was also very practical and quite causal in nature. He was the single student who used a control and variable group and set up the research using an experimental approach. Within the data, there are very few moments of critical thought or demonstration of a critical stance because he did not take an inquiry approach to his work. He took a more empirical approach which may have precluded his ability to shift into more critical thinking and questioning. The one area that he briefly explored was ideas surrounding inclusion. At the conclusion of his action research, he reflected:

I wasn't aware of how often students will be self-conscious of their work. It reaffirms the fact that I have to adapt my lesson plans to accommodate students like this. It has shown me the importance of giving students options for completing their assignments along with options on how to submit or present their work. (Action Research Reflection assignment, p. 10)

Here he was thinking about principles related to UDL and the need to create portals of access for all students to express and demonstrate their learning and understanding. Felipe's work remained situated in the practical effectiveness of the action he enacted and his stance was primarily

practical in nature as the approach he took was neither critical nor inquiry, but rather scientific and didactic.

What is significant in the portraits of these participants' action research is the fluidity with which they moved back and forth from practical to critical inquiry. Some participants took up a critical lens as they framed and constructed their questions and then moved into the practical realm as they situated their work in their pedagogy and classroom instruction. Other participants began with very practical concerns and as they engaged in their action research, they shifted into the critical dimension of questioning and began to identify and problematize issues of equity, democracy, and justice within the details and day to day enactment of their action research. The cyclical and non-linear nature of their practical and critical thinking echoed the cyclical nature of genuine inquiry found in action research, revealing the complexities, layers, and dynamic nature of critical teacher inquiry.

In analyzing the above set of action research questions, it is quite clear that there is a spectrum of preservice teacher's critical thinking and the development of a critical inquiry stance. Some preservice teachers brought a critical stance to their action research question, able to frame their work with a critical view, problematizing not only classroom pedagogy and structure, but the inequities, injustices, and systematic issues imbedded in them. Their view was critical from the onset and the action research supported and encouraged further degrees of critical thinking and questioning.

Other students framed their work in more practical terms, perhaps having brought with them a less-developed set of critical views and abilities to critically problem pose, but were able to, at various points and in different ways in their inquiry, critically question and problem pose. The ability to identify these critical problems rooted in their action research spoke to their point

on the critical inquiry stance spectrum, they may not have structured their questions from a critical viewpoint but they certainly were able to identify and raise up these critical questions for examination and consideration when they encountered them and bumped up against them over the course of the action research cycle. Their developmental progress was prompted by the action research in a different way than those who critically questioned initially.

And finally, some preservice teachers had neither developed the ability to frame questions critically nor identify issues that could be critiqued or problematized within their action research beyond the practical dimension. They were at the very nascent stages of developing a critical inquiry stance and experienced only a few moments of critical thinking and questioning during the action research process. It appears that those who were farther along on the critical inquiry stance spectrum developed and continued to shift farther along the critical inquiry stance continuum whereas those who came to the action research at the beginning stages of developing a critical inquiry stance developed at a slower rate as evidenced by their inability to identify and question more components of the action research from a critical perspective.

Developing a critical inquiry stance is highly individualized and progresses in a multitude of ways for different preservice teachers. The participants in this study came to their work at varied points along their development of a critical inquiry stance, some having a strong critical inquiry stance that guided their work and the issues they chose to problematize, others having a less developed critical inquiry stance but a developed ability to think critically and find many moments and opportunities to critically engage with issues of equity, justice, and democratic practices and approaches within the context of their action research, and others had limited critical inquiry stances as they begin initial exploration and related to the inquiry in which they engaged. Despite the varied points of entry, the action research and the scaffolding and framing

of the critical points of the work provided the participants with the forum to engage in critical inquiry which simultaneously developed their critical inquiry stance, regardless of where they began at the onset of the action research experience.

The preservice teacher action research described above can be categorized as critical on three levels. First, drawing on Freire's (1970) definition of praxis, the action research the participants engaged in involved acting and reflecting on theory and practice in their classroom world in order to transform it. As participants enacted the action research, theory and practice were integrated in praxis and transformation occurred. Joshua transformed curriculum when he included current event articles that represented his students' lived experiences. Jillian and Justin transformed their pedagogy to create access to learning for all students. Mara transformed her thinking as she questioned equitable access to technology, and Amal transformed the way he viewed inclusivity in his classroom. More vague was the transformation Filipe and Alonzo experienced; however, I would argue that they too experienced transformation in their thinking about how they engage students in their classrooms.

Some transformation occurred within the classroom environment and some transformation occurred within the participant, but all who engaged in the praxis of action research were transformed and changed to various degrees. As preservice teachers enacted, made meaning of, and developed their critical inquiry stance during their action research, they experience Freire's version of praxis. They enacted as they practiced, they made meaning as they theorized, and they developed their critical inquiry stance as they transformed their outer and inner worlds.

Second, the nature of the work was critical in that participants grappled with issues of equity, justice, representation, democratic practices, inclusive environments, and moral and just

education. Many of the issues they chose to problematize were critical in nature and demonstrated a critical stance towards their inquiry. Third, the action research, in and of itself, is a critique of the traditionally accepted power hierarchy surrounding the generation of knowledge and whose knowledge is valued. Action research gives preservice teachers a strong voice as they direct their own learning and knowledge construction, which shifts existing power differentials. Teachers who have the authority to pose problems and drive their own systematic inquiry into contextualized problems of practice play a role in the redistribution of that power, a very critical act of disruption to the status quo. Posing problems is a critical action when those posing the problems are traditionally positioned as receptors of knowledge as opposed to generators of knowledge. All the participants in this study posed problems of practice that mattered to them and their students, shifting the power to question, find solutions, and generate knowledge into the hands of classroom teachers, a very critical act within the current context of our educational landscape.

Within this study, the action research served as a vehicle for preservice teachers to develop, enact, and make meaning of critical teacher inquiry. These three actions occurred simultaneously, each process exerting influence over the other, at times in a cyclical direction and at times in a back-and-forth direction. For some participants, the meaning they made while enacting their action research contributed to their understanding of critical teacher inquiry, for others it was the enactment of the action research that contributed towards this development. Still for others, the development of a critical inquiry stance while enacting action research contributed to and guided them towards more critical meaning making. Each participants' process and development were unique to them, the journey unfolded differently for everyone. It is difficult to parse out which process came first, which process exerted influence over which process and to

what effect, however, it is clear that each process, enactment, development, and making meaning of critical teacher inquiry, all contributed to the developmental shifts preservice teachers experienced towards establishing and nurturing a critical inquiry stance in their teaching.

Making Meaning

The second tenet of the theoretical framework that guides this analysis, critical teacher inquiry, conceptualizes that knowledge is constructed through the complexities of inquiry about one's world examined individually and collaboratively. This tenet guides my analysis of how preservice teachers in this study made meaning of and generated knowledge about their inquiry through action research in multiple ways. Part of developing a critical inquiry stance is the ability to make meaning from one's inquiring. As reflected in the literature surrounding preservice teacher action research, while preservice teachers investigated their problems of practice and engaged in the struggle to rethink and reimagine what is possible, they made meaning and came to know more about their teaching, student learning, classroom dynamics, and students' lives. Both Stern (2014) and Davis et al. (2018) described how as participants struggled to inquire into their problems of practice, they came to make meaning of their work and generated a richer, more textured understanding of their teaching experiences. Out of the complex struggle to inquire into their pedagogy, instruction, and student learning, they generated personal and professional meaning. In the examples that follow, I trace how teachers came to know and made meaning through their own process of systematically inquiring, through action research, into the highly contextualized problems they encountered in their classrooms, which stood as a different and unique way of learning and knowing about teaching.

As the preservice teachers engaged in action research, and reflected and grappled with their work, they experienced the process and struggle of meaning making. Of what they made

meaning, how they made meaning, and how they thought about the meaning they made varied across participants; however, the data portray moments where preservice teachers made meaning that was of significance and consequential to them as individuals and their context. Additionally, participants made meaning in different dimensions of the work, for example, some made meaning in the practical sense, about what happened in the classroom as a result of the action research or about their pedagogy and instructional approaches. Others made meaning in a more critical sense, about themselves, their role as educators, and about how students make meaning in the classroom. Most striking is the meaning preservice teachers made of critical action research, as it illuminates how the participants thought about the meaning they made of their action research and how their thoughts guided and supported their development towards a critical inquiry stance. What is clear, based on the meaning made by the preservice teachers, is that they were becoming not only teachers of students but what Dewey (1904) referred to as “students of teaching” (p. 151), as they began to inquire critically into their teaching, student learning, and classroom life, in order to learn from their teaching experiences and improve subsequent ones.

The data revealed how participants made meaning of their inquiry in varied ways, directions, and degrees. For some participants, the action research brought into focus their classroom instruction and pedagogy and allowed them to make meaning about their teaching and pedagogical choices. For other preservice teachers, the action research led them to think about themselves as educators and make sense of their role and responsibilities in the classroom. For others, the inquiry opened the door to making sense of how students make meaning in a classroom. Finally, the meaning preservice teachers made about critical teacher inquiry illuminated how, for some participants, enacting action research contributed to the development of a critical inquiry stance. Ultimately, the meaning made was driven by participants’ lived

experiences, educational experiences, and where they were on their journey towards a critical inquiry stance. This important finding echoes Parker et al.'s (2016) finding in their research of preservice teachers engaged in inquiry during a capstone project. The authors opined that the topics participants inquired into were based on “where our teacher candidates are developmentally” (p. 230), highlighting the influence preservice teachers’ development plays in their ability to inquire, question, and make meaning of their work.

Making Meaning About Classroom Teaching and Pedagogy

In discussing the practical components of effective teaching techniques and pedagogy, Dewey (1904) posited that preservice teachers need “to know not merely as a matter of brute force that they work, but to know how and why they work” (p. 156). As the preservice teachers made meaning of what happened in the classroom and their pedagogy as a result of their action research, some began to enrich their meaning making to encompass not only which actions or teaching practices were effective but made meaning about *why* they were effective.

On a practical and relatively basic level, Alonzo made meaning of his action research as he understood that his action, asking students to respond in a daily journal to prompts about the big ideas in a lesson, gave him further insight into his students’ thinking, development, and understanding in his middle school dance class. He observed, “so that's why one reason this action research project is extremely eye opening, because I can see where my students are, how they portray their feelings, and how they execute their feelings in a physical manner” (Action Research Presentation Transcript, p. 13). The journal entries gave Alonzo a window into his students’ world, granting him access to student understanding in a way he did not previously have. He made meaning of the access to student thinking the journals provided him and to the student journal entries themselves, regarding student understanding and development. He did not

however explore why it was that students were able to express themselves so much more effectively in writing as opposed to classroom discussion, nor did he explore how or why this daily reflection helped students understand the big ideas of the lesson.

Whereas Alonzo did not make meaning of why his action was effective, Felipe began to question why he saw improvement with his assignment submission rates after implementing his intended action. Frustrated with the rate at which students submitted assignments, Felipe attempted to motivate his students using visual aids, such as graphics and charts of class submission data. He saw an increase in submission rates after he began using the visual aids and tried to make meaning of why that was. He did not hypothesize as to why visual aids would motivate students to hand in assignments, but he did question if it was in fact due to the inclusion of these visual aids or due to other factors. He pondered:

I can't help but think that perhaps this may have not had a significant impact on the submission rates, meaning, I can't be completely sure that my use of the visual aids was the reason why students started to hand in the work. (Action Research Reflection Assignment, p. 10)

He considered the *why* and *how* of his action by thinking about possible alternative factors that would lead to students increased submission rates but never discussed why or how the visual aids could have motivated students to hand in their assignments. It was at this point that I suggested that the next time he conduct action research, he should consider a data set that would shed light on student perspectives, through either surveys, interviews, or questionnaires. This point, that student perspectives should be included as one of the data sets collected, was something I learned as an instructor during this study, that I can apply the next time I assign action research to my preservice students. Felipe did not make meaning about why his action was potentially effective,

but he did attempt to make meaning about how other factors may have influenced the increased submission rates and the impossibility of isolating a singular factor when thinking about a layered and messy classroom context.

As Mara made meaning of her action research, we see an example of a participant working to make meaning of what happened because of the action research as well as how and why it happened. In Mara's discussion of the use of new Google Meets backgrounds in her middle school English class, she started to make meaning of the new backgrounds and why they created more engagement and fostered a sense of community in her classroom. She reflected, "Students use the backgrounds to be involved and be 'seen,' because students offered personal information when they displayed a background" (Action Research Reflection Assignment, p. 6). In Mara's examination of why the Google Meets backgrounds encouraged more student engagement, she stated that it was because they were sharing personal information about themselves, which made students feel seen and supported increased classroom involvement. Mara went beyond simply acknowledging that these new backgrounds were effective in increasing engagement but explored why they increased engagement. She made meaning of not only the action and the results but began to think about and make meaning of why this particular action resulted in this outcome. Here too, I recognized that like Felipe, Mara's understanding of her action research would have benefited from the inclusion of student perspectives as one of her data sets and supported the triangulation of the data.

Participants were able to make meaning of their action research on multiple levels. As with the examples above, preservice teachers made meaning of the actions and results of their action research; however, many expanded their thinking and meaning making towards a deeper understanding of the pedagogy that shaped the design and implementation of their action.

Likewise, in Ryan's (2020) study of physical education preservice teachers engaged in action research, he found journaling to be a means for participants to, "sort, identify and bolster evolving pedagogy" (p. 294), as they reflected and made meaning of their action research.

As Jillian implemented group work in her high school math class, she not only made meaning of how the groupwork affected student achievement, but she also made meaning of why groupwork can be an effective pedagogical approach. She explained that the action research, "influenced me to make sure I incorporate group work as much as possible. It helped students make friends and better understand the material" (Action Research Reflection Assignment, p. 3). Jillian made meaning of both the social and academic benefits of implementing groupwork into lesson structures and envisioned taking the meaning she made and applying it in her future classrooms.

Additionally, the meaning that Felipe and Amal made about their action research suggested that their meaning making evolved beyond the implemented action and the results to include meaning and understanding related to pedagogy. They applied the meaning they made about the intended action to develop their understanding about the pedagogy that informed their action. They both explored principles of UDL and made meaning of the benefits of structuring lessons with multiple means of student expression. Amal realized, "the importance of giving students the flexibility of how to answer a question" (Action Research Reflection Assignment, p. 4) and Felipe reflected that his action research, "has shown me the importance of giving students options for completing their assignments along with options on how to submit or present their work" (Action Research Reflection Assignment, p. 10). The action research prompted meaning making about not only the instructional action and its effectiveness, but also about how the experience influenced how they understand and make meaning of the pedagogy that grounds the

action. They were learning to make meaning beyond the isolated moments of instruction towards a more comprehensive understanding related to educational pedagogy.

Making Meaning About Themselves as Educators

Many of the preservice teachers made meaning of their action research by exploring beyond the goal of improving teaching instruction and student learning and claimed the opportunity to explore who they are and want to be as educators. Some participants reflected on their understanding of the purpose of a teacher, letting the work frame their thinking about what it means to teach. Some participants made meaning about their responsibilities as an educator, and others made meaning of their relationships with students. In the following examples, we see preservice teachers struggling to understand and conceptualize who they are in relation to the students they are educating, as they consider their positionality, relationality, and responsibilities.

Making Meaning About the Purpose of a Teacher. Through their action research, some participants explored what their purpose was for being a teacher and specifically as a classroom teacher in 2020. Their reflections and comments were suggestive of the stressors they anticipated as they moved into their role as teachers in the current political climate. They were grappling with the pressures to complete curriculum, enact curriculum that was relevant and sustaining, support students' meaning making, and develop the skills to continuously improve their teaching. In addressing these concerns, their descriptions of the purpose of a teacher were clearly shaped and influenced by the action research they completed.

In Claire's discussion of her purpose as a teacher, she acknowledged the pressure to cover material and complete curriculum but pushed back on those expectations by prioritizing real life and social and emotional skills. Both the meaning she made from her action research and the current expectations of teachers guided her view of the purpose of a teacher:

It has inspired me to be more of a well-rounded teacher, rather than just a physics teacher. I think it inspired me to take a step back, because a lot of times teachers are worried about content, I need to get this done. How can I fit social and emotional learning into a curriculum when I have so much to teach? How can I incorporate life skills in my lessons if I have so much to teach? There's always so much to teach. But the point is, you need to take a step back and decide how you can still incorporate real life skills and social emotional learning and support your students in other ways, rather than just content wise, and this project has shown me that. (Second Focus Group Transcript, p. 18)

She recognized that her purpose does not solely lie in the discipline content, rather there are other priorities that necessitate attention and time in a classroom. For Claire, her purpose as a teacher was to educate her physics students to be productive citizens who can bring their content to life justly, respectfully, and critically.

Joshua's vision for the purpose of a teacher was guided and shaped by the meaning he made from his action research question. His question sought to address the lack of relevancy and representation in his middle school social studies curriculum by including current events articles that reflected students' lived experiences. As he formulated his purpose, this curriculum issue was clearly on his mind, guiding the meaning he made of his purpose as a teacher. He shared, "You know, it's teaching them not just what happened, why it matters and why it's significant, but how it applies to the present day, into their lives" (Second Focus Group Transcript, p. 3). The notion of curricular-relevancy and representation of diverse students was explicit in his vision of the purpose of a teacher. He valued the need for all students to see themselves reflected positively in the curriculum and have a voice in their classrooms.

Likewise, Felipe connected this notion of relevancy to student meaning making in that he understood how powerful and effective it was for students to understand why curriculum or classroom work has importance and relevance to their lives. In his response during the first focus group, he shared, “When I was a student, I would think, why are we learning this? . . . it's kind of stupid, there's no point to this” (p. 7), demonstrating empathy for students who struggle with this notion of curriculum relevancy. He went on to give voice to students’ thinking as he continued, “I don't know what I'm going to do with that. So, it's not important to me. That's not meaningful to me. But if you show me why it should be, then I, as a student, I may look at it differently” (First Focus Group Transcript, p. 7). He articulated an important purpose of teaching in the above statement, to demonstrate and help students find the importance and meaningfulness in their learning and inquiry.

When Joshua added to his vision of the purpose of teaching, he included the need to support his students in making their own meaning out of the work they do in the classroom, much like Felipe did in the above example. During our second focus group, he shared:

I recognized and really honed in on the importance of the meaning of being a teacher, it is helping the students find meaning, enjoying learning, the meaning of acquiring knowledge and free inquiry, and enjoying that learning process and finding meaning in things, is the meaning I guess of being a teacher. (p. 9)

Here Joshua referenced the importance of supporting critical thinking skills, inquiry, and student meaning making as part of the purpose of being a teacher. Much like Claire, teaching is not just about content for Joshua, rather it is the development of more complex thinking processes and skills in students and the ability, space, and authority to make meaning of the daily work they engage in.

Finally, as Justin reflected and made meaning of his action research, he contemplated how the work helped him develop an inquiry stance towards his work, with the goal of continuous improvement in his teaching practices. He made meaning of the action research experience in the sense that he understood that teachers need to be engaged in reflection and inquiry every day to monitor and bring about growth and progress in their practice. After completing his action research, during our second focus group, Justin explained that action research encouraged him to “to want to do something better every day, whether it's something little, to be more reflective. Did I do something a little bit better today? Did I take a step forward? Did I take a step backwards?” (p. 18). He was working towards developing an inquiry stance, as he leaned into the desire and realization that he should be in constant pursuit of a better way to be as a teacher, in all the forms that takes. Justin viewed this as part of his teacher responsibilities, the need to develop professionally over time. He also recognized that progress and development are not linear, rather there is a back and forth in the process of becoming, some days we move ahead, some days we fall backward, but we are always in service to the goal of improving our teaching and learning context.

Making Meaning of Their Relationships with Students. Many of the preservice teachers noted that they gained understanding about their relationship with students through their action research. Immaterial of the topic of inquiry, the participants found that they were making meaning of the relational aspects of teaching. Theisen-Homer’s (2021) analysis of two teacher education programs’ stances towards addressing the relational aspects of teaching shed light on the importance of relationship development, articulating a humanizing approach to relationship building, and the development of relational competencies. The author commented on the lack of research surrounding this topic and the importance of addressing this overlooked area of teacher

development. The following findings suggested that action research may serve as a portal or window into this arena of classroom life, despite that fact that it is not the primary purpose of the work. The action research experience appeared to create opportunities for preservice teachers to think about and develop their relational competencies and draw their focus to their relationships with students, unveiling the potential action research has, to some degree, in addressing relational aspects of teaching.

Jillian shared very clearly and succinctly during our second focus group that the action research, “helped me make meaning of my relationship with my students, although that had nothing to do with my question at all” (p. 10). She recognized that her action research, which looked at incorporating groupwork into a high school math class, helped her engage with students on a more humanistic and relational level. The inquiry seemed to draw her closer to her students than when she was simply planning and executing lesson plans.

Similarly, Claire found that her relationships with students were impacted through her action research, as she learned so much more about who they were as learners and people. She shared in her Action Research Reflection Assignment:

This has affected my relationships with my students as well. I feel like I know so much more about my students after this project because I saw their thought process when contributing to the assignment. Some are quiet thinkers that internalize a problem and then fix it later, some are not afraid to ask for help and source out others’ opinions before changing. Every detail tells me a little story about the student. (p. 2)

She expressed the understanding that each child brings a story with them as they enter the classroom and having opportunities to learn students’ stories helps teachers build relationships with them. Action research allowed Claire to learn about her students and get to know them as

learners and individuals, which led to greater connection and relationships between herself and her students.

In the same vein, Amal and Mara discovered that action research was a vehicle for them to connect and build trust with their students in genuine and authentic ways. Amal focused on the trust that was built between himself and his students as he incorporated multiple means and options for students to demonstrate knowledge in his classroom. He described in his Action Research Reflection assignment, “Another experience that changed how I view teaching was how I noticed that students would be more honest and less likely to lie if they felt they could trust the teacher” (p. 5). He saw trust build as he became more sensitive and responsive to students needs and learning preferences and made meaning of how that fostered trust and honesty in his students. Amal made meaning by connecting how students responded emotionally to his instructional actions and how it enhanced and nurtured his relationships with them. Similarly, Mara made meaning of her connection with students that resulted from her action research, despite the challenges of remote learning. She noted:

I learned so much about having a meaningful connection with students during this time of virtual learning through my research. I was not only curious about this, but quickly was swept into a supportive classroom environment, allowing me to experience what having relationships with students is like. (Action Research Reflection Assignment, p. 6)

Her comments suggest that this was the first time she was aware of the complex process of relationship building with her students, as previously, she did not find a way to connect with and build relationships, further supporting the finding that the action research was a vehicle for connecting with students.

As participants discussed the meaning they made regarding their relationships with students, it was apparent that they were genuinely surprised at this unanticipated outcome. At the onset, most did not expect that the action research would yield results in areas other than their specific question but as they reflected on their work, many participants made meaning specifically of how the work fostered connection and relationships with students. This specific area of meaning making suggested that enacting inquiry not only prompts inquiry into instructional and pedagogical topics but fosters a sense of inquiry into students on a relational level, nurturing more connection, trust, and deeper bonds with students. Preservice teachers had the opportunity to see their students as individuals, with stories and experiences to share, and specific learning needs to be met. It brought about an openness and awareness that did not exist before the action research and an appreciation for the humanity of each student.

Making Meaning About How Students Make Meaning

Through participants' own struggle to make meaning of their inquiry, they began to grapple with the notion that all classroom stakeholders make meaning, students as well as teacher are constantly engaged in this process as they reflect on and internalize their classroom experiences. Just like teachers, students struggle to make meaning of every event in the classroom, from what the curriculum is telling them about who they are, to why there is meaning in what they are learning. As Joshua reflected above, part of the purpose of being a teacher is to help students make and find meaning in learning, inquiry, and the construction of knowledge. The examples below suggested that participants made meaning of student meaning making through a variety of lenses and perspectives.

For some preservice teachers, the idea that students need to make meaning in the classroom in order to learn is a new and unique one. At this early stage in their development as

teachers, beginning to apply theory into practice in the classroom setting, preservice teachers are often concerned with themselves, with the effectiveness of their teaching instruction, and with their adequacy and competencies as a teacher (Conway & Clark, 2003). However, many of the preservice teachers who participated in the study had a sense, even before the action research, that everyone, teacher, and student alike, makes meaning of their work in the classroom in order to grow, learn, and develop, and that everyone has a role to play in making meaning.

There was evidence of this understanding during our first focus group, which took place before the action research began. When asked about how meaning is made in a classroom, many participants put forth views that all classroom stakeholders make meaning, that everyone makes meaning of classroom life and work, not just the teacher. Alonzo was very explicit with this understanding when he shared, “Who can create or who can find meaning? I want to say its everyone, I think the students have the opportunity to create their meaning. And I feel like the teachers have the opportunity to create the meaning” (First Focus Group Transcript, p. 8). For Alonzo, all members of the classroom community could and should be making meaning of their learning experiences. In other words, meaning making is a shared responsibility, as both teachers and students are engaged in the same process, of finding meaning in their work.

Additional responses to the question of how meaning is made in the classroom during our first focus group revealed that preservice teachers understood that finding meaning in classroom work was essential to learning from the work. Both Claire and Felipe expressed a similar understanding about students making meaning during the first focus group, in that they saw the importance of the work being meaningful to students. Felipe responded, “I think as a teacher, in order to develop meaning, you have to show the students why what you're showing them is important, you know, how it's going to relate to them and how it's going to be, how they're going

to use this information” (p. 7). His response stressed the value of having students make meaning about the importance of the work and identify ways in which it connects or relates to their lives. When students find meaning in the actual classroom work, they find the worth in it, which can be a significant motivating factor and contribute to their learning.

Claire’s response during the first focus group also suggested that she understood how valuable and powerful it is for students to find meaning in their work. She shared, “So you start off the lesson by telling them that it's meaningful, and then they'll see, through learning the lesson on their own, and with you, how it's meaningful and why it's meaningful” (p. 8). Here she was clearly addressing the significance and need for students to find meaning in the lesson. She continued:

I think telling them that it's meaningful is one thing, but really showing them and allowing them to explore that on their own is important because you can't make a meaning out of nothing. You need to be guided and then you need to find out for yourself why something is meaningful. (p. 7)

What is interesting in her comment is that she included both a role for the teacher as well as a role for the student in the meaning making process as she pointed to the meaning making the students do on their own as well as the support they receive from the teaching. Her inclusion of the roles of both the teacher and student in the meaning making process highlights the complexity involved in this endeavor and supports Alonzo’s above comment, that everyone has the opportunity to make meaning in the classroom and everyone has a role to play in the complex and multi-dimensional process of meaning making.

As participants discussed the specific role a student plays in making meaning in the classroom, they expressed an understanding that for students to construct knowledge, they had to

own their learning. In other words, part of meaning making involves struggling independently, owning their learning process. Students own their learning when they are engaged in a productive struggle to make meaning of their learning for themselves, when they are granted the space to explore, embody, and engage in their work with room to arrive at understanding independently.

During our first focus group, Alonzo expressed the importance and power in students arriving at meaning on their own, “If the student comes to that realization on their own, then they have a much greater understanding of the material than we thought they had. They're coming to their own meaning of why that's important and why that is required in the technique” (p. 8). In Alonzo’s dance class, he saw firsthand how students came to realizations on their own and attached meaning to their work based on their personal experiences and ways of thinking about and attempting a specific dance technique. Here he pointed to the way in which students embody their learning and, in that way, own the learning and the meaning they make. He went on to give a very specific and illuminating example of the process of owning the meaning making:

So now they're creating meaning that they have control of their body just by engaging the core. Meanwhile, we never said that, all we said was engage the core. But now they're figuring out, ‘Oh, when I do that, this is what happens’. (First Focus Group Transcript, p. 8)

His description of the process of students owning and making meaning sheds considerable light on his own understanding of his classroom and students. He understood that there are parts of the learning the students need to accomplish on their own, that need to be driven by the student in order for the student to learn, thereby establishing the role of students. The teacher’s role is to create the space for the student to own the learning through specifically guiding students to a

certain point and creating scaffolding so students can then take responsibility and independently make connections and meaning of their work.

Amal echoed the above student meaning making process in that he understood the importance of having teachers create opportunities for students to own the meaning making process to allow the students to drive the learning. In his reflection assignment, he shared that because of the action research, “I learned the importance of having students generate knowledge and not just the teacher. I have to make sure that my lesson plans include opportunities that allow the students to give their own input on knowledge” (p. 5). His experience led him to understand that, as Alonzo stated, both teacher and student have a role to play in student meaning making. The role of the teacher is to structure the learning so that students can take up their role in owning and driving the meaning making that ultimately leads to knowledge generation. Amal’s action research question speaks directly to this notion of owning and driving one’s own meaning making, as he sought to and advocated for giving English Language Learners (ELL) opportunities to write independently, without extremely structured advice and guidance from a teacher. He wanted to see what would happen when ELL students led the learning through their attempts to respond in writing to questions asked, using their previously generated knowledge to guide them. Amal expanded on the importance of students making meaning by connecting it to the goal of generating knowledge. Here he suggested that student meaning making is the precursor to knowledge generation, expanding on the importance of meaning making in the classroom.

Based on our first focus group, it was evident that many of the participants had a well-developed understanding of the notion that both teachers and students need to make meaning of classroom life for the work to be a successful endeavor for all stakeholders. Teachers need to

make meaning about the work they engage in to learn from their experiences, grow their teaching practice and pedagogy, and improve student learning experiences and relationships. Students need to make meaning about the work they engage in for it to be an educative and effective learning experience and contribute and support development and growth (Dewey, 1938a). Because of this well-developed understanding of the importance of student meaning making at the onset of the study, the participants were ultimately able to expand their understanding of knowledge generation to include and value the knowledge that not only teachers generate in the classroom, but that students do as well. Through the action research, many of the participants came to understand and place value in the idea that all individuals come to the education experience as *knowers* (Freire, 1970), who can contribute to and play a role in the collective generation of knowledge and understanding in a classroom. Their understanding of the complexities of the meaning making process for both teachers and students set the stage for their developed understanding, at the conclusion of their action research, of who generates knowledge in a classroom. This finding is explored in greater detail in subsequent sections of this chapter.

Making Meaning About Critical Teacher Action Research

The meaning that participants made about their action research was essential to their development of a critical inquiry stance. As they enacted the action research, they made meaning of, understood, and internalized critical teacher inquiry, which allowed them to develop along the spectrum of a critical inquiry stance. I refer to their development on a spectrum on two levels. Firstly, each participant began at a different point with regard to their critical inquiry stance and journeyed at various rates, thus creating a spectrum of experiences and development. Parker et al.'s (2016) research supported this notion of a continuum of development toward an inquiry stance and specifically described the wide range and varying degrees of sophistication of

engagement in the inquiry process observed in their study. Secondly, a critical inquiry stance is not something one achieves or completes, rather it is a life-long pursuit to continuously infuse one's teaching with intentional inquiry to bring about a more just and democratic way of educating, improving teaching practice, teaching context, and the student experience. In fact, Yeigh (2017) referred to this life-long pursuit in terms of "sustained inquiry" (p. 3) and posited that it is a contributing factor in not only developing an inquiry stance but in maintaining and building an effective and thoughtful teaching career. Nurturing a critical inquiry stance is a dynamic, malleable, unpredictable process that does not conclude but grows and develops over the course of a career, hence, it presents as a spectrum of development. In analyzing the meaning preservice teachers made about critical action research, I can identify moments where their thinking developed, from understanding action research as a tool, to how it can be used to improve instruction, to why it should be used to improve instruction, and ultimately, to what action research represents as a process teachers enact and struggle to find meaning in.

In Dewey's (1904) discussion of the relationship between theory and practice in education, he described the work of teacher education. He posited:

The work of the expert or supervisor should be directed to getting the student to judge his own work critically, to find out for himself in what respects he succeeded and in what failed, and to find the probable reasons for both failure and success, rather than to criticizing him too definitely and specifically upon special features of his work. (p. 168)

He asserted that merely observing preservice teaching and pointing out moments of failure and success in a lesson are "not calculated to develop a thoughtful and independent teacher" (p. 168), however creating the experiences and the space for preservice teachers to critique their own work, is a far more productive and beneficial approach to teacher education.

The approach I took in designing the action research assignment was aligned with Dewey's (1904) recommendation, in that my goal was to create an experience and the space for preservice teachers to choose their own learning, develop their critical muscle, and apply it to their own work to identify the moments of success and failure that emerged. In Joshua's response to what he has learned about action research, he shared, "I have learned that it is an ever-evolving process that requires errors and failures and modification and that the question or the methods you start with may change with time" (Action Research Reflection Assignment, p. 8). Joshua recognized what Snow-Gerono (2010) opined in her work about living an inquiry stance towards teaching, the ability to embrace the tensions we encounter, to live with the complexity of our work, and to take up the challenges presented in our teaching and our students' learning. His response suggested that indeed, the assignment was structured for students to identify their successes and failures on their own, independently, without a teacher pointing them out.

In my efforts to support the development of a critical inquiry stance in my preservice teachers, I knew they had to internalize the work, understand it from the inside out, rather than from the outside in. Again, Joshua referenced this idea when he shared, "[Action Research] requires a massive amount of thinking, introspection, and reflection" (Action Research Reflection Assignment, p. 8). He highlighted the internal processes at play during action research, understanding that the work is driven by the individual. The knowledge came from them, my students, not from me, the teacher. The learning, the analysis, and the conclusions, all had to be student driven and generated in order for preservice teachers to learn and develop a critical inquiry stance from the experience. In this way, the participants experienced problem-posing education (Freire, 1970) and began to explore and understand that they, as students and student teachers, had the power to guide their own learning through their inquiry. In Mara's

Action Research Reflection assignment, she explored the experience through a problem-posing lens:

Being asked to engage in a problem-posing model for learning helped me to construct my own knowledge about Action Research. In this way, Action Research is linked to Freire's theories that students should be given opportunities to make meaning through exploration of a topic or issue. Action Research gives the credit for arriving at a conclusion to the educator by allowing her to validate what she records or learns through multiple sources.

(p. 6)

Mara thought about how the action research assignment was structured and explicitly connected it to Freire's (1970) notion of problem-posing education. The experience helped her construct her own knowledge and understanding about action research and how the work allowed her to make meaning of her chosen topic. What is equally striking is her understanding that the success of the learning stemmed from her work, she arrived at the generated knowledge and meaning from the inside out, as she validated her own conclusions and understanding through the work she conducted. She was becoming, according to Kennedy-Clark et al. (2018), a steward of her own professional development, much like the participants in his study who engaged in action research. Mara also included the idea that in action research, the teacher gets the credit for the knowledge generated, asserting a critical stance towards notions of who is allowed to generate educational knowledge, whose knowledge is valued, and in what context knowledge can be generated. Her reflection demonstrates a critical stance towards her inquiry in that sense, as she pushed back against the traditional hierarchy of knowledge generation for teaching, a topic that I will discuss further on in this findings section.

On a basic and practical level, many preservice teachers made meaning about action research as a tool to improve practice and solve problems encountered in the classroom, much like the participants in Crawford-Garrett et al.'s (2015) study, who used action research to problematize classroom instruction and practices. Felipe reflected, "this assignment taught me how to approach classroom problem solving in a much more efficient and thought-out method" (Action Research Reflection Assignment, p. 10). Claire's response supports this notion as well, "I think that action research is a good tool to use, especially for us, we're new teachers, and to try out new things. If we're trying them out anyway, notice how they affect your class, take specific notes" (Second Focus Group Transcript, p. 20). Finally, Amal confirmed this understanding when he said, "So the most beneficial part I would say is the idea of deliberately doing something different and seeing if it works or not" (Second Focus Group Transcript, p. 22). All three examples suggested that preservice teachers made meaning of the action research on a practical level, as a tool, approach, or method to problem posing and solving and bringing some sort of positive change to their teaching practice and instruction.

On a more critical level, Joshua made meaning of the process of action research and what it necessitates of the researcher. In his Action Research Reflection assignment, he shared, "I have learned that it is absolutely essential that you are flexible and fluid with every aspect of action research because in being rigid, it can make you miss opportunities for discovery" (p. 8). His use of the phrase, "opportunities for discovery" evidenced his growing understanding of a critical inquiry stance and the idea that through inquiry we create opportunity to discover something new, something we did not understand before. He was developing the characteristics that accompany a critical inquiry stance, such as flexibility and fluidity, and understood how these characteristics supported inquiry. He was able to let the meaning he made come from the action

research process he engaged in and described how his ability to be flexible and approach the work with a fluid mindset allowed him to arrive at the meaning of the work:

I was looking at it one way, okay this is how it has to go. But I was able to find meaning from, I was able to let the meaning come from itself, from the process itself, from me, instead of just being, okay this is what I'm looking for . . . I was like, do the research and just accept it as it comes, rather than put a round peg through a square hole. (Second Focus Group Transcript, p. 9)

Once Joshua let go of what he thought he was supposed to understand from his action research, once he took a flexible stance, he became open to what the research was really telling him, allowing him to hear the story the data told, instead of the story he expected to hear. Joshua's experience echoed that of the participants in Faikhamta and Clarke's (2015) and Stern's (2014) studies in that they initially struggled to embrace the fluidity and complexity of action research, seeking the comfort and simplicity of finding a correct or definitive answer. They had been conditioned in the process/product paradigm and struggled to embrace the openness and unpredictability of action research. Joshua made meaning when he surrendered to the process of inquiry, and impressively, was able to make meaning about action research as a result of his need to be more flexible and fluid towards it.

Aligned with Joshua, Jillian made meaning of her action research when she acknowledged that it was a process of exploration and there was a need to be open to that process in order for it to be successful. She described the process: "action research is really going deep into one thought and exploring it and then finding many others along the way" (Second Focus Group Transcript, p. 1). She understood and articulated the need to be open to what you find along the journey of inquiry, revealing the unpredictable nature of action research which requires

a researcher to have an open stance. Her description also sheds light on the process of inquiring, in that we start out thinking about one action or idea but are inevitably led down unexpected paths as we look to make meaning of the work. In Jillian's ability to make meaning of the action research itself, she developed an important understanding of the nature of inquiry and the need to be open to the process that awaits her. In this way, her description chronicles a step forward in her development of a critical inquiry stance as she understood and developed the ability to explore and be open to the inquiry process. Jillian's experience stood in opposition to the experiences of the preservice teachers in Choi's (2011) study who were entrenched in the prevailing cultures of teacher education programs that rarely asked preservice teachers to genuinely engage in inquiry, denying them the experience of embracing the authentically exploring the complexities of classroom life.

A third key meaning that participants made of critical action research was the understanding that there are no right or wrong answers in action research. This meaning making supports the flexibility, fluidity, and openness that is required of teachers as they engage in critical teacher inquiry. During our second focus group, which took place at the conclusion of the participants action research, Claudia expressed, "It doesn't matter, even if your conclusions are terrible, even if the research goes south and you find nothing or you find that wherever you enacted made it worse, that's a conclusion and you use that to grow" (p. 22). She recognized the value in the experience itself, even if the results of the action taken in the action research were ineffective. Similarly, Joshua shared, "I have learned that through action, you may end with something completely different and that is sometimes the best kind of action research or results" (Action Research Reflection Assignment, p. 8). He understood the fluidity needed in authentic inquiry and valued the unpredictability and advantages in unanticipated results. Mara recognized

this as well when she explained, “it reminded me that I really felt more confident as I remembered too, that there wasn't a right answer or a wrong answer” (Second Focus Group Transcript, p. 10). All three participants made meaning of the critical action research in the same way in that there were no right or wrong answers to the questions they asked. This is a fundamental shift, according to Snow-Gerono (2010), in developing an inquiry stance. The embracing and acceptance of the uncertainty of inquiry is necessary if preservice teachers are to embody and cultivate an inquiry stance towards their work. The above examples illustrated how participants understood the notion that there existed a multiplicity of answers in action research and did not limit themselves to just a singular understanding. Their responses suggested they understood the nuanced and complex nature of inquiry and that there are multiple ways to learn from an inquiry experience. This meaning making can also be viewed as one that contributed to their development of a critical inquiry stance as they grasped the necessary acceptance of the complexity and multiplicity of inquiry.

Additionally, Mara articulated a unique understanding about the nature of the meaning she made of her action research. She connected to the meaning she made because she held it as her own, which infused the meaning she made with value. In Yeigh's (2017) work within a graduate teacher education program, she situated inquiry at the heart of teacher education and articulated the need for the inquiry to be generated from participants' own interests and needs for it to be meaningful. Yeigh (2017) asserted, “The contextual significance of the experience is at the heart of developing a stance of inquiry and reflective practice” (p. 5), effectively linking the experience of owning the meaning one makes from their inquiry experiences to the development of an inquiry stance.

During our second focus group, she stated, “And through all of it I was just so motivated by my high level of interest into my inquiry as well. So, it made me feel very connected to the meaning that I was trying to make because I was so motivated by it personally” (p. 6). The personal connection she felt to her action research and the high level of interest she had in her topic were both motivating factors in her work. She felt intensely linked to the action research and the meaning she made of the experience because it stemmed from who she was as a person and teacher. Later in the conversation she continued:

I definitely think that having this problem-posing method to create knowledge is, I saw how much it worked for myself. I don't think that I would take my findings to heart as much if somebody told me, this is how it worked or this is how it is. I got to experience that and go through it so that's how I feel so connected to the knowledge that I have now.
(p. 11)

Here, Mara drew on the lens of problem-posing education (Freire, 1970) as well as Dewey's (1938a) experiential education model to make sense of her action research experience. By applying these lenses, she was able to make meaning of her action research and understand that because she posed this specific question and experienced this work for herself, she was able to internalize and connect to the meaning she made and ultimately to the knowledge she generated. The control and authority she was granted in the action research allowed her to own the learning and internalize it on a completely different level than if she was just told about it. Her statements demonstrate a developed understanding of critical inquiry, in that worthwhile and generative inquiry requires personal investment, personal enactment, and ownership to make the work educative and meaningful for the individual.

Finally, Joshua's reflections on his action research evidenced his meaning making of the action research from a wider perspective. He had an acute understanding that a critical inquiry stance is forged through action and thought. In his Action Research Reflection assignment, he expressed, "I have learned that it is very much something you think in addition to something you do" (p. 8). He made meaning of the enactment of critical teacher action research as he developed the understanding that engaging in critical inquiry affects the way you think about critical inquiry. He was learning to use a critical inquiry stance in relation to his action research, to improve teaching and learning and bring about a more democratic and just learning context and experience for his students. Furthermore, when responding to how the action research impacted him as a teacher, he added:

It is absolutely critical for teachers to be reflective, ever-evolving, always open to feedback, and always trying to improve. It is not good for a teacher to be rigid or inflexible or stubborn and not try to get better. I have always wanted to get better as an educator, but this even furthered my desire to create even deeper meaning in the content for my students. (Action Research Reflection Assignment, p. 8)

Joshua's explanation of what he learned about being a teacher through his action research evidenced how his enactment of action research supported his development of a critical inquiry stance. As he engaged in action research, he came to know what a critical inquiry stance required of a teacher, flexibility, reflection, openness to try something new, and the desire to improve the teaching, learning, and meaningfulness of education. He credited the action research with a "furthered desire" to improve his classroom world to make it more meaningful for his students, a view of improvement that highlights a democratic and just approach to education. He situated his

development in the enactment of his action research, weaving the enactment of action research to the meaning making and development of a critical inquiry stance together.

The Struggle of Inquiry

The second tenet of critical teacher inquiry purports that knowledge is arrived at through struggling to inquire about one's world both individually and collaboratively. In other words, knowledge is a hard-won proposition, it is not easy to generate, and it is produced in the interaction between one's internal self, one's action, and those around us. The process of critical teacher inquiry is fraught with struggle on many fronts, but it is a productive and generative struggle as it yields meaning making and ultimately the construction of knowledge through our interaction with ourselves, our context, and others. As the participants concluded their action research, they shared the struggles they experienced during their inquiry. The discussion during our second focus group illuminated three distinct areas where preservice teachers felt engaged in struggle, in their confidence to enact action research, in the questions they posed, and in the process of making meaning of their action research. These struggles were situated both internally and externally, aligning with the above second tenet that the struggle to inquire occurs within one's world and with one another.

Claire and Mara encountered both internal and external struggles, as they both shared that they struggled with their confidence and the enactment of the action research. From one perspective, Claire's struggle was an external struggle, between her enactment of the action research and her students. She explained during our second focus group:

So, I didn't know if it was because it was new that they didn't take it as seriously, or if it was because it was me doing it. I started second guessing myself and I had this kind of

struggle of ‘ok, maybe they're just not responding to it because it's me.’ I'm not a very aggressive figure. I lack a bit of confidence standing in front of the room. (p. 6)

She struggled to get her students to take the action research seriously, as she considered that they did not take her seriously because she was not a very “aggressive figure.” This external struggle, between herself and her students, led to an internal struggle with her confidence as a teacher. She described her lack of confidence in “standing in front of the room,” in other words, in her ability to manage the classroom as a preservice teacher. The struggles she encountered in her action research fluidly crossed over from internal to external struggles, and arguably, each struggle impacted and influenced the other.

Mara struggled with her action research from both an internal and external perspective as well. She struggled internally to understand what happened in her action research and she struggled externally to know how to respond and address the happenings in her action research. She shared, “I spent so much time washing dishes, folding laundry, my mind is like, what does this mean? I'm still like, this happened today, what am I going to do to address it in my action research?” (Second Focus Group Transcript, p. 5). She described an internal struggle, as the work was on her mind throughout her day, as she engaged in mundane tasks, the action research filled her thoughts and reflections, challenging her confidence in the meaning she was trying to make of her work. However, she also struggled with how to respond in class as her action research unfolded, engaging in a more external struggle between herself and her context and students. As with Claire, Mara’s struggles moved fluidly between the external and internal, her struggle with her confidence to make meaning of what happened in class with her action research led to struggles of how to respond and enact the action research the following day.

Some participants struggled with their action research question in that it was a challenge to develop an actionable research question, while others second guessed their choice of question. Within the literature, the struggles to develop and pursue questions were attributed to the fact that preservice teachers are not often asked to be inquisitive and therefore remain more comfortable answering questions rather than posing them, preferring questions with simple and straightforward answers as opposed to complex and messy ones (Choi, 2011; Stern, 2014). The participants in this study struggled with their questions; however, I assert that it was not because of a lack of inquisitiveness or resistance to the complexity and uncertainty of the answers they found. Rather, their struggles were more in the practical nature of questioning, in the sense that they struggled to develop questions that were realistic given the parameters of their circumstances.

As mentioned previously, Justin struggled to craft an action research question that was focused enough to complete in the allotted timeframe. During his action research presentation, he frankly shared this struggle, “so my question, it definitely took me a while to come up with this question and to revise it and kind of think about it.” (p. 15). His action research question began as “How can I rectify the achievement gap?” (Action Research Question and Narrative, p. 4), a very noble but ultimately too undefined and unrealistic a question to pursue. He approached the question from a very broad perspective and worked hard to narrow his focus to something that was actionable, that he could realistically enact in a classroom setting.

Jillian also struggled with her action research question, wondering if it was something she could really accomplish, given the restraints of the online classroom format she was teaching in. She explained:

I [was] doubting my question at first too because although the outcome of my first group work with their exit slip being really high grades, I questioned it because I was like, wow it takes so much time to enter the groups, are they losing anything, should I be doing this, are they, although they're gaining this understanding, they're also losing a lot of time in class because it took 10 minutes to open the groups, get groups and some groups had more time because I opened their groups first. So, I did question it at first but I was like you know let me keep going, and that did scare me a little bit but I was like let me keep going. (Second Focus Group Transcript, p. 7)

She struggled with what she was sacrificing in terms of classroom learning time and what understanding and knowledge she could potentially gain from pursuing the question. Her struggle was not with the uncertainty or complexity of the answers she would find, rather it was in the concern over the learning time sacrificed because of the online learning. The circumstances placed limitations on her action research question, not her unease with the complexity of the process.

The limitations of Claire's placement necessitated a change in her action research question about halfway through the action research process. She was looking at how to increase and motivate students to hand in homework through a change in the types of questions she asked. Due to Covid-19 and the stress that students expressed, Claire's district decided that students did not need to complete homework because it was an added stressor that they were trying to remove. As a result, Claire switched her question mid-way through the action research which was a hard move for her to make. She reflected on her first question and noted, "I feel like the biggest struggle that I had was second guessing why I even chose it [the second question] because I had to switch questions, and I thought my first one was going to be really good"

(Second Focus Group Transcript, p. 6). She found herself halfway through pursuing a question and having to abandon that question because of a change in school policy. She struggled to generate another question and certainly felt pressure as to the time left to complete the assignment. Claire's struggles with her question were also related to circumstances and the limitations that were put on her as a result.

Finally, participants struggled to make meaning of their action research results. When looking at the data they collected, some participants expressed how difficult it was to make meaning of the data in relation to their question and the action they enacted. As discussed above, during our second focus group, Mara shared, "I spent so much time washing dishes, folding laundry, and my mind is like, what does this mean?" (Second Focus Group Transcript, p. 5). She spent considerable time, time not devoted specifically to her action research, contemplating what the data was telling her, what her action research experience revealed with regard to how students used the virtual backgrounds in Google Meets to engage in various unexplored ways in the classroom community. She was quite frank and forthcoming about how hard it was for her to make meaning of her action research, as she elaborated, "I did spend a lot of my time, my mind jumped to what I was thinking about and tried and tried to make meaning, it felt like a struggle" (Second Focus Group Transcript, p. 6). Mara's struggle was authentic, she experienced it over a prolonged period of time and was drawn back to the struggle of making meaning repeatedly.

Initially, she felt insecure in the meaning she arrived at and struggled with those feelings of insecurity. However, over time, as she inquired deeply, repetitively, and seriously into her action research, she began to build her confidence about the meaning she was making based on her data. She explained:

I really struggled to feel confident in what I'm doing because I'm always second guessing myself. And this helped me actually, because even though I was like wait, why am I making that meaning, and I went back and I was like no, no, I saw this in three different places, it has to be something, it has to be valid in some sense. (Second Focus Group Transcript, p. 5)

The data Mara collected during her action research helped her make meaning as they were the evidence she needed to be confident that the meaning she made was in fact credible. Seeing the same themes and ideas multiple times in her data enabled her to see validity in her findings and the meaning she made of them. Identifying the same points in her data supported the meaning she made and the confidence she had in those meanings.

Similarly, Claire also struggled to make meaning of her action research and the confidence to trust in the meaning she was making. She was overwhelmed with the amount of data she collected and could not envision making meaning of the action research experience. During our second focus group, she also stated:

So, then I started second guessing myself and this is all within the first three days of this. I was thinking, how am I going to do this for three weeks, and get data and make this meaning out of it if this is what I found, if I have 10 different things that I think is the cause of this issue? (Second Focus Group Transcript, p. 6)

Much like Mara, Claire was overwhelmed by the data she collected and could not envision how she was going to make meaning out of the action research experience. She had so many thoughts and ideas about what caused the issue that she was second guessing herself, her confidence was challenged as she struggled to make meaning of her experience. She further clarified, "The struggle was not even the assignment itself, was not the research itself, conducting the research

was just handing things out and collecting data. But it was deciding what to do with it” (Second Focus Group Transcript, p. 6). In Claire’s above comment, that the action research was not the challenge, “deciding what to do with it” was the challenge, she expressed the struggle of inquiry, the struggle to decide what to do with the information we receive, with the experiences we have, as we attempt to make meaning of new experiences and information in light of our prior ones. Her comments encapsulate the essence of the struggle to inquire, it is the struggle to understand what we have experienced in light of what we already know.

Critical teacher action research is a unique way of knowing and learning about teaching as it allows teachers to make meaning of their work from the inside out. The meaning that is made during critical teacher inquiry reveals the messiness and complexity of classroom life and learning. In a multitude of ways, the participants made meaning of their critical teacher action research. On a practical level, the preservice teachers made meaning about what happened in the classroom as a result of the action research. On a more critical level, they made meaning of their pedagogy, their purpose as a teacher, and their relationships with students. They began to make meaning about what students required in order to make meaning of classroom experiences and what role teachers play in student meaning making. Furthermore, participants made meaning of critical teacher action research itself and what it means to them as educators. As preservice teachers made meaning of their action research, they developed along the spectrum of a critical inquiry stance, understanding that critical inquiry is essential to their development as teachers who continuously aim to improve practice, classroom settings, student learning, and students’ lives.

The act of engaging in critical teacher inquiry supported the development of a critical inquiry stance as they made meaning of their work in relation to their students, their classrooms,

and their school contexts. As Dewey (1904) posited, it is critical that teachers learn and develop the habits of mind to study their teaching in the hopes of understanding the complexities that exist right below the surface. He suggested, “Unless a teacher is such a student, he may continue to improve in the mechanics of school management, but he cannot grow as a teacher, an inspirer, and a director of soul-life” (p. 151). A critical inquiry stance is essential for a teacher who hopes to bring about positive change to education, contribute to and generate educational knowledge, and inspire one’s students to critically live in their world to improve it.

Generating Knowledge

As the preservice teachers engaged in the praxis of critical teacher inquiry and made meaning of their experiences, they generated knowledge about their teaching instruction, student learning, and educational theory. I classify this generation of knowledge as critical in that typically, classroom teachers, let alone preservice teachers, are rarely positioned as knowledge generators, but rather are relegated to the role of knowledge consumers (Roulston et al., 2005). This positioning establishes the production of educational research, theory, and knowledge as a point of struggle between teachers and scholars (Cochran-Smith & Lytle, 2009). Creating spaces within teacher education programs for candidates to inquire into their problems of practice initiated a shift in the positioning of preservice teachers, disrupting the above traditional positioning, and inviting them to become producers of knowledge, not simply consumers (Darling-Hammond & Snyder, 2000). Thus, the act of preservice teachers conducting action research, generating knowledge, and theorizing about teaching and learning is in itself an act of critical teacher inquiry as it pushes up against the traditional hierarchy of knowledge that exists between teachers and scholars. (In the above sentences, I intentionally write ‘teachers’ before ‘scholars’ in an attempt to disrupt the commonly held view of scholarly knowledge as privileged

over teacher knowledge.) The fourth tenet of critical teacher inquiry presupposes this push back and highlights the disruptive nature of the praxis of critical teacher inquiry. The action research these preservice teachers enacted was a direct disruption of the above knowledge hierarchy and supported the third tenet of critical teacher inquiry, the reorientation of knowledge production.

The participants with whom I worked were comfortable in the role of knowledge consumers, having completed many education courses and studied various educational theorists, principles, frameworks, and approaches. They were far less familiar with the experience of being asked to generate knowledge, as the action research study demanded of them, so much so, Amal enthusiastically recommended:

After experiencing action research, I think this should be standard for all future student teachers to do as well. It is definitely beneficial for all our new teachers to not just copy the old ways of teaching but to think outside the box and try to see what ways can be improved. (Second Focus Group Transcript, p. 21)

For Amal, it was clear that engaging in the praxis of action research was critical to becoming a successful teacher who could contribute to and develop theory and educational knowledge. He recognized and valued his own ability to improve upon the ‘old ways,’ or the established scholarly knowledge about teaching, by acting and reflecting on theory and practice in his classroom, thereby experiencing praxis as defined by Freire (1970). In disparate ways, this praxis led to the transformation of Amal’s and many of the participants’ knowledge about teaching, learning, knowledge generation, and ultimately, knowledge itself, shifting participants from knowledge consumers to knowledge generators.

Action Research as a Vehicle to Develop Theory

According to Cochran-Smith and Lytle (2009), teachers should be viewed as intellectuals who continuously theorize practice as they engage in practice. Supporting this view, Cornett (1990) opined that personal theory development is a result of a teachers' experiences in the classroom and can be leveraged and used to improve teaching instruction and student learning. As such, Chant et al. (2004) argued that personal theorizing should be included in teacher education programs. According to Lammert (2020) and Britzman (1991), in practice, most teacher preparation courses ask candidates to apply the content of the course to their field work, seldom asking preservice teachers to theorize or innovate novel teaching practices. However, upon further analysis of the literature, there are accounts of preservice teachers engaged in personal theorizing to improve instruction using action research as the vehicle to do so (Chant et al., 2004). Chant et al. (2004) found that the preservice teachers who engaged in action research developed personal theories and generated definitions about self, reflection, and professionalism. Most striking is that participants explained how integral developing personal practical theories were to their success in the classroom and how they intended to take the knowledge they derived from their action research into their future classroom to support their efforts to continuously improve their teaching practice. Furthermore, participants used their personal practical theories to identify areas for improvement in their practice, which they parlayed into research questions for their action research. Chant et al.'s (2004) study very specifically linked preservice teacher action research with the process of developing personal theory.

Inviting preservice teachers to theorize practice as they experience it aligns with the experience of the participants, who as they enacted action research in their teaching practice came to theorize the practices they enacted. Felipe was explicit when he labeled the intellectual work he engaged in as developing theory:

I feel like art is more of, and this is a theory on my end, I feel like a lot of the time kids come into art, and if they're not into it, they might think of it as more of a free period. But once I started showing graphs, I feel like there's almost a level of seriousness with that.

(Action Research Presentation Transcript, p. 9)

Felipe's deliberate choice of the word *theory* illustrated how he viewed his thinking process and highlighted his ability to theorize the work he enacted and reflected on. Along with Felipe, many of the preservice teachers generated knowledge through the development of theory as they transformed their previous knowledge about education, thus engaging in and enacting a critical teacher inquiry stance. Smith and Sela (2005) articulated a clear connection between the intellectual processes of meaning making and theorizing when they argued that action research is a tool for personal meaning making, in that it empowers preservice teachers to develop their "personal practical theory of teaching" (p. 297). They described an awareness that developed as preservice teachers engaged in action research that supported their ability to theorize their experiences.

There was evidence of participants beginning to theorize their action research as they formulated their action research plans. The assignment asked them to develop an action research question and to propose a plan of action or intervention to address the initial problem on which the research question was based. Identifying an action or intervention that would address the stated problem necessitated thinking that led to nascent theories, as participants hypothesized actions that had the potential to improve a problem of practice. Like Felipe, Justin was explicit in the way he labeled his thinking when he explained, "My theory is that one [grading on a 10-point scale instead of a 100-point scale] would impact the other [confidence of struggling students] and bring up the kids who are on the lower level, while not making a negative impact on the kids

who are already high performing” (Action Research Plan, p. 4). Justin named the intellectual work he engaged in by using the word *theory*, highlighting how the action research process created the space for preservice teachers to theorize about the educational problem they were addressing.

Although there is no explicit statement of theory in Jillian and Joshua’s research plans, there is evidence of the beginnings of possible theories, as they stated their rationale for their intended action. The process of hypothesizing that participants experienced while generating actions to ameliorate the stated problems was the precursor to developing theory. It was their first step in generating knowledge for education. Joshua hypothesized that, “the increasing number of students participating will directly correlate to the increased relevance and significance of the content as a result of the current events assignments” (Action Research Plan, p. 2). Joshua theorized the correlation between relevance in curriculum and student engagement and asserted that student engagement would increase as the relevance to students’ lived experiences increased in the curriculum.

Jillian’s intended action included designing instruction to incorporate group work. She hypothesized about the interaction between students during group work, “the high performers will better grasp the content by explaining it to those in the group that are struggling. Also, those who are confused can hear it in the words of someone their own age” (Action Research Plan, p. 5). She theorized the benefits to all students when they work in groups as she delineated the advantages for both higher and lower achieving students. Additionally, Claire’s action was intended to shift student focus regarding assessment by incorporating performance-based assessments. She hypothesized, “By using new forms of assessment, I feel like students will not focus on the actual number that they get on their grade and more on the process and product”

(Action Research Plan, p. 1). She theorized the impact varying forms of assessment would have on student focus and achievement, she continued, “I wanted to see if students, if giving them different style of assessment would make it easier for them during COVID and get higher test scores” (Action Research Presentation Transcript, p. 1).

Finally, during Alonzo’s presentation, he explained how he wrestled with his attempts to understand how students express emotion through their bodies, “That’s my main idea here, is talking about feelings and how we can emote it through the body, so really I’m trying to figure out how we can do that” (Action Research Presentation Transcript, p. 11). He went on to hypothesize that responding to specific prompts in a daily journal may support students in understanding and noticing how they emote feelings through their bodies. His wonderings led him to form a hypothesis and the action research study allowed him the space to test the hypothesis and generate theory based on observation and reflection. The above examples illustrate how the participants harnessed their curiosities into hypotheses which ultimately led to the development of theory at the conclusion of the action research study.

Testing Hypotheses and Reflecting to Develop Theory. Once the participants completed their action research plan, they enacted an action research cycle. They initiated the action they believed would improve the problem or issue they outlined in their research problem, gathered data, analyzed and reflected on the data, and arrived at various conclusions. This process was the vehicle for the preservice teachers to test their hypotheses, develop theory, and generate highly contextualized and personal knowledge. Joshua articulated his understanding of the process very clearly:

[I was] able to compare different kinds of data, differences between participation, submission rates, and I was able to make a theoretical claim. Okay, [relevant] current

events assignments do increase participation in class and in homework completion, I was able to test that claim. (Action Research Presentation Transcript, p. 13)

For Joshua, the work was about developing theory by engaging in the action research process, which supported his ability to make a theoretical claim about the work he engaged in and the data he analyzed. Other participants did not articulate the process as clearly, nor did they name their conclusions as theoretical claims, however, many arrived at new understandings, beliefs, take-aways, or assertions that I would classify as educational knowledge. This knowledge was hard won, arrived at through the struggle to critically inquire into their personal pedagogy and teaching practice.

In the following examples, participants put forth theories they developed as a result of their action research experience. The inquiry process led them to understandings based on the data they collected and the reflection they engaged in. In her reflection assignment, Claire shared, “This is a huge take-away in the fact that I can say with evidence that this model allowed students to demonstrate understanding in multiple ways” (p. 1). She included the fact that her claim is supported by evidence to further substantiate her theory on the impact of multiple means of assessment. Jillian asserted the theoretical claim that, “the right activity group work impacted most student achievement, students learn from students when a group leader is appointed” (Action Research Presentation Transcript, p. 9), as she observed the benefits of assigning roles during group work. In both Claire and Jillian’s assertions, there is an increased level of confidence in their educational knowledge and understanding that did not exist prior to their action research study. The confidence in their knowledge was built as they engaged in critical inquiry, highlighting the impact generating knowledge has on a preservice teacher. Claire confirmed this increased confidence in the knowledge she generated when she shared during our

second focus group, “I think, even my small amount of experience has given me a lot of room to speak on education . . . I might be new, but I'm confident in the short amount of time that I've been there and how much I've learned” (p. 13). She viewed her experience as powerful and generative which led her to feel confident in the knowledge she developed.

Mara and Amal also demonstrated their ability to develop theory as a result of their action research. They both spoke with authority and confidence in their new understanding of the context in which they conducted their action research. In her Action Research Reflection assignment, Mara astutely observed, “Students used the backgrounds to be involved and ‘seen,’ because students offered personal information when they displayed a background or were seen on camera with a background” (p. 6). She theorized how appearing on camera contributed to student involvement and voice in the classroom. Amal linked his actions to student outcomes when he developed his theory around his action research experience in an ESL classroom. He theorized, “making these changes, like giving students privacy, one on one conferences, and giving students 100, as long as they make an effort has shown to boost student participation and effort in their work” (Action Research Presentation Transcript, p. 23). With his choice of wording, Amal positioned himself as a knowledge generator, as he took up the language of research articles he read and used research terms he was familiar with. All of the above examples highlight the ways in which the participants developed theory based on their action research experiences and positioned themselves as knowledge brokers, who generate knowledge through theory development as opposed to consumers of others' knowledge and theory.

For Jillian, Felipe and Claire, the experience of generating knowledge was such a powerful one that they envisioned how and why they would use action research in their future educational settings. Jillian imagined using action research and shared, “I would love to do some

action research in the near future, when we do have our own classrooms to really try that and figure it out” (Second Focus Group Transcript, p. 20). She understood how action research helped her figure out an issue she encountered during her student teaching and saw the value in applying it to her own classroom. Similarly, Claire stated, “it helps because we're new teachers and we are always, we continue to evolve, every day, every year. So, I would definitely use action research again” (Second Focus Group Transcript, p. 21). She went on to explain how she would use action research in the future:

I would probably try out the same question that I did this time actually, just to see if I can change it a little bit, fix it, use one of my new questions I'd made from this assignment and see where that takes me, to try and be constantly evolving the practice” (Second Focus Group Transcript, p. 21).

Claire’s action research experience left her wanting to continue her inquiry further, as she envisioned picking up where she left off and delving deeper into her line of questioning in her future classroom to generate further knowledge. Felipe also sought to continue pursuing his current research question, during our second focus group he commented, “When I get into my own classroom, I would like to continue with the question that I posed for my project. I would like to go and see if it really did work or if it was a one-time fluke for me” (p. 20). Like Claire, he was motivated to continue down this line of inquiry to ultimately generate increased knowledge and understanding around this educational topic.

Participants’ stated desire to use action research in future educational settings speaks to the development of a critical inquiry stance as inquiry has come to be an important part of their teaching and learning experience. They did not view inquiry as a one-time experience, rather they envisioned using it in their classrooms to support and improve the teaching and learning in

their personal education settings. Claire and Felipe's intention to continue pursuing their current research question also points to a developed understanding that educational problems are complex and layered, not easily, simply, and definitively answered, in a single attempt. In wanting to use action research in the future, there is an understanding that inquiry is a life-long pursuit, an integral part of a teacher's growth and development, an integral aspect of a teacher's stance toward her work.

Action Research as a Way of Knowing

Using critical teacher inquiry, which draws from Cochran-Smith and Lytle's (2009) work on practitioner inquiry and Freire's (1970) concept of problem-posing education, as a theoretical framework allows for the possibility of a unique way of knowing about teaching and learning for preservice teachers. Viewing action research as a way of knowing grants teachers the authority to come to know and make meaning of their own process of inquiring into the contextualized problems they encounter in their classroom. Viewed through this lens, action research takes on a constructivist understanding of knowledge generation, allowing preservice teachers the space to experience personal construction of knowledge (Stern, 2014). According to Kitchen and Stevens (2008), "When teachers learn they are capable of transforming student learning by researching their own practice, their conceptual understanding of teaching and learning changes" (p. 26). They come to understand that they have the ability and agency to construct knowledge from their experiences by systematically inquiring into their practice, which stands as a different way of knowing about teaching and learning. Critical teacher inquiry supports the development of this new way of knowing and thinking about teaching beyond coursework, scholarly articles, and educational theorists. It guides an investigation into how teachers come to know and ultimately

develop educational knowledge based on their inquiry experiences to improve teaching practice and contribute to and expand the field of education.

In thinking and reflecting upon their completed action research experience during our second focus group, participants described how action research inspired them to think in ways they had not thought before. They began to see beyond what they had learned in their coursework and educational assignments and pivoted towards thinking about what knowledge they could develop from the critical inquiry they conducted. Some participants felt inspired to think in a new direction, in a way they had not thought before. They understood action research to be a way to know and learn about the challenges they encountered in their personal teaching practice, much like the participants in Parker et al.'s (2016) study, highlighting the ways in which the participants' inquiry reflected their belief and aspiration to positively impact their own teacher knowledge and student learning.

Felipe felt that action research, "definitely inspired me to think even more outside the box, if that makes sense" (Second Focus Group Transcript, p. 3). A new way of knowing and thinking opened up for him, as he engaged in action research, he understood that he could think in ways he had not before, outside the box, outside of traditional approaches to teaching and pedagogy he had learned about. Amal's comments also referenced this 'out of the box' way of thinking, "It is definitely beneficial for all our new teachers to not just copy the old ways of teaching but to think outside the box and try to see what ways can be improved (Second Focus Group Transcript, p. 21). He juxtaposed old and new ways of thinking about teaching and saw himself, and all new teachers, as capable of thinking in new and innovative ways to improve teaching and learning.

Alonzo also saw himself as capable of a new way of coming to know about teaching, as he approached his action research with a sense of personal transformation and creativity. He defined action research as:

Really wanting to understand how to fix this problem that you may be having in the classroom, diving into it ... come at it at a new angle, come at it with a new point of view, come at it with a new idea (Second Focus Group Transcript, p. 1).

His definition highlights his desire to generate new understanding, ideas, and knowledge about teaching and thinking in novel and inventive ways about classroom issues and challenges. Thus, for Felipe, Amal, and Alonzo, action research was a way of knowing something new and innovative about teaching and learning that sprung from personal experience and reflection.

Claire and Mara's views on action research also framed the work as a way of knowing in that they saw action research as a tool to help them pursue their classroom questions and wonderings and generate knowledge. When reflecting during the second focus group on what ways action research has impacted or inspired them, Claire responded, "I think that action research is a good tool to use, especially for us, we're new teachers, and to try out new things. If we're trying them out anyway. Notice how, how they affect your class, take specific notes" (p. 20). She saw the value in systematically collecting data to learn from her experiences, which she learned from conducting action research. Claire saw action research as a tool that supports the development of knowledge for new teachers, a tool used to intentionally and methodically come to know something new about one's classroom.

Along the same lines, Mara honed in on the methodical nature of action research and the specific steps one works through to address the questions that arise in a classroom. During our second focus group she shared, "I'm left with thinking now too that I have a method or steps that

I can take to run my questions or my curiosities through” (p. 19). In that sense, Mara viewed action research as a tool to guide the investigation of her teaching questions and curiosities to arrive at a new understanding or knowledge about education. Jillian also expressed the idea that action research was a method to pursue her classroom questions. She explained in her Action Research Reflection assignment, “Action Research opened my eyes to how much I can learn [because I] have so many questions to investigate in my own classroom in the upcoming years” (p. 4). It was a method to apply to find answers to her educational questions and a way to create personal learning opportunities. Finally, Felipe shared that action research, “taught me how to figure out if things work. It gave me a way to have evidence behind it, instead of just saying, ‘yeah, I think this works.’” (Second Focus Group Transcript, p. 3). Here, Felipe agreed with Claire that action research is a tool, a way to systematically figure out how effective his instruction is with evidence to support his conclusions.

All of the above participants understood action research to be a way to answer the questions they will come up against in their classrooms, a tool, a method, or a way for them to work through these curiosities and questions to come to know and understand something new about their teaching and student learning that they had not known previously. Action research was a tool or method for them to systematically and intentionally come to know something new about their teaching and student learning.

Amal described a unique understanding of action research during our second focus group. He saw action research as a way of knowing since it asks the researcher to purposely try something new to arrive at updated understanding and knowledge. He explained:

So, the most beneficial part I would say is the idea of deliberately doing something different and seeing if it works or not. Because a lot of people, once you're doing the

same thing for a long period of time just, if it works for you, people use the expression, if it works, don't fix it. But no, you can't say that for everything. (Second Focus Group Transcript, p. 22)

He envisioned action research as a rejection of the status quo and as a tool to bring about new knowledge. Adding to this idea, Amal shared in his Action Research Reflection assignment, "Action Research is something that every teacher should do. The world is constantly changing but that does not necessarily mean that teachers are changing along with it. ...From this I learned the importance of keeping knowledge updated" (p. 5). Here he credited action research with the ability to update knowledge. He recognized that he came to know something new about his teaching through his action research and that it supported his ability to update his knowledge in his content area. For Amal, the purpose of action research was to update knowledge, to come to know something new and novel about teaching.

For some preservice teachers, engaging in action research was a very empowering experience in that it allowed them to generate knowledge in a way they never had before. Up until now, the preservice teachers constructed educational knowledge through readings, research articles, and coursework. Their action research studies created the space for preservice teachers to engage in knowledge construction in a new way, through their own research and experience. It illuminated a different way to learn and construct knowledge, which was a powerful experience for some participants. Mara in particular felt very affected by the experience of knowledge generation during her action research. She articulated:

I definitely think that having this problem-posing method to create knowledge is, I saw how much it worked for myself. I don't think that I would take my findings to heart as much if somebody told me, this is how it worked or this is how it is. I got to experience

that and go through it so that's how I feel so connected to the knowledge that I have now.

(Second Focus Group Transcript, p. 11)

Experiencing knowledge construction first-hand, through action research, which Mara framed as a “problem-posing method,” altered the way she felt about the knowledge, creating a sense of ownership and a strong connection to the knowledge she generated. She articulated a distinction between knowledge that is handed to you already formed and developed and knowledge that is personally constructed. She concluded with the notion that she does not internalize someone else’s knowledge as deeply, and emphasized how critical it is to generate personal knowledge. For Mara, this experience was a personal one, it affected how she viewed knowledge generation in that she understood that there is a difference between the connection we feel to the knowledge we generate versus the knowledge we consume. In that sense, this was an empowering experience for Mara.

Much like Mara, Claire also connected to the knowledge she generated during her action research. She clearly stated the belief that she generated knowledge as a result of her action research and that she internalized that knowledge on a different level because she experienced the process of generating it. She explained, “Everything that I learned throughout this process, all of the knowledge that I've gained, I feel like I created all of that myself. So, if that's common knowledge already, it didn't hit home until I actually experienced it myself” (Second Focus Group Transcript, p. 12). Claire also made the distinction between the knowledge she generated and what she refers to as “common knowledge,” or established educational knowledge. Knowledge that someone else generated did not “hit home” for Claire like the knowledge she generated during her action research. Her comments suggested that she felt a high degree of ownership and internalization over her generated knowledge compared to the knowledge she

read about or was taught. For Mara and Claire, personally generating knowledge was a new way of knowing, internalizing, and connecting to the knowledge generated.

In varied ways, the participants experienced action research as a way of knowing. Through their action research, participants generated new knowledge, thought out of the box to solve problems, innovated, updated their content knowledge, connected to and deeply internalized their generated knowledge, and experienced and understood what it meant to be a knowledge generator as opposed to a knowledge consumer. Participants viewed action research as a tool to use to come to know and pursue the educational questions they encounter. In his Action Research Reflection assignment, Joshua profoundly stated, “I have learned that it [action research] is very much something you think in addition to something you do” (p. 8), supporting the assertion that action research is a way for preservice teachers to come to know and generate knowledge for education.

A Reorientation of Knowledge and Knowledge Production

Though specific questioning and prompts in their Action Research assignments and focus groups, I probed participants’ views of knowledge and knowledge productions. My goal was to understand how preservice teachers think about and make meaning of knowledge and the process of knowledge generation. The question that generated the richest and most revealing answers and discussion were in response to the question, “As a result of the action research, was there any change to your understanding of knowledge, how it is generated, and how knowledge is valued?” (IRB Submission, p. 4). Participants noticed changes to their thinking about knowledge and knowledge production as they reflected on their action research experiences, revealing shifts that occurred in their thinking and details about the ways in which they thought about their process of knowledge generation after completing their action research. These

disruptions to previously held notions of knowledge and knowledge construction are found numerous times within the literature. According to Hulse and Hulme (2012), engaging preservice teachers in action research supported the challenging of long held assumptions about knowledge generation and the traditional knowledge hierarchy for participants. Preservice teachers in their study took the view that professional knowledge evolves and is dynamic and could envision contributing to the process of knowledge generation. Additionally, Kizilaslan and Leutwyler (2012) argued that the notion of “teacher as researcher” was of vital importance to the way preservice teachers constructed their teacher role at the conclusion of the study, illustrating how they included themselves as teachers in the category of knowledge generators.

Claire, who is a preservice physics teacher, approached the construct of knowledge from a very cerebral perspective before the action research. In some ways her content shaped the way she regarded knowledge as very concretely and factually based, and quite one dimensional. However, after her inquiry, she began to widen that perspective to incorporate a broader and more nuanced view. She was very explicit about the shift that occurred in the way she viewed and thought about knowledge over the course of her action research. She explained:

I defined knowledge, maybe just incorrectly defined, as information or intelligence. You think of knowledge as, the more knowledge you have the smarter you are, to put it in really plain words, and obviously it's more complex than that but I didn't realize how complex it was because when I was watching my kids work together, I saw, it's multifaceted. (Second Focus Group Transcript, p. 7)

She compared the way she originally thought about knowledge, as simply information or facts, and the way she viewed it after her inquiry, as complex. She did not have a sense of the complexity of knowledge until she personally generated it. She went on to broaden her definition

of knowledge even further to include emotion and the interpersonal dimension of knowledge. She shared, “There's emotional intelligence and there's knowledge of communication skills, and that is present everywhere. Knowledge about content, per se, or specific facts is not the only thing that matters” (Second Focus Group Transcript, p. 7). She was able to broaden her understanding of knowledge and recognize and value the different dimensions to knowledge beyond facts and information. Claire’s perspective and understanding of knowledge shifted and grew, after her action research she saw, acknowledged, and appreciated the complexity, layers, and multiple dimensions of knowledge.

In thinking about how knowledge is produced, Mara drew on her understanding of Freire’s (1970) banking and problem-posing models of education. Through her own experience generating knowledge during her action research study, she came to understand Freire’s (1970) problem-posing model of education on an entirely different level. She described the shift she experienced:

I was actually thinking about the banking model before when we were talking about knowledge and I really think that if I had any reservations that that was possible for learning or good for learning or that it worked that way at all that, that is completely removed from my impression of how to create knowledge. So, I definitely think that having this problem posing method to create knowledge is, I saw how much it worked for myself. (Second Focus Group Transcript, p. 11)

Mara assessed her action research to be a form of problem-posing education, in that she posed an authentic problem of practice and directed her personal inquiry into the problem to arrive at new knowledge. The success she experienced in generating and producing knowledge through inquiry was clearly an influential one for Mara, as it led to a shift in her understanding of how

knowledge is generated, from the banking model, where preexisting, curated knowledge is transmitted from teacher to student, to a problem-posing model, where all members of a classroom are capable and responsible for generating knowledge. Her inquiry helped her dismiss the reservations she had about the problem-posing method of education and shift the locus of control for generating knowledge from an external source to an internal source. As she experienced knowledge production, she understood that knowledge is internally produced, not bestowed. This shift is promoted in Hooley's (2013) discussion of incorporating understanding of Freire and Bourdieu to analyze the nuances and complexities of preservice teacher education. Hooley (2013) argued for the reimagination of teacher education, where knowledge is too complex to be deposited as in Freire's (1970) banking model of education, where assumptions are challenged, and a comfortable consensus is not the goal.

Finally, Joshua, a preservice social studies teacher, began to shift the way he regarded and valued knowledge even before his action research, but he credited his inquiry with solidifying the shift in his thinking. The shift Joshua made in his view of knowledge was from the ability to retain information to the ability to critically reflect on that information. His comments suggested that he saw a clear distinction between rote knowledge and the knowledge that is arrived at through critical reflection and questioning.

I've always known this but this [action research] just drives this home. . . . There are different kinds of knowledge, but not all knowledge is the same. And not all knowledge is equal. I would love for all my kids to memorize and know every single cause of the English Civil War or every single way the Ottoman Empire was radical and groundbreaking for its time. That's fine and all, but I really more care about their ability

to think critically and be analytical, critical, questioning people and members of society.

(Second Focus Group Transcript, p. 8)

Joshua's prioritizing of the different components of knowledge did not begin with his action research, however his inquiry crystalized this newly developed view of knowledge. Although he did not abandon rote knowledge, he continued to value it to some degree, he prioritized the knowledge arrived at through critical thinking and analysis. He specifically noted how he cared more about knowledge that was generated through critical thinking, highlighting a shift in the way he valued these different components of knowledge.

All of the above noted shifts in knowledge differed to some degree but shared a common thread, that of knowledge as complex, multifaceted, and internally generated. Claire, Mara, and Joshua experienced a shift in their thinking as they understood that knowledge goes far beyond facts and information because knowledge is intertwined with the individual, with the way they construct knowledge for themselves and in relation to others. These participants came to know something new and different about knowledge and knowledge construction through action research as evidenced above. The shifts in the way they understand knowledge suggested the potential action research has to help preservice teachers develop and enact critical teacher inquiry and reorient their thinking about knowledge and knowledge production.

Generating Knowledge for Teaching

Along with shifts in thinking about knowledge production came shifts in thinking about who generates knowledge for teaching, in other words, the epistemology of teaching or what it means to know in teaching. In Brownlee et al.'s (2017) work on epistemic cognition, the authors investigated ways to help preservice teachers improve engagement with sophisticated problem-solving and knowledge production using focused reflection and reflexivity. Their proposed

framework of reflexivity allowed preservice teachers to consider appropriate action against the backdrop of contextualized settings and emotional and personal considerations, to focus on knowledge, understanding, and explanation. The framework positioned teachers as professionals rather than technicians, capable of generating knowledge for teaching through reflection and reflexivity.

Throughout the action research experience, preservice teachers explored questions about who has the power to generate knowledge in the classroom, whose knowledge is valued, and where educational knowledge comes from. I was surprised by some of the participants' thinking during the first and second focus groups and in their Action Research Reflections assignments, as they expressed an openness to and an embracing of Freire's (1970) notion of viewing all as knowers. The sources of knowledge for teaching they referenced in their Action Research Reflections and during the focus groups were quite inclusive; they included students, preservice teacher, classroom teachers, and more in their responses, suggesting a priori reorientation of knowledge production.

Jillian's thinking about who generates knowledge for teaching was quite broad and inclusive. She asserted the idea that everyone was responsible for generating knowledge about education in that everyone has experienced the act of learning and can therefore contribute to knowledge about education. Jillian shared:

So, I really don't believe that one person is really responsible for it, I think that everyone everywhere learns from everyone everywhere, whether it's someone you meet at the store, you can learn something from a random person you bump into, your cashier, your next-door neighbor, another teacher. I think that everyone in life contributes to knowledge about education because you get to see all different aspects of how others

learn. They have their experience, what they've dealt with. So, I think it's everyone. I don't think one person is responsible. (Second Focus Group Transcript, p. 14)

Her view embodied Freire's (1970) belief that we are all knowers, with personal knowledge based on lived experiences, who have the capacity to question and generate new knowledge. She continued:

I don't believe that just one person is in charge of generating knowledge anywhere, I think everyone is. Teachers learn from other teachers, they learn from their administration, they learn from their students, I even [learn from] tik tok, I learned a lot about teaching from random people on tik tok. (Second Focus Group Transcript, p. 14)

She expressed an openness and a willingness to embrace everyone as knowers and thus embraced the knowledge they have as potential knowledge for education. She evidenced deep humility in her openness, in her willingness to admit she knew she alone could not possibly know everything, and in that way, she valued everyone for the contribution they can make.

Several participants demonstrated an openness to the concept of all as “knowers” (Freire, 1970) in their Action Research Reflection assignments and during our second focus group, after they completed their action research studies. Some of the preservice teachers took the stance that all members of the classroom, the teacher and the students, separately and collectively, are responsible for generating educational knowledge, with each having a role to play in the process. In his Action Research Reflection assignment, Alonzo explained:

I believe that it is both the teacher and the student who are responsible for generating knowledge about teaching and learning. The classroom should be a collaborative setting, allowing the students to provide information to the teacher to use to create better

instruction for the students. This creates a cycle of knowledge allowing the classroom to become a living and breathing workshop. (p. 10)

Alonzo's vision of generating knowledge for teaching was grounded in a collaborative and cyclical model of knowledge generation. In his view, educational knowledge was generated when teachers and students collaborated and engaged in a loop of feedback, where teachers taught and solicited student feedback to help them improve upon their teaching instruction and practices, looping the feedback offered back into the process, enabling teachers to take the next step to improve practice. He referred to the classroom as a "living, breathing workshop" in that this cycle of feedback led to improved instruction and thus the generation of knowledge. Both the teacher and the students were generating knowledge and sharing their knowledge with one another to support further generation. His view stood in solidarity with a transformative activist stance (Lammert, 2020) in that:

Every person matters because the world is evoked, realized, invented, and created by each and every one of us, in each and every event of our being-knowing-doing by us as social actors and agents of communal practices and collective history, who only come about within the matrices of these practices through realizing and co-authoring them in joint struggles and strivings. (Stetsenko, 2016, p. 7)

Furthering this line of thought, Hooley (2013) asserted that critical praxis is the interdependence of knowledge with action that asks teachers and students to collaboratively produce new understandings and practices that serve all individuals. Alonzo's perception of knowledge generation for teaching is grounded in his understanding of Vygotsky (1978) and Freire's (1970) approach to knowledge construction. For Alonzo, knowledge for teaching was

clearly generated in situ with others, specifically with students, positioning students as knowledgeable others and knowers in a classroom setting.

Amal blurred the lines between teacher and student even further when he responded:

[Action Research] gives me a chance to take a step back from the being the teacher and allows me to become the student. It gives me a chance to allow the students to tell me what they are seeing, what they are experiencing. (Action Research Reflection Assignment, p. 10)

First, his comment illustrates how some of our underlying notions about teaching and learning assume that the teacher never functions in the role of learner. Second, for Amal, the students' contribution was critical to the generation of knowledge for teaching in that their experiences and subsequent feedback informed this generative process. He casted the teacher in the role of student, thereby inserting a need to learn something from others as part of generating knowledge. Similarly, Felipe asserted that both the teacher and students are responsible for generating educational knowledge and went on to describe the role of the teacher in this collaborative model. Felipe posited:

Both teachers and students are responsible for generating knowledge about teaching and learning . . . It is the teacher's job to collect the data given to you by the students and make sense of it through analysis and speaking with students. (Action Research Reflection Assignment, p. 10)

Here, students share in this process as they give input to teachers based on their experience and the teacher then makes meaning of the input or feedback to arrive at localized and contextualized knowledge.

Justin's view of who generates knowledge for teaching and learning is also grounded in this collaborative model of knowledge generation but he looks at it through the lens of power and authority. He stated:

I believe that there is a dual effort for both students and teachers to generate the knowledge about teaching and learning . . . I like the idea of the classroom being a place where students and teachers can learn together and go somewhat against the traditional scope of power and authority that comes with being a teacher. (Action Research Presentation Assignment, p. 12)

He recognized and was explicit about this collaborative model of knowledge generation and how it pushes back against the traditional roles of students and teachers in a classroom. In essence, his view is that all are in the role of knowers, learners, and teachers, and when these roles are fluid, the dynamics of a classroom are restructured and how and who generates knowledge are transformed.

Perhaps the above examples highlight the influence action research had on the participants with regard to the shift in their understanding of who generates knowledge. I wonder if having the experience of generating knowledge as preservice teachers opened up the possibility for them to expand their understanding of who generates knowledge in schools. Their action research experience was a disruption to the traditional hierarchy of knowledge generation and production, which may have led them to consider a wider perspective and include students in the knowledge generation process.

When asked to consider, before their action research study, where knowledge for teaching came from and how it was produced, several participants argued that knowledge about how to effectively teach so students can learn, both pedagogically and within the discipline,

came from both outside the classroom, for example from professionals in the discipline, educational theorists, and scholars, as well as from teachers inside the classroom. During our first focus group, participants shared their views regarding who produces and generates knowledge for teaching.

Some participants discussed the notion that those in the discipline, those outside the classroom, who had real-world experience played a role in knowledge generation for education. They valued the real-world experience of professionals in the field and believed that educational knowledge should be informed by those who live the discipline. Alonzo, a preservice dance teacher, remarked:

I believe [knowledge is generated] in your field of what you want to teach, because there's no one else better to teach than the people who have gone through it. If you haven't gotten through what you're teaching, how reliable can your teaching be, how true is your teaching going to be?" (First Focus Group Transcript, p. 9)

He explicitly pointed to the generation of knowledge within the discipline, produced by those who have “gotten through” it, experienced it, and grappled with it. He went so far as to question the authenticity of one’s teaching without having any real-world experience. This view on knowledge generation correlates with what Anyon (1980) observed in her study investigating symbolic capital. Alonzo’s ideas about knowledge generation spoke to the experiences of students in the affluent professional school within the study, who are acquiring symbolic capital as they are developing linguistic skills, artistic expression, and scientific exploration, all skills required to contribute to the culture and become successful professionals.

Claire’s physics cooperating teacher had many years in the field before he became a teacher. During our first focus group she shared, “He was an electrical engineer for 20 years, and

he's only been teaching for seven years. I feel like I've learned more about teaching from him than from my original teacher” (p. 10). She credited his years in the field, outside of the classroom, with his success as a teacher, wealth of knowledge, and ability to help her grow as a physics educator.

Felipe’s personal real-world experience, that of learning graphic design, was where he generated knowledge for teaching art. During the first focus group, Felipe described a time when his professional experience outside the classroom supported success in his classroom. A student was struggling to crop an image and he knew how to correctly offer support to this student because of his previous experience. He explained, “I wouldn't have known that, you know, if I didn't have an experience with the program, if I just read it in a book” (p. 10).

Other participants argued that knowledge for education is generated when knowledge from outside the classroom is combined with knowledge inside the classroom. Alonzo explained, “I believe it comes from both, 100% especially in my field, because I can't teach unless I know the material I'm teaching” (First Focus Group Transcript, p. 8). In the same vein, Joshua expressed, “I think theory can provide a good framework. But there are certain things that you only can learn for experience” (First Focus Group Transcript, p. 11). For Alonzo and Joshua, knowledge for education was generated both inside and outside the classroom, with each occupying a different but important role in producing teaching knowledge.

Building on this view, Mara described the synthesis of knowledge generated outside the classroom with knowledge generated inside the classroom. She stated:

The theorists and the teachers own experience need to work compatibly in a sense, without the framework of the theorists, the teachers might not be able to have some

something sound to go off of as they create their practice and work at it. (First Focus Group Transcript, p. 11)

She saw the knowledge situated in the classroom working in tandem with the knowledge situated in scholarly fields, providing a framework or backdrop that informs one another.

As they completed their action research studies, participants' views shifted with regard to the question of who is responsible for generating knowledge for education. The responses in their action research reflections and during our second focus group, both completed after the action research studies, suggest that participants experienced some shifts in their views of where knowledge for teaching is produced, from outside the classroom to inside the classroom, a clear disruption to the traditional hierarchy of educational knowledge (Roulston et al., 2005). This shift highlights the development of a critical inquiry stance in the participants as they pushed back on the traditional hierarchies of knowledge generation, disrupting the hegemonic hold scholars and theorists have on education knowledge and who has the power to generate knowledge. The same shift was noted in a study conducted by Mok (2016), depicting the ways in which action research nurtured the habits of mind associated with inquiry and research and supported the cultivation of a researcher's disposition for participants.

Whereas in the first focus group described above, before the action research studies were conducted, Joshua asserted that knowledge for education comes from both educational theorists and teachers, during our second focus group, after the completion of his action research study, Joshua shifted and positioned the generation of knowledge for teaching more so within the classroom. He passionately stated in his action research reflection assignment:

Lastly, teachers, indisputably and unequivocally, are primarily responsible for generating knowledge about learning and teaching. Teachers are the ones on the front

lines living this every single day. It is one of the few areas where hands-on knowledge trumps secondhand or studied knowledge by a wide margin. I have no doubt that being highly educated on pedagogical theory and educational psychology is exceptionally valuable, but it does not come close to being in the classroom every day. No amount of Piaget or Vygotsky can compare to being in front of living, breathing children, and working to make a difference every single day. (pp. 8–9)

There was a specific shift in his tone and confidence in his assertion that teacher's knowledge is so valuable, as it is rooted in what he termed "hands-on knowledge". He still valued the knowledge generated by theorists and scholars but the shift was in the value he placed on teacher generated knowledge. His strong response suggested the impact the action research study had on his confidence in his ability, and all classroom teachers' abilities, to generate and contribute to educational knowledge alongside educational scholars and academics.

A noticeable shift occurred for Claire as well, in that before the action research, she emphasized and valued the educational knowledge generated in her discipline, outside the classroom; however, as she reflected on her action research study, she argued, "I think the responsibility is on teachers to generate knowledge about teaching and learning" (Action Research Reflection Assignment, p. 2). She was very explicit about her opinion and determined that the most important part of her teacher education was the time she spent in a classroom teaching. She continued, "I have learned about 'teaching and learning' through the act of doing. It is the teachers with experience, that have gone through trials and tribulations that know what is effective and what is not" (Action Research Reflection Assignment, p. 3). Through her student teaching experience, she grew tremendously as an educator and generated educational knowledge, far beyond the knowledge she generated in her coursework outside of the classroom.

She reasoned that most of her teaching knowledge came from her experience teaching, therefore teachers are the ones who are responsible for generating educational knowledge. She reiterated this view during our second focus group:

So, even my small amount of experience has given me a lot of room to speak on education. Whereas, somebody that has only ever sat through classes and has never actually done it, probably will not have the same experiences that I have or the same opinions or knowledge about teaching, so I might be new, but I'm confident in the short amount of time that I've been there and how much I've learned. (p. 13)

As Claire developed her teaching practice, her confidence in her teaching, as well as her ability to generate knowledge, grew. In wanting to understand if her action research contributed to any of her thinking about generating teacher knowledge, I asked Claire if she thought her confidence increased because of her overall experience or could she attribute any increased confidence to the action research itself. She responded:

I think a lot of it was from action research because when I went into it, I had the mindset of, my goal when doing this research is that I want kids to get better grades, and by the end of it . . . I was thinking, what else am I going to get out of this, and I got back so much more than I anticipated, and that changed my view a lot as a teacher. (Second Focus Group Transcript, p. 13)

Her research focus was helping students improve their grades through project-based assessment but what she learned through the inquiry process extended well beyond her research focus, into multiple layers of her classroom, her teaching, and student learning. She recognized that the meaning she made of her action research study led her to generate knowledge for teaching and

learning, allowing her to view herself as “teacher as researcher” much like the participants in Kizilaslan and Leutwyler’s (2012) study.

Initially, before the action research study, Mara posited that knowledge for education comes from both theorists and classroom teachers and described a synthesis between the two. After she completed her action research there appeared to be a shift in her thinking, a move away from the idea that scholarly knowledge frames and supports the development of teacher knowledge towards a belief that teachers, as well as scholars, are responsible for generating educational knowledge. In her action research reflection, she stated, “Though I give credit to the educational theorists and social scientists who have also performed research in order to publish and distribute their findings, when it comes down to it, teachers are responsible for generating knowledge about teaching and learning” (p. 7). Her comment suggested a shift in the way she valued teacher generated knowledge; she came to recognize the power of the classroom teachers as a contributor to knowledge for education. She continued to hold a space for scholarly knowledge more so than Joshua and Claire, but it was clear that her belief in a teacher’s ability to generate knowledge for teaching and learning increased over the course of the study. As we were completing the second focus group, Mara offered, “We’re glad to participate in helping you create knowledge that validates teachers as generators of knowledge. Now that we’ve got to go through this, thank you for giving us this opportunity because we really are behind you” (p. 23). Her gracious comment offered more evidence of her certainty and confidence in classroom teachers’ ability to produce important education knowledge and contribute effectively to the canon of knowledge for teaching and learning.

Taken together, the above findings suggest how participants’ action research developed their understanding of how knowledge is generated, whose knowledge is valued, and who has the

power to generate knowledge. Looking through the lens of critical teacher inquiry, it is evident that the preservice teachers experienced a reorientation of knowledge and knowledge production through the praxis of critical inquiry. As they generated their own teacher knowledge, they came to rethink their assumptions about who is responsible for developing educational theory, who participates in knowledge generation, and how knowledge is developed and produced. Their action research studies allowed for a new way of knowing about teaching and learning and about how to harness their experiences to produce knowledge. The work was generative on multiple levels, as it created the space in which participants produced knowledge, became empowered and confident in their production of knowledge, and envisioned a more democratic approach to knowledge production wherein classroom teachers join the ranks of knowledge generators for education.

Bridging the Space Between

The final theme of the findings explores the many ways in which action research helped preservice teachers bridge the *space between*. The space between refers to the gaps that exist between such things as theory and practice, instruction and learning, and teachers and students. Throughout the data, there were moments of discovery and growth, moments where a gap appeared to be filled or narrowed that previously held a wide divide. These divides were brought together as participants inquired into their practice through action research. As such, action research was not only a vehicle for preservice teachers to develop, enact, and make meaning of critical teacher inquiry, but it served as a means for connection, or the bringing together of ideas, practices, and people, that necessitate being connected in education.

Within the literature I explored about action research in preservice teacher education, many researchers found that action research helped preservice teachers bridge the gap between

theory and practice (Hulse & Hulme, 2012; Kizilaslan & Leutwyler, 2012; Lattimer, 2012; Mok, 2016; Smith & Sela, 2005). Additionally, many studies concluded that a shift occurred in participants' focus from their teaching towards their students' learning as a result of action research, an important step in the transition from preservice to in-service teacher (Gore & Zeichner, 1991; Kitchen & Stevens, 2004; Lattimer, 2012; Levin & Rock, 2003; Mok, 2016; Price & Valli, 2005; Smith & Sela, 2005). The data in this study support the above findings; however, there was greater evidence of the bridging or narrowing of the spaces within the relationship between participants and their students. I was particularly surprised by the relational space that was navigated between the preservice teachers and their students, as I had not found any indication of this in the literature surrounding preservice teacher action research.

Interestingly, some participants also expressed surprise and delight at this outcome, as they had not anticipated their inquiry would affect their personal relationship with students.

Below I analyze the role inquiry played in helping participants connect to and build relationships with students, shift their singular thinking from their teaching and instruction to student learning and growth, and navigate the often times very wide terrain between theory and practice. I conclude the section with an examination of the role I, as professor, played in supporting students entering and negotiating the space between practical and critical inquiry, reflection, and analysis and how these efforts supported the development of a critical inquiry stance in preservice teachers. Our developmental paths as educators are as messy and complex as classroom life itself and I therefore do not assert that participants neatly become, rather it is in the process of becoming where participants, and all educators, spend the majority of our professional lives. Therefore, my intent in using the term, *bridging the space*, is to imply

development, focusing attention on ways in which participants moved and evolved towards their educational goals and ideals in their teaching practice.

Bridging Relational Spaces

As the preservice teachers reflected on what they learned as a result of their experience conducting action research, many participants were pleased that their inquiry not only affected their teaching practice and instruction, but it had a significant impact on their relationships with their students. Participants shared how action research afforded them the opportunity to get to know their students on a deeper level, learning more about their students' lived experiences and personal stories and lives. In Theisen-Homer's (2021) investigation of relationship building in two different teacher residency programs, she argued, using Freire's (1970) paradigm of co-construction, that, "meaningful education is not possible without humanizing teacher-student relationships" (p. 281) and that ethical education requires a reciprocal and dialogical relationship between students and teachers. Based on this argument, the relationship building that occurred between participants and their students as a result of their action research contributed to and supported preservice teachers' efforts to engage in meaningful education.

In her Action Research reflection, Claire articulated, "This has affected my relationships with my students as well. I feel like I know so much more about my students after this project ... Every detail tells me a little story about the student" (p. 2). Her inquiry allowed her to learn more about her students' lives, the stories they hold, and the experiences they have. Similarly, Jillian expressed, "So it made me really realize that, we know each student is different but [it] made me really understand my students more, have a closer relationship with them" (Second Focus Group Transcript, p. 4). Jillian's work helped her understand the diversity amongst students, which predictably brought her closer to her students. She began to see them as individuals, with

different strengths, challenges, and stories to tell. She continued, "...it helped me make more meaning with my relationships with my students" (Second Focus Group Transcript, p. 4), suggesting that action research pushed her to not only make meaning of the instructional implications of her inquiry but of the relational implications as well.

For some participants, action research led to learning about students on a much more personal level. During her Action Research presentation, Mara commented, "the backgrounds really allowed us to get to know one another and be able to offer important personal details" (p. 1). In looking at how technology was incorporated for remote learning, Mara understood that she could leverage the technology to create an opportunity for her students to share more of themselves in class. Because Google backgrounds are visual, Mara felt that it gave her students an easy way to "offer important personal details," often without even having to verbally share the information. Through her action research, she recognized the "awesome chance to get to know students during the five minutes of break time we have at the beginning of our class period" (Action Research Presentation, p. 1). She understood how to utilize the precious moments before a lesson starts and inject it with relationship building.

Amal shared Mara, Jillian, and Claire's viewpoints and expressed how much he learned about his students over the course of the action research. As Amal enacted his planned action, meeting one on one with students to share feedback on assignments, students shared very specific personal information with him. He explained, "I learned that some students in my class, they've experienced bullying, I even learned that some students had their accounts hacked into by other students" (Action Research Presentation, p. 24). The focus of his action research was feedback, however a very real and meaningful outcome for Amal was the development of his relationships with his students. His action research created points of entry for him to speak with

students individually, thus building his relationship with students as they shared what was happening in their personal lives.

Furthermore, Mara reflected on the personal connections that were developed over the course of their inquiry. For Mara, personal connection was of utmost importance and as a result, she struggled with remote learning during Covid. Rice's (2015) analysis of online teacher education validated Mara's struggle to connect and build relationships with students online. Rice (2015) stated that relational connections between teachers and students in online environments can be hindered when interactions are devoid of connection, such as electronic lessons, emails, and online assignments. Her action research gave her the opportunity to work through this challenge. She stated:

I learned so much about having a meaningful connection with students during this time of virtual learning through my research. I was not only curious about this, but quickly was swept into a supportive classroom environment, allowing me to experience what having relationships with students is like. (Action Research reflection, p. 6)

Mara's inquiry led her to make "meaningful connections" with her students by looking at ways to use technology tools to develop relationships with students. Through her action research, she negotiated the divide between herself and her students that remote learning created and used the tools at her disposal to experience the relationship building process, a process that she had not yet experienced in her student teaching placement. Mara was so inspired by her experience of relationship building and connecting to students that she began to think about ways to take the work one step further. She questioned, "What other tools can we utilize to cultivate connections in a virtual classroom? How can we continue to use technology to create connections?" (Action Research Presentation, p. 3).

Along with the connections to students and the relationship building, some preservice teachers began to make meaning of how social and emotional learning factored into the work they engage in as preservice teachers, expanding their understanding of the action research experience far beyond the original scope of the inquiry. Claire's action research question, "How will my students' exam grades change if I give them a summative project instead of a test?" (Action Research presentation, p. 3) focused on transforming assessment. Her conclusions about project-based assessments were insightful and educative to her but she appreciated far more the understanding and meaning she made about the relational aspects of teaching, such as social and emotional learning, that she came to at the conclusion of her inquiry:

I think it inspired me to take a step back, because a lot of times teachers are worried about content, I need to get this done. How can I fit, social and emotional learning into a curriculum when I have so much to teach? How can I incorporate life skills in my lessons if I have so much to teach? There's always so much to teach. But the point is, you need to take a step back and decide how you can still incorporate real life skills and social emotional learning and support your students in other ways, rather than just content wise, and this project has shown me that. (Second Focus Group Transcript, p. 18)

Claire directly correlated this awareness of the need to prioritize social and emotional learning along with content to her action research. Through her inquiry, she made meaning of the relational and interpersonal needs of her students, despite the fact that her research question focused on a pedagogical question. The above data provided evidence of how Claire came to navigate the space between content and relational responsibilities in a classroom to understand that both are crucial in teaching and learning.

In line with Claire, Mara also began to think about the social and emotional implications of action research. She too made the distinction between the content or classroom instruction and the relational aspects of the classroom community. She shared:

When we started using the backgrounds, we had fun, and we got to really focus on the social and emotional awareness of how students are feeling or what they want to volunteer, what they want to engage in. Because it was not really about what was going on in class, it was about our connection together. (Action Research presentation, p. 3)

Much like Claire, Mara's comments suggested a newly developed understanding that connection with students and a focus on their social and emotional wellbeing is an equally important aspect of classroom life and teaching and learning. As a result of their action research, both Mara and Claire entered and negotiated the space between students' intellectual and cognitive needs and their emotional and personal ones and recognized and valued the importance of both.

Bridging Relational Spaces Between Students

Another aspect of relationships on which preservice teachers reflected was the relationship between students. Not one of the participants' research questions focused directly on student-to-student relationships, however many of the participants came to value the need to foster relationships between students in their classroom. Their views of relationships enlarged to encompass not only their relationships with their students but students' relationships with one another, suggesting a shift in concern to include not only their personal relationships but their students' relationships as well. Mara began thinking about student relationships with peers as soon as she began her action research. In her Action Research Question and Narrative Assignment, she explained how as a result of the work, she found herself, "zeroing in on the affect that they have on our interpersonal relationships, both between students and teachers and

among groups of students” (p. 2). She was immediately drawn to the relational aspect of classroom life and through her action research, thought about her relationships with students as well her students’ relationships with their classmates.

Jillian’s action research examined the effect of groupwork in her high school geometry class. Her focus at the onset of the inquiry was on student academic achievement; however, as she inquired into the nature and impact of groupwork, she understood and came to conclusions beyond simply student achievement, she understood and grappled with the social impact of groupwork on her students as well. She explained:

The very first day of groupwork I asked students, “how did it go and what did you think about it?” I had a good amount of students say, “I liked it and I made new friends.” And that to me, it was like wow, it's more than just about them understanding but getting that social experience of, I can make friends, now I have someone to help me even outside of the classroom. (Action Research Presentation, p. 7)

She recognized that along with the benefits to achievement, students benefited socially, through the connections they made with other students in the group.

In Claire’s Action Research Reflection, she began thinking about relationship building beyond the relationships she established with her students to include the relationships her students were building amongst themselves. Her inquiry opened up a new way of viewing her students, beyond those she is charged with educating cognitively to those she is charged with nurturing socially and relationally:

The themes really made me think about my students as human beings and not just “the people I teach.” My vision of teaching has been shifted to include the relationships that form between myself and the students, and the students with each other. (p. 1)

Claire specifically highlighted the relationships that formed between students during the action research. She was sensitized to the struggles some students encountered in terms of relationship building amongst their peers because of remote learning. She shared:

I was happy to see that my students worked well together regardless of their location, even the virtual students that have not been to school in-person once this year, made new connections to the rest of their group mates and built new relationships. (Action Research Reflection, p. 1)

She placed value on students' ability to connect with classmates and grow socially in the virtual space that lay between them.

She went on to clearly recognize and name a shift in her understanding of the structures at play in the classroom and articulated a far more complex vision of classroom life than before she engaged in her action research. During our second focus group, she continued:

Seeing the results from this project made me look at teaching completely differently because a lot of times we are focused on the number, and we are focused on the data that you can analyze and to make a decision about your teaching, when in reality it's multifaceted, these students came out with relationships with other students, they build friendships and they built a community where they can edit each other's work, it's about so much more than just a number. And that's something that I don't think I ever would have figured out if I hadn't done this research. (p. 2)

Claire recognized and made sense of the layers that make up classroom life, and as such, her vision and understanding of classroom life became more intricate and “multifaceted” as she intentionally inquired into the work she was enacting in her classroom. What was unearthed was how educative interactions in the classroom contribute to and impact social interactions and

relationships amongst students. She began to see the classroom as a community, a very relational way of viewing the classroom setting.

Despite the fact that their relationship with students were not the focus of their action research, many participants understood and made meaning of the ways in which the inquiry affected personal connections, between themselves and their students and between students and their classmates. Participants' work was generative in the sense that it helped them understand the complexities of classroom life, far beyond the specific pedagogical instruction they enacted. They appeared to cherish these understandings, almost more so than the understanding they developed about their instruction, as these new ideas and views of the classroom were quite unexpected, perhaps a bonus not anticipated by participants when they began the action research.

Conceivably, this attention and focus on relationship building may have been brought about by the circumstances participants found themselves completing student teaching under. As a result of the Covid-19 Pandemic, most student teaching was online, making it particularly difficult for preservice teachers to forge relationships with students. Most preservice teachers reported a lack of attendance, lack of participation, and a general apathy in students, which makes building relationships quite challenging. I assert that action research was a portal for preservice teachers to connect with students on a more direct and specific level, leading to more connection with students and ultimately, authentic relationship building. It was a vehicle for connection, a way for preservice teachers to engage with and focus intentionally on students in a manner that perhaps they could not during their typical day-to-day interactions of their student teaching. Action research served as a point of entry for preservice teachers which ultimately yielded genuine connection and community, something we were all seeking during the darkest days of the pandemic.

Bridging the Space Between Teaching and Learning

As noted above, many researchers found that a shift in preservice teachers' focus from their teaching towards their students' learning was a common result of preservice teacher action research (Gore & Zeichner, 1991; Kitchen & Stevens, 2004; Lattimer, 2012; Levin & Rock, 2003; Mok, 2016; Price & Valli, 2005; Smith & Sela, 2005). Gore and Zeichner (1991) observed that participants developed an increased awareness of their students' thinking and learning as a result of conducting action research during student teaching. Smith and Sela (2005) asserted that preservice teacher action research helped participants understand and learn about their pupils and their learning needs, while it strengthened their belief in students learning and possible achievement. The data in this study support the above findings and indicate a particular shift in participants' thinking, which supported their ability to narrow the gap between their teaching and student learning.

For some preservice teachers, bridging these educational spaces was quite clear and evident in their thinking about action research, which stands in opposition to Moi Mooi and Mohsin's (2014) findings that preservice teachers' understanding of student learning after conducting action research remained at a very surface level. Alonzo clearly connected his teaching to student learning when he shared, "Action Research is an amazing way to gain insight on the students, it helped me figure out ways to guide students learning" (Action Research Reflection, p. 9). He tied action research to student learning as he recognized the insight he gained from the inquiry regarding student learning. He was able to see beyond the pedagogical implications of his action and think about how his pedagogy affected his student learning. His reflection did not end with his teaching, rather it extended to encompass his students' understanding based on his teaching, effectively tying his teaching to student learning.

Jillian recognized this shift in her thinking as well, and in her recognition, there appeared to be some regret at not making this shift earlier in her student teaching experience. During our second focus group, when asked how action research influenced their teaching practice, Jillian responded, “it made me feel like I, as a teacher, and this sounds terrible because you should always teach like this, but be more attentive to my students’ needs and how they learn through their eyes” (p. 4). Her comment suggested that before action research, her educational thinking did not encompass “student needs,” however, after her inquiry, it became obvious to Jillian that looking at her classroom through her students’ perspective, “through their eyes,” is a critical teaching practice. As her perspective widened, the gap between her teaching and her students’ learning narrowed and became more intimately entwined and connected.

Claire’s perspective was also widened as a result of her inquiry, as the changes she noticed went far beyond the specific pedagogical action she enacted in her action research. She articulated a change in her thinking, in that she understood that despite the fact that action research is about a specific instructional change, the focus was on the effect it had on her students. She shared:

I think it inspired me to think differently about my students, because this whole research was kind of focused on observing my students, and noticing changes in my students, and it makes you notice a bunch of changes, not just the one that you're looking for. (Second Focus Group Transcript, p. 17)

She noticed how her thinking changed, from a focus on her pedagogy to a focus that included the needs of her students and the changes they experience as a result of her instruction. Going into action research, she was focused on her pedagogical action, looking at what happened as she changed her approach to traditional assessment, but what she realized was when we talked

about what happened as a result of her action, we were focused on what was happening to and for her students, not just with her instructional and pedagogical choices. A gap was bridged during her action research experience, and she understood that teaching and learning are intricately intertwined, and cannot be examined in isolation.

In addition to this shift in understanding how instruction and pedagogy impact students, came a more complex and intricate understanding and focus on the process of student learning. Participants attributed this new understanding about student learning to the action research in which they engaged, as it gave them a window into students' learning styles, learning needs, and thought patterns. In her Action Research Reflection, Jillian concluded that her action research experience "taught me more about how my students learn" (Action Research Reflection, p. 3). She went on to explain that each day during her action research she recorded her observations in a journal about what students shared with her, which created the space for her to think about student learning. She described, "This gave me an opportunity to sit and think about my students and how they are learning. It got me more involved in the process of their learning rather than just teaching the material" (Action Research Reflection, p. 4). Her comment highlighted the gap she bridged, from "merely teaching the material" to getting "more involved in the process of their learning." Finally, during our second focus group she reiterated, "I was more closely looking at how my students are learning, how this group work is affecting them, and I was able to really be attentive to how my students learn" (p. 4). As her attention shifted, she started to uncover and explore the messy and unpredictable complexities of classroom life and learning.

Justin and Claire were very explicit regarding what they understood about student learning as a result of their action research. Justin explained, "I have learned a great deal about problem solving and student thought patterns through this process of action research (Action

Research Reflection, p. 11). As he was looking at how to meet all students' needs in the classroom through inclusive pedagogy, he noticed students' responses, which allowed him to develop a stronger understanding of the ways students think about problem solving and the thought patterns they engage in. Through his inquiry, his focus was drawn to the intricacies of student thinking and problem solving.

In line with Justin, Claire also noticed more about various student thought processes and approaches to learning. During her Action Research Reflection, she remarked:

I feel like I know so much more about my students after this project because I saw their thought process when contributing to the assignment. Some are quiet thinkers that internalize a problem and then fix it later, some are not afraid to ask for help and source out others' opinions before changing. Every detail tells me a little story about the student.

(p. 2)

She used her action research to learn more about student learning profiles and processes, as she understood that every student has a story to tell not only about their lives, but about their learning as well. She clearly bridged the space between her teaching and student learning as her attention enlarged to include student thought processes and learning styles. Kitchen and Stevens (2008) identified moments when preservice teachers in their study bridged the same gap between their teaching and student learning that the above participants bridged. The authors insightfully articulated that as teachers come to know how researching their problems of practice transform student learning, they experience a change in the way they conceptualize the relationship between teaching and learning, as the connection between their own growth and their students' growth becomes explicit and known. In this way, bridging the gap between one's teaching

practice and students' learning connects teachers and students in a completely new and transformational way.

Bridging the Space Between Theory and Practice

Building on the literature surrounding preservice teacher action research (Adams, 2016; Faikhamta & Clarke, 2015; Hulse & Hulme, 2012; Kennedy-Clark et al., 2018; Kitchen & Stevens, 2004; Mok, 2016; Stern, 2014), participants also bridged the space between theory and practice as they engaged in critical praxis. They all brought theory to bear on their work, which they used to guide them in their choice of which action to enact and the subsequent meaning they made of those actions. Justin was the most explicit about this experience when he noted:

Action research and the themes that I explored and found as a result of conducting this experiment have helped me to put theories into practice. One of my biggest observations and obstacles that I encountered in clinical I was that the theoretical and the practical or reality of teaching kids did not always align. (Action Research Reflection, p. 11)

Justin described his frustration with the lack of alignment between the theories he learned in his teacher education courses and the realities of the classroom, which highlighted the frequently noted large gap between theory and practice. He specified UDL as a theory he struggled to enact in practice and articulated how action research gave him the opportunity to attempt to bridge this gap. He noted that:

This action research project has helped me develop and become a more reflective teacher by bringing to light some of the aspects of theory that I have been struggling to put into practice. Specifically, UDL, and has been a great exercise in trying out low-stakes environments for pedagogy. (Action Research Reflection, p. 12)

Justin's action research was the vehicle to connect his understanding of the theory of UDL with the practice of UDL principles. He appreciated the low-stakes nature of the work, as it was in a context that allowed for exploration, trial, and error, thus the space between theory and practice was bridged for Justin through his praxis of action research.

Similarly, Claire used her action research to apply principles of the theory of UDL and was able to gather data to support the effectiveness of the theory. She shared, "This is a huge take-away in the fact that I can say with evidence that this model allowed students to demonstrate understanding in multiple ways" (Action Research Reflection, p. 1). She was able bridge the gap between the principle of *Multiple Means of Expression* in UDL with the practice she enacted during her action research, which helped her make meaning of the theory and apply it effectively in a classroom setting.

During our second focus group, Joshua shared his understanding of the process of bridging theory and practice. He noted, "It's one of those few things where you have to do [it], I studied teaching and education and educational theory, and that was all helpful, but it didn't mean anything until I was in the room doing it" (p. 15). For Joshua, the way to make meaning of theory was to enact it in a classroom, he had to "do it" to understand it, in other words, he had to engage in praxis. His action research provided him with the opportunity to be in a classroom, enacting pedagogical theory, which helped him bridge the divide between the theories he learned and how they are experienced in a real classroom.

Likewise, Jillian expressed the belief that theory needs to be applied by teachers in order to test the validity of the theory. In her reflection she shared, "A theory needs to be applied and tested before it can be distributed as valid advice, teachers are the ones applying and testing it" (Action Research Reflection, p. 3). She named the classroom as the site of intersection between

theory and practice. Her action research experience allowed her to envision her teaching as the work that bridges theory and practice, testing the validity, reliability, and usability of a theory.

The above describes the spaces that participants entered and negotiated during their action research experiences. The act of inquiring brought together the spaces between teachers and students relationally, teaching and learning, and theory and practice for preservice teachers. They experienced the narrowing of the divide between themselves as teachers and their students as learners as they engaged in action research to intentionally transform their teaching practice. The following section addresses my role as the professor on record in the course where students conducted action research in supporting students to enter the space between practical and critical inquiry and exploration.

Bridging the Space Between Practical and Critical Praxis: Facilitating Critical Praxis

As stated in Chapter 1, one of the goals of preservice teacher action research is to equip teachers with the necessary skills to make meaning, learn from, and exact educational knowledge from their classroom experiences in order to transform their educational settings (Dodman et al., 2017; Faikhamta & Clarke, 2015; Klein et al., 2015; Manfra, 2019; Price, 2001; Price & Valli, 2005). Anchoring this goal is the notion of transformation of practice, in other words, bringing to bear a critical lens in our classroom inquiry. As participants conducted action research, they enacted praxis, clearly defined by Ryan et al. (2017) as the merging of educational theory and the practice of teaching. It was in this resulting praxis that participants fluidly, and in varied ways, bridged the gap between practical and critical praxis. Arnold et al. (2010) defined critical praxis for educators as work that “encourages communities, teachers and students to work together in producing new understandings and practices for majority interest” (p. 286). The authors argued in support of the idea that critical praxis is the foundation of teacher education and is “hopeful,

dialogical, and emancipatory” (p. 287). Each participants’ journey through action research held moments, some nascent and some well-developed, of hope, dialogue, and emancipatory ideology. These moments were the beginning of preservice teachers’ work in bridging the space between practical and critical praxis.

The development of a critical inquiry stance is essential if educators are to develop the agency, skills, and stance to engage in critical praxis and transformational teaching. Throughout the study, participants engaged in both practical and critical inquiry, as described earlier, moving fluidly back and forth between the two dimensions of action research (Manfra, 2019), approximating the authentic experience of in-service educators. Classroom teachers experience critical moments often, as they intersect with the real-life work of their practice. Whether or not teachers name and recognize their inquiry as critical, they are genuine and should be valued as a means of nourishing and supporting the continued use of a critical lens in classroom inquiry.

My work in supporting the development of a critical inquiry stance was intentional yet subtle, weaved into the reflective discourse we engaged in during our seminar course together. Below is an analysis of the deliberate responses to action research presentations I offered students to highlight, name, and draw attention to moments of genuine critical inquiry in their action research, pointing out the instances when their inquiry crossed over into the critical dimension of action research. As such, I viewed my role as a facilitator of praxis, supporting participants’ engagement in praxis, in the hopes of bringing together their reflective and generative abilities to bridge theory and practice in order to transform it (Freire, 1970).

To bring the critical moments of inquiry to the surface and make them more transparent, I deliberately pointed out and commented on these moments and points of critical thinking to help the preservice teachers recognize them, value them, and look to pursue them further. My

responses were a way for me to illustrate to my students the struggle to think more critically in the moment and to condition themselves to look for these critical moments in the hopes of pursuing them. The feedback and questions I asked were specifically crafted to foster a sense of responsibility as educators, specifically the responsibility to bring about change that creates more just and equitable learning environments for students. In line with Freire's (1970) definition of praxis, I wanted students to think about whose interests were being served in their inquiry and to critically think about how the bridging of theory and practice, or praxis, can bring about positive change (Stuart, 2020).

Naming the Critical Aspects of Our Work

During our classroom discussions analyzing participants' action research, I purposefully labeled the moments of critical thinking as such to establish them as something to work towards and to imbue them with value and importance. When I encountered instances of participants' work moving fluidly and authentically from the practical to the critical dimension of action research, I specifically named and labeled them to emphasize the critical nature of the thinking involved and to bring it to the forefront of preservice teachers' consciousness. For example, Claire presented her action research, which examined alternative modes of assessment but ebbed into issues of inclusivity and access for students who are learning remotely, as Claire was teaching in a hybrid classroom. She mentioned these issues peripherally in her presentation so at the conclusion of her presentation I commented:

You have advantages when you're [the student] in the classroom that you may not have when you're home, so I love that you took this work into the critical realm, thinking about, 'well what are the issues of equity here and what are the issues of inclusivity here?' (Action Research Presentation Transcript, p. 5)

I intentionally placed the work in the “critical realm” to signal this important movement between the practical and critical dimensions of action research. What began as practical inquiry organically and fluidly crossed over into critical inquiry, and it is in my choice to name and highlight this shift that I was actively supporting the development of a critical inquiry stance for the participants.

In my role as facilitator of critical praxis, it was important to draw attention to and identify the inequities that participants unearthed as they conducted action research. As mentioned above, Claire constructed the advantages and disadvantages between being a student in the classroom and being a student online in a hybrid classroom through a critical lens. I reinforced this critical thinking when I stated:

You really didn't just focus on the assessment piece of it, but you brought in issues of inclusivity in terms of connecting the students who are virtual with the students who are in class and just making sure that there's equity in the work that they're doing . . . creating this whole new set of types of inclusive questions we need to ask ourselves. (Action Research Presentation Transcript, p. 5)

I wanted to draw attention to and reinforce her critical thinking around the issues of equity she was problematizing within the context of a hybrid classroom and insert these ideas into our classroom dialogue for all students to think about and contemplate.

Additionally, I responded to Megan’s presentation by highlighting her critical thinking about moral and just education related to issues of student privacy during remote learning:

And one thing I'm really thinking about is that it was easier for them to be on camera with a background. I would love to explore that further, what about the background makes it easier for them? Is it that it's blocking out everything else, so that they have their

privacy? Then that makes me want to ask what about being on camera do they not like? How does this address what they don't like? (Action Research Presentation Transcript, p. 31)

I purposefully highlighted her critical thinking about students on camera and shared my own thought process, how her work inspired my own questions surrounding issues of privacy and respect for students' home lives. I made my critical inquiry thinking visible by modeling and giving voice to my own critical thought process and questioning in the hopes of supporting the development of my students' abilities to do the same.

As Justin presented his action research, he touched on critical issues such as inclusivity and access to learning for all students. He framed his work as critical and he made meaning of it through a critical lens, which presented me with the opportunity to name the critical thinking he was engaged in and explore it with the class. He explained how in his action research he noticed that he was using academic language that was too difficult for some students, denying them access to the content. I restated his explanation in terms of inclusive teaching practices:

[I hear you] really asking, "how do I create access for all students in my class to really meet their potential and succeed?" . . . trying to think about how to create this environment where all students have this portal and have the opportunity to connect to the information, the content, the skills and develop them. (Action Research Presentation Transcript, p. 19)

Again, his action research was situated in the practical dimension as he sought to include principles from UDL, but the enactment of the inquiry enabled him to move between practical and critical praxis and examine educational practices that create access to learning for all students.

Another critical point that I highlighted was problematizing issues of power in a classroom. Felipe explained that his cooperating teacher showed considerable interest in his action research and decided to enact the specific action from Felipe's action research plan to see if the results would be different, which predictably, they were. I saw this as an opportunity to help students understand the ways in which we problematize issues of power in our classroom, looking through a lens of questioning and critiquing. I asked:

Do you think the fact that your CT, for your students, holds more power in their eyes as opposed to a teacher intern? Do you think that could have impacted [the results] in any way? Do you think your roles, your teacher roles played a part possibly? (Action Research Presentation Transcript, p. 9)

In posing these questions, I demonstrated how we as teachers can hold up a critical lens to examine the power structures at play in our classrooms.

Bridging the Gap Between Receptors of Knowledge and Generators of Knowledge

As mentioned previously, many students began to develop and build upon theory as a result of their action research. In doing so, they narrowed the gap between consuming outside knowledge to generating their own knowledge. Parker et al. (2016) similarly concluded that engaging preservice teachers in inquiry prepared participants to be knowledge generators. Furthermore, Lattimer's (2012) study found that preservice teachers evolved into knowledge generators as they struggled to make meaning of their action research, closing the gap between being a receptor of someone else's knowledge to being a producer of personal knowledge. When Felipe presented his action research, he framed his conclusions as theories. The work Felipe conducted was generative and meaningful to him and he valued it by naming it as theory. In an attempt to support this view, I highlighted and spoke about his labeling of his work as theory:

I'm just so happy you framed it like this, you just said, it's just a theory, but that is the point of action research, it is to create an experience for yourself where you can start developing theory. These are the learning experiences we're trying to create for ourselves and this goes back again to this idea of who generates knowledge for education. You could potentially be on to something; you're developing this theory based on the experiences you're having in the classroom. So, I'm so happy and so pleased that, it struck you as such, that this was really the beginning of some sort of theory, you've given it value, you've given it weight by naming it and terming it theory. (Action Research Presentation Transcript, p. 10)

I purposefully connected his use of the term theory with the question of who generates knowledge for teaching as I was trying to help the preservice teachers view their inquiry as a contribution to the field of education. My response was an attempt to help students navigate the space between viewing themselves as consumers of knowledge to generators of knowledge, empowering them to see the potential that awaited them in terms of their ability to generate meaningful education knowledge and develop educational theory, thus disrupting the traditionally bounded space between scholarly knowledge and teacher knowledge.

My efforts to help students bridge this divide and expand the possibilities they envisioned for themselves continued as I responded to Joshua's action research presentation. Much like Felipe, Joshua named the process he engaged in during his action research as "theorizing." To validate that assertion and to delve a little deeper into the process of theorizing, I decided to open up the conversation to the steps involved in theorizing. I explained:

I would always encourage you when you are developing theories, so if this is what I'm seeing, this is the meaning that I'm making, always include the why. So, if you're saying

that current events support relevance and increases and helps students see themselves in the curriculum, you need to say why, you need to tell us why. Why does it work?

According to you, what's your theory on that? (Action Research Presentation Transcript, p. 41)

In my response, I attempted to support Joshua's theorizing process, to help him more fully round out his theory with an explanation of why he is theorizing what he is theorizing. I was pushing him to delve deeper into his critical thinking to more fully understand and theorize the work he is engaged in in his classroom. Here too, the point was to emphasize preservice teachers' ability and authority to develop theory based on the experiences they have in the classroom.

Developing a Critical Inquiry Stance

Supporting preservice teachers as they develop a critical inquiry stance is the thread that weaves all parts of this study together. Action research was assigned as a means of creating the opportunity for preservice teachers to enlarge their understanding of their roles as educators. The intention was to support students' development from practical thinkers to critical thinkers, from receptors of knowledge to generators of knowledge, from those who repeat to those who innovate, and from those who simply react to their world to those who inquire and respond thoughtfully and intentionally to it. The remaining examples illustrate my efforts to help preservice teachers understand the above spectrums and use that understanding to develop a critical inquiry stance.

As set out in chapter 1, my working definition of action research for preservice teachers was to "improve their own practice, their understanding of these practices and the situations in which the practices are carried out" (Zeichner, 1987, p. 568). The desire to continually evolve one's teaching practices and setting for the better was at the heart of a critical inquiry stance. As

such, I intentionally pointed out and articulated the process of continually searching for opportunities to grow as educators and bring about positive change in our educational settings and structures.

As Mara was concerned about her choice of action research topic, she shared during her action research presentation, “I was even initially concerned that this wasn't serious enough of a topic to pursue until I talked to Rachel and she encouraged me to go for it and I really got so much out of it” (p. 30). She worried that her choice of topic was too simple and inconsequential. I took this comment as a chance to further develop participants’ understanding of ways to bring about change in one’s classroom. I validated Mara and continued:

Sometimes if it's just meaningful to you, and you find meaning in these things and you make meaning out of these points of interest in your classroom and things that speak to you, you can use them as a jumping off points to really make change, meaningful change in your classroom. So, it's not about how large the scope of the action research is, it's about how deep you want to go with it, how much you want to see in it, how much you want to explore in it. (Action Research Presentation Transcript, p. 31)

My intention in this response was to demonstrate how by following our interests, and inquiring into the problems we encounter in our educational settings, we can bring about meaningful improvement and change. I was attempting to keep the proverbial door wide open for any and all inquiry in the classroom, to ensure there was ample room for all preservice teachers to walk through and critically reflect on their educational practice and situation. I continued with this point when I stated:

Going back to something that just sticks with you, that haunts you, that you cannot get out of your head, that you're just drawn to and explore it and see where it takes you.

Because that's a way for you to continually build in learning opportunities for yourself to grow as an educator. (Action Research Presentation Transcript, p. 31)

My goal in the above comment was to demonstrate the process of how teachers create learning opportunities for themselves to grow and develop their practice using the issues they encounter that make them question and wonder in their daily work. I sought to name a new way of knowing for teachers, similar to Cochran-Smith and Lytle (2009), through exploration and inquiry into their contextualized educational settings. I shared:

That is one of the reasons why we do this [action research] is to teach you this way of knowing. This is a way of coming to know, not from a textbook, not from an article, this is coming from you. And it's just powerful work I think and empowering work. (Action Research Presentation Transcript, p. 31)

This way of knowing, stemming from teacher inquiry, directly supported the development of a critical inquiry stance, as educators need to view their classrooms as generative sites for education knowledge and themselves as the generators of that knowledge.

Additionally, I intended to give voice to my process of inquiry and the ways in which I continually question what happens in my teaching practice. Specifically, I wanted to highlight how inquiry is an iterative, messy process without finite and definitive answers. When Jillian shared that some students preferred to work independently despite improved grades when they worked in groups, I chose to model how I generated questions and problematize classroom happenings:

When you ask students if they wanted to do it [assignments] in group work, and they chose independent work, to me, that was the next question of, well, if they're more successful in group work, why would they want to work independently? So, what's going

on there? What's that dynamic? What's happening? (Action Research Presentation Transcript, p. 37)

The most powerful phrase in the above quote is “the next question,” as it clearly demonstrated the process of taking understanding from one inquiry and pursuing something deeper in a subsequent one. I continued to illustrate how the answers we generate from one inquiry filters back into the next cycle of inquiry:

Action research is iterative, it's cyclical. You do one thing you see what happens. You take what you've learned, you take the meaning that you've made from the experience and you plug it into the next cycle, and the next thing you're going to explore. (Action Research Presentation Transcript, p. 37)

It was important for me in my role as facilitator of praxis to expand upon this inquiry cycle and explain how we take new understanding and apply it to the next cycle of inquiry we attempt. The message I intended to convey was that critical inquiry, questioning, and exploration are not isolated events, but rather intertwined throughout our work and growth as educators. My intention was to help participants develop the disposition, or stance, to continuously inquire to improve teaching and learning in their educational settings.

During Justin's action research presentation, he shared that he felt his research question was one he could spend his whole career pursuing, in that it addressed the achievement gap and the notion of access to education for all students. I wished to validate the concept that our questions are worthy of a lifetime of inquiry and investigation and how looking at inquiry through that perspective contributes to the development of a critical inquiry stance, as it articulates how critical inquiry is not an event, rather a stance an educator embodies. I offered:

This is just a very organic process, we try something and we get what we get from it and then we say, okay, what else did I need? You go back and that's why it's an iterative process and it's very cyclical. The expectation is not to have the answers in one cycle, that is not the expectation ever. You know it takes time, research takes time, building theory takes time, getting enough information and developing your understanding, developing a really full and rich understanding, it all takes time. (Action Research Presentation Transcript, p. 19)

Emphasizing the importance of time, explaining how critical inquiry takes time and patience, and that it is not complete, finite, or answered in one cycle, was important in helping participants understand that inquiry is a stance, something we live as educators, a way we see the world, a way we approach our work, and a way we live our work. My intention was to help preservice teachers envision the educator they wanted to become as they were concluding their teacher education program, empowering and equipping them with the knowledge, skills, and tools to connect the space between who they currently are as educators to who they ultimately want to be.

The above examples all illustrate my purposeful attempts to nurture the development of a critical inquiry stance in the preservice teachers I taught. The work of fostering this stance is complex and nuanced, built on many different factors, such as program structure and mission, student teaching experience, course assignments, assigned readings, and classroom discourse. The above examples are all culled from classroom discourse and cast a light on a narrow slice of participants' teacher education experience. These were my attempts, during participants' action research presentations, to support the development of a critical inquiry stance in preservice teachers.

Conclusion of the Findings

In his book on life changing ideas in Judaism, Rabbi Jonathan Sacks (2020) presented foundational ideas on the weekly Bible portion. In one of the portions, God tells Moses to command the Jewish nation to build a Sanctuary, a dwelling place, for him to rest on earth. Rabbi Sacks pondered why God needed the people to actively engage in this building process. Easily, God could have created this sanctuary for himself, however, there was purpose in the act of actively engaging in the building process. He wrote, “The builders of the Sanctuary lifted up their gift [the sanctuary] to God, and in the process of lifting, discovered that they themselves were lifted” (p. 99). It was in the enactment of the building of the sanctuary that they were lifted, it was in the doing that they became. It was necessary to enact in order to become, as these processes are intricately intertwined, interdependent, and complexly connected.

When I came across this idea, I was struck by the conceptual similarities between the paradigm Rabbi Sacks’ (2020) described and the ideas I encountered as I worked my way through this study and the notion of developing a critical inquiry stance. Throughout the study, I observed and gathered evidence of preservice teachers developing towards a critical inquiry stance as they enacted and made meaning of their action research. Preservice teachers became critical inquirers as they inquired into their problems of practice. The critical praxis the participants engaged in was the vehicle that brought them to a critical inquiry stance. They developed this stance because they enacted it, in essence, it was in the taking up of critical inquiry that they developed a critical inquiry stance.

Across participants, there is a varied spectrum or continuum of experiences. There was a wide range of ways in which participants were able to bridge the space between critical and practical inquiry, some preservice teachers were able to apply a critical lens in a sophisticated

and explicit way and others applied a critical lens in a more nuanced and implicit manner. I would argue that all participants experienced moments of critical inquiry in that asking preservice teachers to problematize, theorize, and generate knowledge for teaching is a disruption to the hegemonic hold scholarly generated knowledge has in the realm of knowledge for teaching. It was a transformative act, as it subverted the power that academic knowledge holds and valued a different way of knowing and generating knowledge for education, as preservice teachers moved from knowledge consumers to knowledge generators, constructing knowledge from the inside out as opposed to the outside in (Cochran-Smith & Lytle, 2009).

As all the preservice teachers' action research began with a problem of practice, all participants experienced elements of practical praxis. The work was grounded in their classroom experiences, thus there was, to some degree, practical intent in all participants' action research. However, it was in the meaning they made of their work, the theories they chose to problematize, and what they saw and made note of in their action research where they crossed over into critical praxis. This process of moving between practical and the critical praxis was fluid and organic, happening multiple times over the course of participants' inquiries, which highlighted the complex, messy, and unpredictable nature of action research.

Asking preservice teachers to enact action research gave them the authority to problem pose questions that arose in their clinical placements, creating the space for them to make personal meaning and learn about teaching through their own experiences. They created meaning about their teaching pedagogy and instruction, about themselves as educators, and about how their students made meaning in their classrooms. Furthermore, they made meaning about critical action research and inquiry and how their experiences conducting action research contributed to and nurtured the development of a critical inquiry stance.

As they reflected on and analyzed their action research, preservice teachers used the meaning they made to begin to generate theory. The meaning making process was the precursor to the development of theory, once they understood what their experiences meant and attached particular meaning to those experiences, they were able to hypothesize and theorize how those experiences apply to teaching and learning. Within participants' action research, they tested the hypotheses and continued to construct nascent theories about their problems of practice. This generation of theory was a new experience for the preservice teachers, as this was one of the first times they were positioned as knowledge generators. The participants savored the meaning, understanding, theories, and knowledge they arrived at, connecting to their newly developed knowledge on a personal level, owing and internalizing their understanding in a new and far more powerful and complex manner than when they were simply receivers of knowledge. This shift led some participants to a reorientation of knowledge and knowledge production, as it allowed them to question who has the power to generate knowledge, from both a scholar/teacher and a teacher/student perspective, and whose knowledge is valued inside and outside a classroom.

The process of engaging in action research helped preservice teachers bridge gaps in the classroom, in their understanding of teaching and learning, and in their ability to enact a critical inquiry stance. Participants' inquiry opened portals for preservice teachers to connect with their students in very intentional and specific ways, which helped participants build trust and understanding with students in a way they could not before the action research. Participants also noticed the ways in which the action research facilitated relationship building between students, as students activated one another as resources for learning in the classroom. The inquiry work supported understanding about how teaching and learning are intertwined and helped preservice

teachers focus on not only how and what they were teaching but how and what their students were learning, helping them bridge their instructional and pedagogical judgments with their students' learning and growth.

Some participants explained how their action research helped them bridge the gap between specific theories and what those theories look like in practice. As they reflected on how educational theory interacted with teaching practices, they experienced praxis. At times this praxis was practical in intent and nature and at times it moved into the critical realm, flowing fluidly and naturally between the two, as teaching is at once a practical and critical endeavor.

I viewed my role as professor of record as a facilitator of critical praxis. My aim was to make explicit the moments of critical praxis, to bring it to participants' attention and focus, to name it, and bestow it with value. As I engaged in dialogue with participants and we co-reflected on the inquiry they presented and shared, my intent was to bring the critical moments and pieces of the inquiry to the forefront, highlighting a way forward to the enactment and development of a critical inquiry stance.

Participants' journeys through action research were varied, dependent on the lived experiences, histories, and assumptions they brought to bear on their work. Each experience told a disparate story of the development of an inquiry stance; however I argue that each participant developed, to a certain degree, on the path to a critical inquiry stance because, as human beings, as we lift, we become lifted, as we enact and engage, we become and develop.

Chapter 5: Conclusions and Implications

The purpose of this qualitative research study was to investigate how, and in what ways, preservice teacher action research fosters a critical teacher inquiry stance. More specifically, I was interested in understanding the ways in which preservice teachers thought about meaning making, generating knowledge, and problem posing in their classroom. As I traced and chronicled participants' development towards a critical inquiry stance, I came to understand that I journeyed alongside my preservice teachers, simultaneously accompanying them and experiencing the same shift, in relation to our role as educators from knowledge receptors to knowledge generators. Although I engaged in inquiry as a classroom teacher and as a doctoral student, this was the first time in my professional career that I came to view and value myself as a knowledge generator.

I believe this newly acquired viewpoint is a result of this research study in two separate ways. First, this study afforded me the space to think about my relationship to knowledge, the process of knowledge generation, who has the power to generate knowledge, and whose knowledge is valued, in a way I never did before. Throughout the study, I waded into the complex, messy, and intricate process of knowledge generation with participants and came away with a far more sophisticated and transformed understanding of how knowledge is produced. In applying this newly developed lens to my personal journey as an educator, I understood that I was a knowledge generator, to various degrees, my whole educational career, but only came to value it as such at the completion of this research study. Second, I came away from this research study owning and embracing the knowledge I generated from an academic perspective. I felt much like Mara did when she stated, "I feel so connected to the knowledge that I have now" (Second Focus Group Transcript, p. 11), in that I believe so strongly in the knowledge I

generated, in the value it holds for teacher education, classroom teachers, and teacher education programs, and how this research contributes to the educational field. This concluding chapter summarizes the knowledge I generated from this study, the conclusions I drew, and the implications of my generated knowledge to the field of teacher education and teacher development.

The primary research question that drove this qualitative study was: How does the experience of action research for preservice teachers foster a critical teacher inquiry stance? This overarching question led me to ask the following two more specific sub-questions:

- How does action research influence the ways in which preservice teachers think about how they make meaning and generate knowledge as teachers?
- How does action research allow preservice teachers to make meaning and generate knowledge for themselves and the educational field?

Drawing on the work of Freire (1970) and Cochran-Smith and Lytle (2009), I used what I termed critical teacher inquiry as my theoretical lens. Critical teacher inquiry is grounded in the assertion that knowledge is arrived at through the purposeful, systematic, and intentional struggle to inquire and make meaning of classroom life. This theoretical lens allowed me to consider how action research promoted a reorientation of knowledge production and served as a disruption to the scholar/teacher hierarchy that exists in the education field. Included in this chapter is a review of the findings followed by a discussion and interpretation of the summarized findings. I then outline and discuss related conclusions. Next, I present implications and recommendations for preservice teacher education and teacher educators who seek to infuse inquiry and knowledge generation into the work in which they engage with preservice teachers. Additionally, I offer implications and recommendations for professional development and in-service teacher

development that supports the exploration of inquiry, action research, and problem posing in the classroom setting. I conclude with a review of my experience conducting research as a first-time researcher, how the work affected my understanding of my role as a teacher educator, and the insights at which I arrived as I worked through the oft times complex, overwhelming, and messy research process.

Interpretations of Findings and Conclusions

In seeking to understand how preservice teachers made and attached meaning to their action research, a qualitative research design was an appropriate fit as it allowed me to unearth and understand the meaning participants made of their lived experiences and constructed realities of conducting action research as preservice teachers (Golafhsani, 2003; Merriam & Tisdell, 2016). This methodology necessitated an inductive approach to the research, as I sought to arrive at insights and understandings based on data collection and “emergent analysis” (p. 8) rather than using data to assess established theories, models, or hypotheses (Taylor et al., 2016). This emergent analysis yielded four major findings.

The first, and overarching finding threaded throughout all the subsequent findings was that preservice teachers developed, to varying degrees, a critical inquiry stance as they conducted action research. The action research served as a vehicle for participants to simultaneously enact, make meaning of, and develop their ability to engage in critical teacher inquiry. Second, participants made meaning of their action research from both a critical and practical perspective. This meaning making process was fluid, as the preservice teachers moved organically from practical to critical inquiry, at times highlighting aspects of their work that were driven by practical concerns and at moments highlighting the critical concerns of their work. Third, the act of generating knowledge through action research contributed to the development of a critical

inquiry stance and transformative ideas about knowledge production and the power to produce knowledge. Findings revealed shifts in participants' understanding of knowledge production for education and determining who is responsible for the generation of educational knowledge. Finally, I found that action research served as a bridge, helping fill gaps that existed between theory and practice, in their relationships with students, between their teaching and student learning, and between being positioned as knowledge receptors to knowledge generators.

The above findings are woven together in multiple ways and from several directions, exerting influence and support over one another in various ways. Enacting action research created opportunities for participants to explore various pedagogical approaches, such as democratic and inclusive practices, which helped them bridge the theories they learned about in their coursework with how they are brought forth in practice. Additionally, exploring ways to create inclusive environments and democratic practices shifted their investigations fluidly between practical and critical inquiry. This shift into critical inquiry supported the development of their critical inquiry stance. The more often they shifted into critical inquiry the more developed their critical inquiry stance became and conversely, the less often they crossed over into critical inquiry, the slower their critical inquiry stance developed.

The meaning making participants experienced supported their ability to develop theories related to their action research and ultimately led them to generate knowledge for teaching. This process of generating educational knowledge stood in direct opposition to the long-accepted hierarchy between scholarly generated knowledge and teacher generated knowledge, positioning participants' action research as a disruptor to the hegemonic hold scholars and universities have over localized and contextualized teacher knowledge. This disruption supported the development of a critical inquiry stance for participants, as they were engaged in a process that pushed the

boundaries of knowledge generation beyond classroom teachers to include preservice teachers as well. The meaning they made of their experience generating educational knowledge supported development of a critical inquiry stance in that they began to question how knowledge is generated in a classroom, who generates knowledge in a classroom, and whose knowledge is valued in a classroom. The posing and exploration of these questions, coupled with the experience of problem posing education (Freire, 1970) as students, allowed them a means to envision how to enact problem posing education as teachers, a very critical pedagogue, and one that is often in need of bridging between theory and the practice.

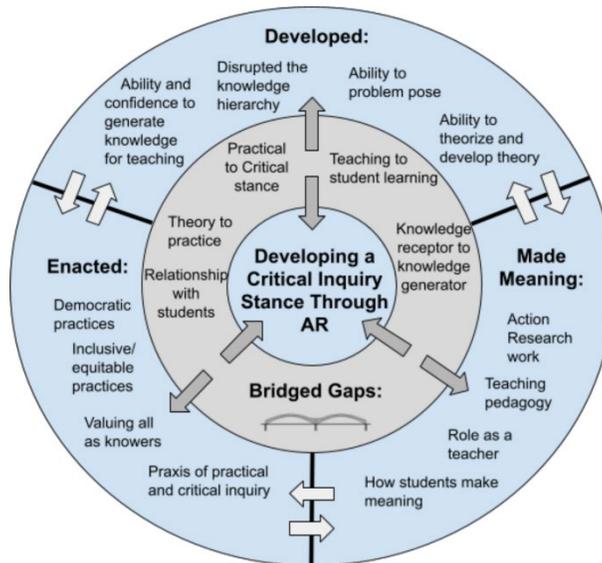
The Complexities of Developing a Critical Inquiry Stance

These messy, complex, and interwoven findings helped me understand and draw several nuanced conclusions about preservice action research, some I expected, some I was surprised at, and some I never envisioned before commencing this research process. What I came to understand about conducting action research as a preservice teacher is that many developmental processes occur simultaneously while engaged in action research. Preservice teachers were simultaneously enacting critical teacher inquiry, making meaning of their inquiry, and developing along a path towards a critical inquiry stance. These processes were distinct yet reliant on one another and occurred differently for each participant. For some participants, the meaning making drove their development of a critical inquiry stance as they shifted into the critical realm to make meaning of their work. For others, the enactment of action research drove their development, as they felt newly empowered to pose questions, inquire, and seek answers in a systematic, and purposeful manner. Still for others, the development drove the enactment because their prior development towards a critical inquiry stance allowed them to frame their question from a critical perspective, reinforcing and nurturing their already well-developed

critical inquiry stance. In whatever unique order or combination experienced, these three processes, enactment, meaning making, and development, occurred simultaneously during preservice action research, all three were essential and contributed in disparate ways to the development of a critical inquiry stance. The figure below illustrates the complexities of conducting action research and the interconnectedness of the enactment, meaning making, and developmental processes at play.

Figure 2

Developing a Critical Inquiry Stance



The processes that foster the development of a critical inquiry stance are iterative, non-linear, and quite fluid, much like the process of action research itself. Participants moved from enacting action research, to meaning making, and back to enacting, multiple times, illustrating the dynamic nature of the work. They cycled through enactment, meaning making, and development multiple times over the course of their action research, each iteration changing their understanding of the work, their ability to move fluidly from practical to critical analysis and inquiry, and the meaning they attached to it.

Participants' experiences were marked by various successes, obstacles, and failures; their movements forward necessitated movement back, to reconsider, enact anew, and come to new meaning. Progression was very jagged, with breakthroughs in understanding and meaning making about what happened in the classroom leading to more questions. Many participants remarked about how many questions arose from their work and how they came away with more questions than answers. Other participants shared frustration with the process, second guessing themselves, their actions, and their meaning making, struggling to make sense of their work. All three processes, enactment, meaning making, and development, were experienced by preservice teachers in a non-linear fashion, each experiencing a unique and personally meaningful journey towards the development of a critical inquiry stance.

These experiences mirrored the process of action research itself, as action research is conducted iteratively, is often non-linear, and should be quite fluid in flow and progress, meaning the work is unpredictable in nature and requires the researcher to surrender to the direction, meaning, and inevitable questions the work progresses towards and raises. Perhaps these characteristics of action research set the stage and dictate the nature of using action research as a vehicle to develop a critical inquiry stance, guiding the complex and intricate process of coming to know, understand, and develop towards a new way of looking at our world.

As found in the literature, the development of an inquiry stance is highly predicated on personal lived experiences and histories (Parker et al., 2016). Preservice teachers who came to the action research with a more fully developed critical inquiry stance based on previous personal experience framed their work more often from a critical perspective. Participants, who at the onset of the assignment sought to infuse their teaching with equity and justice, used a critical lens more often and with greater depth and sophistication. Previous development towards

a critical inquiry stance influenced what preservice teachers chose to problematize, highlighting the impact personal histories, experiences, and past development have on preservice teachers' ability to inquire critically into their problems of practice (Parker et al., 2016).

Closing Gaps

As a teacher educator, the goal that shapes the purpose of my work is to prepare and equip preservice teachers with the skills, stances, and understandings needed to enter the teaching profession successfully. What I found over the course of this study was that several gaps exist that need to be addressed and bridged if we are to fully prepare preservice teachers to successfully transition into classroom life. Gaps can be found between the educational theories taught in coursework and their practice in the classroom, between instruction and learning, and between teachers and students. Additionally, gaps exist between the practical and critical work we ask preservice teachers to engage in and between positioning preservice teachers as knowledge receptors or knowledge generators. These gaps need to be bridged to successfully prepare preservice teachers to be effective educators.

A common refrain surrounding teacher education is the gap between theory and practice, meaning, what is learned in teacher education coursework does not easily translate into practice in the classroom. Either preservice teachers are not seeing these theories and pedagogies enacted by their cooperating teachers, they do not have the opportunity to attempt to live and practice these theories in their clinical placements, or there is simply an unavoidable gap that exists between theory and practice. Action research has been used often in teacher education as a means to bridge this gap and to create spaces for students to enact the pedagogy and theories they have studied in their coursework (Adams, 2016; Kennedy-Clark et al., 2018; Mok, 2016; Stern, 2014). Bridging this gap is essential if teacher education programs hope to see their

preservice teachers enact and bring forth the specific pedagogy and theories advocated in their programs.

Furthermore, the findings point to a gap between instruction and learning, in other words, at this preservice teacher stage, preservice teachers tend to focus on their teaching more so than student learning. Within the literature, this gap has been theorized as part of teacher development in Fuller and Brown's (1975) teacher-concerns model which argued that preservice teachers' concerns move outward from concern about themselves and personal adequacy to concern for their teaching task and finally to concern for effects of their instruction on student learning. Miksza and Berg's (2013) study examining preservice music teacher development found that over the course of participants' year and a half student teaching placement, initial concerns connected to their basic competencies and adequacies as teachers gave way to more specific concerns related to the detailed and nuanced instructional challenges they were facing in their classroom context, highlighting the shift in concerns as teachers develop and grow. Bridging this gap is fundamental to teacher development and should be a point of focus for teacher education programs and teacher educators.

Throughout this study I thought frequently about the work in which we ask preservice teachers to engage and I questioned how the tasks teacher education students are asked to complete prepares them for classroom life. I wondered repeatedly if preservice teachers were being equipped with the skills, tools, and stances necessary to carry forth the democratic and social justice values our program, and many others like it, we are attempting to nurture. Have preservice teachers been asked to engage in meaningful inquiry in their coursework often enough to envision how to engage their own students in inquiry-based lessons and units? Have we asked them to critically interrogate knowledge that we present? Have we given them the opportunities

to generate their own knowledge throughout their teacher education experiences? Based on the findings, I concluded that preservice teachers need more of the above experiences to successfully and effectively move into the classroom and live and practice the pedagogies and theories we hope and believe they should. The findings highlight a gap between preservice teachers' practical and critical thinking abilities as well as a gap in the way we position preservice teachers as receptors of knowledge or generators of knowledge. At times, these gaps prevent preservice teachers from fully embracing and coming to know the multiple ways of educating students inclusively and equitably and helping them come to know and learn for themselves. Given the enormity of the scope of what preservice teacher education programs hope to accomplish with students, the question should be reframed as a question of what is an adequate foundation for preservice teachers to construct during preservice teacher education that will enable them to carry this work forward as they move into their own classrooms? To fully support preservice teachers in developing this sufficient base, teacher education programs should be integrating and reframing the critical aspects of the work throughout each course and experience offered to preservice teachers.

The Connection Between Inquiry Work and Relationships

One of the most surprising conclusions I reached during this research process was the connection between the inquiry work in which preservice teachers engaged and their success in building relationships with their students. Participants expressed delight and surprise at the ways their action research created spaces for them to build relationships with students, providing them with opportunities to learn more about their students' lived experiences and getting to know them on a deeper and more authentic level. The action research allowed preservice teachers to engage and nurture a more reciprocal and dialectic relationship with students, as Theisen-Homer's

(2021) asserted in her study of two teacher residency programs. As participants' relationships with students shifted into a more co-constructed and shared space, their relationships developed and strengthened. Participants' inquiry served as a portal or entry point for students to engage in a far more authentic and genuine manner compared with other types of work they engaged in during their clinical placements.

There are many enduring questions this conclusion brings me to; was it the action research in particular that facilitated the relationship building, or would it have been any assignment that asks participants to look closely at something specific in their placement, such as a case study or classroom analysis. If in fact this effect of deepening relationships is specific to inquiry work, what about the nature of inquiry brings about this effect? What characteristics of inquiry support this co-constructed and dialectic space for preservice teachers and students? This line of questioning is of great interest to me and worthy of further research and investigation as it holds significant implications for preservice education and in-service professional development.

Experiencing and Understanding Knowledge Generation

As a result of their action research, participants generated knowledge about practical and critical aspects of their work, about how effective certain instruction was in their classroom, and about the process of generating knowledge in a classroom. Generating knowledge is a key experience for preservice teacher as it focuses their attention on how knowledge functions in a classroom, for both teachers and students. As participants experienced the process of knowledge generation, they came to understand it in a far more nuanced, critical, and constructivist manner. Their relationship to knowledge changed. They began to view themselves as capable of generating knowledge, shifting their role from knowledge receptor to knowledge generator. Furthermore, they developed a vision of how students can and should construct knowledge in a

classroom as they had in ours. This experience is essential if teacher education programs are to prepare preservice teachers to create classrooms where students have the opportunity and authority to construct and co-construct knowledge.

As preservice teachers made meaning of the knowledge generation process, they experienced a shift in their understanding of how knowledge is generated, who has the power to generate knowledge, and whose knowledge is valued. Engaging in inquiry and meaning making was a powerful experience for preservice teachers, as it was the first time they were asked to learn from their own work as opposed to others' work. They were driving their own learning experiences, seeking answers to the problems of practice they were personally struggling with, and generating contextualized knowledge.

During the second focus group, I asked the preservice teachers to make meaning about the meaning they made in their action research. I asked participants to reflect on and talk about their process of making meaning of the work they did in the classroom, what the struggle to make meaning felt like, if engaging in action research opened up any new opportunities within their paradigm of the teaching, and in what ways did the action research affected their ability to make meaning of the work they do in the classroom. At first participants struggled with this metacognitive task, unsure of what I was asking them to think about or make meaning of. However, as participants discussed their experiences, they began to understand how they attached meaning to their experiences and the interactions they had. The first level of meaning making supported their ability to make meaning on the metacognitive level, about their experience making meaning and generating knowledge from their action research. Asking participants to not only make meaning about their work but about the meaning they made about their work opened up many new avenues of understanding for participants beyond the practical

understanding. This metacognitive work supported their crossover into more critical thinking and the development of a critical inquiry stance, helping them question, push back, and disrupt many of their long-held assumptions about teaching, learning, and knowledge generation.

Challenging preservice teachers to be critical of the work they are doing, the knowledge they have received, and the settings in which they are teaching led me to conclude how strikingly and profoundly teacher education professors influence the ways in which preservice teachers frame issues in a classroom. As I intentionally named and highlighted the critical aspects of our work through the feedback I offered and the dialogue we engaged in during our class sessions, I came to understand how influential classroom dialogue is and the power it holds to convey the purpose of our work. My role as facilitator of critical praxis allowed me the opportunity to draw student attention to critical concerns, another way in which the action research experience supported the development of a critical inquiry stance for participants.

Disrupting the Educational Knowledge Hierarchy

Constructing and generating knowledge was a very real and tangible outcome of the action research participants conducted. Each participant articulated conclusions they drew based on the inquiry they conducted. However, beyond conclusions, some participants began a journey towards developing theory and making theoretical claims about pedagogy, teaching, and knowledge construction. They extended theories they learned during coursework through their inquiry, making meaning of and then building upon these theories about teaching and learning. As the action research helped them bridge the gap between theory and practice, it simultaneously allowed them to extend theories to incorporate the knowledge they generated as they put them into practice.

These findings suggest that preservice teacher inquiry stands as a disruptor to the hierarchy of teacher knowledge, illustrating new possibilities for the construction of educational knowledge, through the synthesis of scholarly generated theory with the knowledge preservice teachers generated in their classrooms through action research. Preservice action research pushes up against long-held understandings of who is responsible for educational theory and knowledge, ushering in a new way forward where educational knowledge is generated through the work of both university scholars and teacher practitioners. Thus, preservice teacher action research can be categorized as critical from the onset, as it redistributes the power to generate knowledge for teaching, so that both university scholars and classroom teachers are responsible for the development and construction of educational knowledge.

This shift in power is significant in that it expands the role of teachers in the education field. It empowers teachers to contribute in a way that they may not have ever envisioned. It substantiates and validates the wealth of knowledge classroom teachers generate and values them as contributors to the intellectual pursuits of knowledge generation. Asking preservice teachers to problem pose, theorize about these problems, and set their own intellectual agenda and course allows for a reorientation of knowledge production for education, whereby teachers are driving the generation of educational knowledge alongside and in tandem with university scholars. Although it is beyond the scope of this study, I would argue that when teachers experience a reorientation of knowledge generation for themselves, it supports a reorientation of knowledge construction in their classroom, allowing them to position students as knowledge generators as well, not simply knowledge receptors, shifting the dynamic of classroom life, instruction, and learning.

As stated earlier in this dissertation, I am a teacher's teacher, meaning at my core I believe in the power, abilities, and strengths of teachers to inspire, educate, and impact their students. I believe teachers are intellectually curious and natural inquirers, capable of contributing valuable, authentic, and hard-won knowledge to the teaching profession based on their classroom experiences. Having taught in first and second grade classrooms for well over a decade, being a classroom teacher is deeply engrained in my identity as an educator. It is only recently that my educator identity has come to include researcher; however, I do not hold that identity with nearly the conviction nor the confidence I hold the classroom teacher aspect of my educator identity. In Villenas' (1996) article analyzing the tensions she experienced as a Chicana ethnographer, she found herself feeling as though she was participating in her own colonization, in that she identified as a Chicana but held the role of privileged ethnographer who was legitimizing the discourse surrounding the education and child-rearing practices of Latino families as problematic through her research. After reading this article I began to ask myself if, as an academic researcher at a large university, I was complicit in the knowledge hierarchy I so badly wanted to disrupt. Villenas' (1996) description of her responsibility, "to confront both my own marginalization and my complicity in 'othering' myself and my community" (p. 729) resonated with me. I still feel as though I stand with a foot in both worlds, as a classroom teacher and university professor. From this position, I had to attempt to reconcile my own feelings of marginalization as a classroom teacher, of not being valued as an intellectual with knowledge to share, with my complicity in othering the teachers I was studying, as a result of the new-found privilege I was granted as a university researcher. As I studied and analyzed the ways in which action research was a disruption to this knowledge hierarchy, I questioned if I was part of the

problem. Was I objectifying my research subjects and marginalizing them with the very research that was intended to place them at the center of knowledge generation?

In some cases, knowledge generation for teaching is a problematic structure when it excludes the very teachers who it is intended to support (Villenas, 1996). I however came to understand through my research that although I hold privilege in that I am a university researcher, I believe I used my privilege to engage participants in ways that empowered them by giving voice to my preservice teachers who are not often included in public discourse. I hope to continue to question, analyze, and innovate research approaches to address, reconcile, and use the duality of my roles, as an insider and outsider, to support the reorientation of knowledge for education.

Implications and Recommendations

In reflecting on all eight participants' journeys towards a critical inquiry stance, moments of growth, development, and an expanded consciousness towards a critical inquiry lens are evident. Each participant arrived at their inquiry work at different points of development, Mara, Justin, and Joshua began from a point of having a well-developed critical inquiry stance and the framing of their action research questions demonstrates such. Claire and Jillian initially had a less-developed critical lens, but found and made meaning of their work in very critical ways at multiple points throughout the action research. Finally, Amal, Felipe, and Alonzo brought nascent ideas about critical inquiry into their action research but nonetheless, found moments to hold up a critical lens to make meaning of their work. Participants' disparate experiences suggest that journeying and developing towards a critical inquiry stance is highly individualized as preservice teachers bring with them both personal and professional experiences that shape their ability to question and inquire critically into their work.

Despite the differences in participants' progress and development as they engaged in action research—development is always varied across any population—the findings I arrived at and the conclusions I drew all point to the potential action research holds in fostering a critical inquiry stance for preservice teachers. The specific points on participants' journeys as they began and ended the inquiry process are less relevant, it is the space they crossed, the development that occurred over the course of their action research, that evidences the importance of inquiry work in preservice teacher education. Both the findings and conclusions presented above are suggestive of the fact that creating spaces for preservice teachers to engage in critical inquiry, such as action research, nurtures the development of a critical inquiry stance, regardless of where preservice teachers are in their development and growth.

Additionally, I suggest that readers who encounter this study will grasp the profound ways in which action research stands as a disruptor to the hegemonic hold universities and scholars have over educational knowledge, as action research and critical teacher inquiry sets the stage for increased practitioner participation in the generation of knowledge for education. The work preservice teachers engaged in allowed them to envision a structure wherein they were the drivers and generators of knowledge, where they constructed meaning and learned from their own individualized work and classroom experiences. It allowed for the possibility to “name the world differently” (Apple, 1996, p. 21), a new way to know, understand, and generate knowledge for education.

The following section is a discussion of the implications and recommendations that I believe are of value to three distinct educational stakeholders (a) preservice teacher education programs; (b) teacher educators; and (c) those involved with professional development and in-service teacher education. In the concluding section, I detail and share recommendations for the

process of qualitative research I generated based on my personal research experience. I recognize that these implications and recommendations will not resonate for all readers as each population, context, and research process are uniquely defined and guided by a specific set of circumstances. I offer them up in the hope that they can contribute to the work of others who seek to nurture a critical inquiry stance in the next generation of teachers and help our current teacher force imagine the possibilities of asking classroom teachers to join university scholars and academics and step into the role of knowledge generators for education.

Implications for Preservice Teacher Education

The call to educate and prepare preservice teachers to teach for social justice has evolved extensively over the past two decades, from Gay (2002) and Villegas and Lucas' (2002) work on culturally responsive teaching, to Ladson-Billing's (1995, 2017) work on culturally relevant pedagogy and most recently, to Paris (2012) and Alim and Paris' (2017) research on culturally sustaining pedagogy, teaching for social justice and equity drives the current lexicon of educational pedagogy, practice, and expectations in the education field. Teacher preparation programs incorporate the above texts into many of the required courses included in their programs. Throughout my doctoral work, the above scholars have been staples in each of my course syllabi and their theories have guided and shaped classroom discussion and debate. Within the courses I designed as a teacher educator, I incorporated these scholars in my reading requirements and assignments. The tension however lies in the practical application of teaching for social justice. Teacher education programs assert a "teaching for social justice" stance, predicating coursework and fieldwork on this assertion, but in reality, there is little room carved out for the hands-on, practical application of these theories. Teacher education programs have incorporated the research and scholarship of teaching for social justice into their coursework but

have neglected to create spaces where preservice teachers can explore what it means and looks like to teach for social justice.

An integral step in exploring social justice pedagogy is the development of a critical inquiry stance. Teacher education programs need to cultivate dispositions in their preservice teachers that allow for the investigation of new pedagogy and application, the development of new teaching practices, and the space to critique existing theory. In order for preservice teachers to successfully reimagine, innovate, and apply culturally responsive, relevant, and sustaining pedagogies, they must develop a critical inquiry stance and the skills and disposition that support this type of inquiry. Space, attention, and time are needed in teacher education programs to foster a critical inquiry stance which would allow for the exploration and innovation of practical ways to teach for social justice.

Those who structure teacher education programs should look for more ways to bring inquiry into coursework to explore social justice-oriented pedagogies. Because theories that ground teaching for social justice have only existed for the past two decades, they are relatively new educational theories. The current work surrounding teaching for social justice requires the bridging of theory and practice through inquiry. Preservice teachers should be given ample opportunity to inquire into the application of the above theories, such as action research in this study, to develop practices that execute these pedagogies with authenticity and fidelity, and further the work of social justice in education. Without these opportunities, without the space to inquire and explore social justice pedagogy, these theories will remain just that, theories that educators advocate for but struggle to practice.

Additionally, teacher education programs should be looking at how to address the gaps that preservice teachers encounter as they move into the field to complete their clinical work. As

with many other studies on preservice action research (Hulse & Hulme, 2012; Kizilaslan & Leutwyler, 2012; Lattimer, 2012; Mok, 2016), this study found that preservice teachers wrestled with the gap between theory and practice. Beyond that, findings from this study suggest that teachers are more focused on their teaching and struggle to see the connection from their instruction to student learning. Furthermore, there appears to be a relational gap between preservice teachers and their students, a distance that preservice teachers struggled to close during their clinical work.

The quality and effectiveness of preservice teachers' experience would be improved and strengthened if teacher education programs engaged in the work of identifying why the above gaps exist and develop pedagogy to address them successfully. Within this study, inquiry work such as action research helped bridge these gaps; however, different assignments and approaches should be researched and developed to help bridge these gaps further. Teacher education programs should be a sight of innovation and research to generate specific pedagogy that would help preservice teachers bridge these gaps and increase success and efficacy in the classroom. The practice of asking preservice teachers to critically think about and make meaning of the work they are engaged in should be threaded and embedded throughout each course and experience in teacher education programs. Developing the ability to critically examine and reflect on our teaching in order to bring about a more just and equitable educational experience is a process. It does not take hold in one or two experiences, it takes time, multiple exposures, and space to make meaning of the work, something we need to consider when structuring our teacher education programs.

Another avenue of research and investigation that teacher education programs should take up are ways to engage teacher candidates in more epistemological work, in other words,

asking preservice teachers to think about, explore, and experiment with ways individuals come to know. As participants in my study began to think about the meaning they made, they came to understand more deeply their process of coming to know and understand something. Asking participants about their own experience in developing knowledge and coming to know something new about their clinical work necessitated metacognition and reflection on the process they experienced as they developed knowledge and understanding. In thinking about their personal experience of knowing something new, as in their action research, participants began to think about how their students experience the process of coming to know something and what role they ought to play in supporting this epistemological process for their students. I suggest that if we ask preservice teachers to think about how they come to know and understand frequently enough in courses and seminars, they will be better prepared to think about and make meaning of the ways their students know and understand in the classroom setting.

Finally, if teacher education programs are to expect preservice teachers to create inquiry opportunities for their students, to incorporate inquiry-based learning into their own classroom, programs need to weave inquiry experiences throughout preservice teachers' course of study. In Sleeter's (2019) introduction as guest editor of the *Educational Forum*, she discussed the challenges for the current cohort of preservice teachers, "whose entire school experience has been framed by scripted curriculum, pacing guides, and testing" (para. 4). She went on to question how this current cohort will learn to teach using student-centered pedagogy if they never experienced that type of pedagogy as students themselves. My question follows Sleeter's (2019) in that I wonder how preservice teachers will learn to apply inquiry-based learning if they never or seldomly experienced that type of learning as students. Sleeter argued that, "Experience certainly does shape what we think is possible" (para. 6); therefore, it is incumbent on teacher

education programs to create many different inquiry experiences for preservice teachers so programs can help shape and guide the possibilities preservice teachers can envision for their classroom instruction and pedagogy.

Implications for Teacher Educators

In my role as teacher educator, I realized that the ways in which I structure my course expectations, the assignments, experiences in which I ask preservice teachers to engage, and the dialogue and discourse that I lead during sessions significantly impact the development of the preservice teachers I teach. It is a sobering thought but one that motivates me to be purposeful, cognizant, and intentional in how I construct courses and interact and speak with students to meet the goals I lay out each semester. The following section outlines suggestions and recommendations for teacher educators who share the goal of supporting the development of a critical inquiry stance in their preservice teachers.

What I observed throughout the study was how impactful it was for preservice teachers to have ownership over their meaning making. When we first began to talk about the action research assignment, I would ask students to think about the meaning they were making of the inquiry they engaged in. They were at a loss. I believe they were confused by the question as it was rare for a professor to ask them to generate meaning. They were more comfortable receiving and embracing the meaning the professor made. However, asking participants to own and drive the meaning they made, asking them to attach meaning to the issues they were encountering in their action research, was a natural way for them to develop the ability to make sense of the critical issues they wanted to address. Giving preservice teachers ownership over the meaning they were making allowed them the space and opportunity to investigate the issues that mattered to them, to critically focus their attention on what they were drawn to on the issues that resonated

with them. I assert that it is far more difficult to develop the ability to critically inquire when the inquiry is contrived or dictated by the professor. Individuals need space and agency to explore the meaning they make in order to critically interrogate their beliefs and assumptions. Thus, I recommend giving preservice teachers ownership over pieces in assignments and inquiry experiences such as choosing the topics to be explored, choosing how to investigate a problem, or directing where they take their reflective process, to nurture the development of a critical inquiry stance.

Second, if teacher educators wish to see their students identify and address equity issues, we need to be sure that we have developed that skill for ourselves. Teacher educators need to train themselves to see the equity issues in classrooms, to focus on and identify these issues when they arise and think about ways to address them. What I learned from my preservice teachers' action research was that equity issues are so pervasive in classroom life, they arise when some students have access to technology and others do not or when some students can attend school and some must be remote, but we need to be looking and searching for them in order to see them. Being able to identify and address issues of equity in a classroom is an integral step in developing a critical inquiry stance, one that should be modeled in teacher education classrooms by teacher educators.

A very powerful piece of this research study was analyzing the dialogue that occurred during participants' action research presentations. The analysis revealed the frequency and the specific ways in which I highlighted issues of equity that arose during the action research. For some, equity issues were the foundation of the action research, as in Joshua's questioning of his US History curriculum or Justin's investigation of UDL principles in the classroom. My response to these presentations was straightforward; the equity issues were obvious and drove the inquiry.

For others, the equity issues were buried a little deeper under the surface and many times participants just briefly touched upon them. Here my role in our classroom dialogue was more purposeful. I intentionally asked questions about the issue, prompting the presenter to think more deeply about the issue, guiding their gaze to focus on and give thought to the equity issue at play. And for some, I recognized issues of equity within their work that they did not focus on or recognize themselves. My intention throughout our classroom discourse was to, as David Foster Wallace (2005) described in his commencement speech to the graduating class at Kenyon College, help my preservice teachers learn, "...how to exercise some control over how and what you think. It means being conscious and aware enough to choose what you pay attention to and to choose how you construct meaning from experience" (para. 5). I sought to help them build the strength and awareness to choose to see the equity issues in their work.

Through our discussion, I pointed out the equity issue, demonstrating and modeling for the preservice teachers how to identify equity issues, analyze them, and think about ways to address them. This analysis led me to the conclusion and recommendation that purposeful, intentional dialogue matters in a classroom. It is a powerful tool teacher educators have at their disposal to support the development of a critical inquiry stance in preservice teachers. If teacher educators want to heighten students' awareness of and ability to identify issues of equity in the classroom, they must harness the power of classroom discourse and dialogue in purposeful and deliberate ways.

Once equity issues are identified, strategies must be developed to help preservice teachers address them. Teacher educators need to develop strategies to support students' engagement with these issues in order to address them successfully. Asking preservice teachers to engage in action research is one strategy that opens up opportunity for preservice teachers to contemplate, analyze

and act, allowing them to address an equity issue from a wholistic perspective. A variety of strategies should be developed and I would suggest that many of these strategies include an inquiry approach, given the variability across contexts and circumstances. As teacher educators, we are not meant to have all the answers to the issues our students encounter in their clinical work. However, we are obligated to help our preservice teachers develop the tools, strategies, and abilities to address all issues, including issues of equity, systematically, intentionally, and effectively.

Another challenge I experienced during this study was the coopting of my teaching time by the edTPA, which is a teacher performance assessment for licensure. Much time was spent in peer conferences, as I, a teacher educator, was not permitted to offer specific feedback to my students on their edTPA submissions. Preservice teachers often become consumed by the work that goes into successfully completing the edTPA, to the detriment of potentially more educative classroom work. I struggled to fit in the opportunities for students to engage and discuss their action research and give it the time it requires. At times, I felt that I was competing for my students' attention, as it was so completely drawn to their edTPA work. I know many teacher educators have felt this same tension as do elementary and high school teachers who prepare their students for standardized testing. Teacher educators who are determined to protect authentic inquiry and learning in their courses need to prioritize inquiry and student-centered investigations while setting aside time to support students work for the edTPA, as it is a real concern for preservice teachers and must be validated and acknowledged with designated class time. There is the work in which we want to engage, such as critical inquiry and investigation, and the work in which we need to engage, such as peer workshopping and editing. These are the realities of teacher education, these realities must be acknowledged, addressed, and

problematized in order to find a way to support students' success on their submissions while ensuring critical thinking, analysis, and inquiry occur as well.

Over the last few years, I have incorporated an action research cycle into my seminar course for preservice teachers currently in a clinical placement. I observed numerous preservice teachers cycle through the action research process and emerge with new insight, understanding, and knowledge about their teaching, student learning, and classroom life and a newly formed belief in themselves as knowledge generators. Throughout these years and teaching experiences, action research has evolved into a pedagogy for me. I apply it with the goal of nurturing a critical inquiry stance in my preservice teachers. Both my findings and my conclusions suggest that it is an effective pedagogy in that it helps preservice teachers reorient their understanding of knowledge, who is allowed to generate knowledge, whose knowledge is valued, and how knowledge is generated by those who live in a classroom. For teacher educators who wish to create experiences for preservice teachers that positions them in the role of inquirer and knowledge generator, I suggest incorporating action research as a pedagogy to engage preservice teachers in the remarkably transformative and generative work of critically inquiring, investigating, and exploring classroom life.

Implications for Professional Development and In-service Teacher Education

The findings and conclusions of this study offer administrators and in-service professional development coordinators insight into how to support teacher growth and development beyond simply a new approach to classroom management or teaching elementary math. Over three decades ago, Lytle and Cochran-Smith (1992) argued that:

When teacher development is reconfigured as inquiry and teacher research as challenge and critique, they become forms of social change wherein individuals and groups labor to

understand and alter classrooms, schools, and school communities. These transformations will inevitably cause conflict as those traditionally disenfranchised begin to play increasingly important roles in generating knowledge and in deciding how it ought to be interpreted and used. (p. 470)

The implications of this study align with what Lytle and Cochran-Smith (1992) outlined above, highlighting the untapped resources of educational knowledge for which teachers can be advocating that breaks down the barriers that prevent teachers from constructing and contributing real and impactful knowledge for education.

Professional development for teachers at any stage in a teacher's career, should include space for teachers to set their own agendas, problem pose their contextual problems of practice, and inquire into the problems posed. When instruction is mandated from the top down, it does not always address the specific problems of practice that classroom teachers experience. Classrooms, teachers, and students are all highly individualized and nuanced, and as a result, the issues encountered are as well. Professional development that places teachers in control of the issues they choose to address has the potential to not only mitigate ongoing and current educational issues, but sets the stage for teachers to move into the role of knowledge generators for education.

Asking classroom teachers to own their professional development empowers them to problem pose and engage in inquiry that is meaningful to them, allowing them to seek solutions to authentic issues and challenges. Solutions that come from within are often times more effective than from without because of the intimate knowledge teachers have of classroom life, which positions teachers as excellent problem posers and solvers. Professional and in-service development should mobilize the intimate and extensive localized understanding teachers have

and empower them to apply that understanding to inquiry and become problem posers and solvers.

Personal meaning making through inquiry is a powerful experience. Teachers should have opportunities to experience personal meaning making during professional development and be encouraged to think about ways they can incorporate it into their classrooms with their students. Giving teachers the space to understand how personal meaning making ignites the mind, the connection one feels to the meaning made and the confidence it builds is essential if we are to help our current teaching force embrace inquiry and reimagine academic success (Ferlazzo, 2021).

Similar to preservice teachers, in-service teachers need to experience inquiry to be able to apply it as pedagogue. Pedagogy such as inquiry-based learning or project-based learning require a strong understanding of the process of inquiry and a familiarity with the steps involved. I assert that if classroom teachers are asked to engage in inquiry during their professional development, they will be more likely to attempt and successfully incorporate inquiry work into their classrooms. Teachers need inquiry experiences to become more comfortable with the structures that support inquiry, the lack of control inquiry offers, and the unpredictability of the outcomes. Traditionally, teachers crave control and predictable outcomes, thus exposure to and engagement in professional inquiry is essential if we are to expect teachers to effectively apply it to classroom life and engage students in the inquiry process.

Finally, this study has implications for understanding the ways in which knowledge develops. Preservice teachers in this study had the opportunity to think about the ways in which they came to know and made meaning of their inquiry work. They came to understand the power of generating one's own knowledge based on an inquiry experience. This understanding led them

to contemplate the diverse ways knowledge is generated by students in a classroom and how students come to know and understand. This avenue of study is an essential topic for teachers and should be included in professional development. In-service teachers should have space and time allocated to explore how one develops knowledge, in other words, to investigate and engage in epistemology work. Understanding and thinking about the many ways students generate knowledge is beneficial for classroom teachers in several ways. First, it is generative in the sense that it can lead to new pedagogies and approaches to support disparate traditions of knowledge generation. Second, it makes apparent the notion that there is not one singular way to generate knowledge. In this study knowledge was generated through inquiry, however that is only one of the many ways knowledge can be generated. Third, epistemological work can support teachers' ability to differentiate instruction and meet the needs of diverse learners. Thus, professional and in-service teacher development should be structured to engage teachers in the investigation of how knowledge is constructed and generated in a classroom. We must begin to position classroom teachers in the role of learners, seekers, problem-posers/solvers, and knowledge generators if we are to bring innovation to the educational field and meet the needs of the 21st century student and classroom.

Implications for Research

Before I began this research study, I could not fathom why it would take someone over two years to complete a dissertation. I calculated the proposal would take six months, the data collection would take four months, and the findings and conclusions would take 6 months, so generously, it would take me a year and half to complete. In life, as in research, expectations often do not align with reality.

My reality was that I began data collection in January 2020, two months before Covid-19 turned our world upside-down. I intended to collect my data in a colleague's seminar course who also assigned an action research assignment. Getting participants was a challenge but ultimately, I was able to recruit participants. Just as I conducted our first focus group, life came to a grinding halt. Participants could not complete their action research cycle because schools moved to remote platforms and most preservice teachers struggled to complete their clinical placements. Data collection was pushed off to the following fall, adding more time to my dissertation timeline. I pivoted and decided to collect data in my own seminar course.

Data collection went well, as it was primarily integrated into the coursework, but to avoid a conflict of interest and to protect my participants, I did not begin analysis until grading was completed at the end of the semester. Analysis and writing up the findings took six months, and was a much more grueling process than I ever anticipated. Conclusions and implications took another two months, adding to my timeline. The reality is that the research process is a complex, unpredictable, time-consuming, and cognitively challenging process, a conclusion I have come to only through experiencing it. As a result, I walked away from this experience having constructed a more intricate knowledge of the research process and with conclusions and implications to share with those embarking on their own research journey.

When plans fall apart, it is hard to believe that it is for the best, however because of Covid-19 and the switch to data collection in the course I taught, I believe I constructed a stronger and more multi-dimensional understanding of how preservice teachers develop a critical inquiry stance. My work was far richer because I researched my preservice students completing action research in my own course. This context afforded me the opportunity to understand more fully the experiences of my students because I had built relationships with them, I knew them,

and they knew me. Additionally, I explored the space that I held in this developmental process, thinking about how my work with students influenced and supported their development.

Researching my own work and the students I was connected and close to yielded a far more complex and interesting understanding than had I researched a colleague's work with their students. The proximity to my participants and the action research they engaged in was a benefit to this study in multiple ways.

The change in research plan also brought me to the realization that it is crucial to let the research unfold and not fight the path it is headed down. Initially, I clung to my original research plan, working so hard to enlist participants and accommodate their needs. I wanted so badly for the data collection to happen that I struggled to let go of my plan and accept the realities of the circumstances. Once I was able to let the work unfold organically and naturally, I was able to see the benefits of the unexpected changes and embrace my new research plan. Letting go of the control and surrendering to the reality of where the research was going allowed me to more authentically and genuinely arrive at findings and conclusions. I stopped fighting the process and began to experience it, which was a change in stance for me. Experiencing the forced change and the struggle to accept it prepared me to do the same with the data I collected, it allowed me to embrace the unpredictability of the work and let the data guide and inform the research.

Another change I embraced, upon good advice from a member of my dissertation committee, was the move away from questionnaires to a focus group to gather data. Engaging in dialogue with participants yielded substantially richer data sets than a questionnaire completed by each participant would have offered. The exchanges that occurred in the focus group as we dialogued about the work participants engaged in was dynamic in the sense that participants were able to respond to one another's comments, further developing ideas, and more explicitly

expressing their experiences of conducting action research. The dialogue allowed participants to listen to their peer's understanding of their experiences, sparking them to think about and share their own ideas and experiences more robustly. The focus group was alive with energy and ideas, which stimulated participants to share and describe their experiences more fully. Thus, I suggest incorporating focus groups when researching to understand experiences; it allows for a strong collection of data and insight.

Out of the many data sources I used for this research, the researcher journal was surprisingly one of the most valuable sources in this study. I journaled as I collected data, recording my thoughts and ideas about what preservice teachers were experiencing as they engaged in action research. The contemplation and reflection that I recorded guided much of the structure of my findings. It was a space for personal meaning making, where I could ramble on and make sense and meaning of the work I was engaged in. So many ideas floated in and out of my head over the course of the research, had I not recorded them they would have been lost to me. It served as a trail, tracing the evolution of my understandings, how I arrived at those understandings, and why I was confident in the conclusions I was reaching as I journeyed through the data (Richards, 2015). I do however regret the inconsistency with which I wrote in my researcher journal. There were weeks that I scribbled furiously, recoding every thought and idea I had and weeks where I never even opened the file. I should have been more routinized and conscientious about my journaling habits as it was a very powerful source of data and ideas.

Writing up the findings was the most challenging part of the research. It required the most analysis, critical thinking, and cognitive input. When I submitted the findings section to my advisor, I felt a tremendous sense of accomplishment and relief. The feedback from my advisor was predominately positive, however I neglected to include supporting research throughout the

section. I went through the arduous task of reviewing the literature once again to understand and explain how my findings fit into the research. In hindsight, I wish I followed the research literature all along, rather than having to go back to find it after I completed the writing. I think the writing would have been more contextualized had I followed the literature throughout the research process and I would have been able to present the findings against a more thoroughly synthesized understanding of the research literature.

Finally, I circle back to the point I raised earlier regarding educational researchers being complicit in the scholarly hegemonic hold over the production of educational knowledge they are privileged with. Educational researchers need to acknowledge the tension that lies between wanting to disrupt the power dynamic of knowledge generation while simultaneously contributing to it. We as a research community need to find ways to address this tension and innovate ways to dismantle the hierarchy that persists in knowledge generation for teaching. This colonization of teachers needs to be confronted if we are to ever dismantle it and transform it into an arena that values, welcomes, and substantiates all stakeholders' individual knowledge and contributions.

Conclusion

In Stigler and Hiebert's (1999) comparison of 8th grade classrooms in the United States, Japan, and Germany, the authors argued that improving the quality of teaching in the United States is critical if we are to improve student learning. They asserted:

The United States clearly lacks a system for developing professional knowledge and for giving teachers the opportunity to learn about teaching. American teachers, compared with those in Japan, for example, have no means of contributing to the gradual improvement of teaching methods or of improving their own skills. (pp. 12-13).

More than 20 years later, we still do not have a well-developed system for supporting teachers to develop improved teaching methods and generate professional knowledge for education. This study attempts to examine one strategy, action research, as a means of creating opportunity and developing the skills necessary for preservice teachers to generate and contribute to knowledge for education that is critical to improving teaching and learning in the United States.

Through their engagement in action research, preservice teachers developed, to varying degrees, a critical inquiry stance. As they enacted and made meaning of their inquiry, they developed a critical inquiry stance, an awareness and a desire to use a critical lens as they inquired into their problems of practice. They owned their learning and came to know and understand new and important insights about their teaching through the responsibility they took, aligning with Lytle and Cochran-Smith (1992) statement that, “only learners themselves (whether teachers or students) can come to know, or assume responsibility for making meaning of their work in the classroom” (p. 453).

The theoretical framework, critical teacher inquiry, drew on the work of Cochran-Smith and Lytle (2007) and Freire (1970), and looked at the multiple ways teachers’ relationship to knowledge influence their teaching, student learning, and knowledge construction. Lytle and Cochran-Smith (1992) argued, “When teachers redefine their own relationships to knowledge about teaching and learning, they often begin to reconstruct their classrooms and to offer different invitations to their students to learn and know. When they change their relationships to knowledge, they may also realign their relationships to the brokers of knowledge and power in schools and universities” (p. 459). Participants in this study experienced a change in their relationship to knowledge which made them reconsider the ways they approached their teaching, student learning, and their role in generating knowledge for education.

There has been little movement within the arena of teacher generated knowledge since Cochran-Smith and Lytle (2007) and Stigler and Hiebert (1999) presented their ideas about teacher generated knowledge and practitioner research. Today, teachers are still relegated to the role of knowledge receptors rather than knowledge generators. The hierarchy of knowledge still holds a strong grasp on knowledge for teaching and the ways the education field values knowledge. As a community, we need to galvanize and harness the knowledge of teachers if we are to see authentic, lasting, and widespread improvements in teaching and learning. This study further extends this call to arms to include not only teachers, but preservice teachers as well, to establish from the beginning, that teachers can and should be driving innovation and improvement in teaching and learning.

I come to my teacher educator role armed with Freire's (1998) assertion that, "to know how to teach is to create possibilities for the construction and production of knowledge rather than to be engaged simply in a game of transferring knowledge" (p. 49). This notion not only guides my pedagogy in the courses I teach but is the very same pedagogy I hope my preservice teachers come to know, understand through experience during our time together, and enact in their own classrooms. Action research supports this pedagogy, as it creates the opportunity and possibility for preservice teachers to experience the construction and production of knowledge.

At the conclusion of this research study, my relationship, alongside the relationships participants hold to knowledge, has transformed. I now understand that I have been a knowledge generator my whole teaching career, from the moment I walked into a classroom to the moment I finished this study. My contributions have varied and developed with my experiences, but what has remained constant is the fact that I was always generating knowledge for education. Today, I work in a system that asks me to generate and share this knowledge with my colleagues and the

education field, and I hope in the near tomorrow that my preservice teachers find themselves working in a system that asks them to share their knowledge as well, valuing all educator knowledge from a place of equity and inclusion.

References

- Adams, P. (2016). Preparing learning teachers: The role of collaborative inquiry. *Canadian Journal of Action Research, 17*(1), 20–35.
- Alim, H. S. & Paris, D. (2017). What is culturally sustaining pedagogy and why does it matter? In H. S. Alim & D. Paris (Eds.), *Culturally sustaining pedagogies: Teaching and learning for justice in a changing world* (pp. 1–21). Teachers College Press.
- Anyon, J. (1980). Social class and the hidden curriculum of work. *Journal of Education, 162*(1), 67–92. <https://doi.org/10.1177/002205748016200106>
- Apple, M. (1996). *Cultural politics and education*. Teachers College Press.
- Arnold, J., Edwards, T., Hooley, N. & Williams, J. (2010). Conceptualising teacher education and research as ‘critical praxis’. *Critical Studies in Education, 53*(3), 281–295. <https://doi.org/10.1080/17508487.2012.703140>
- Ball, S. J. (2010). The teacher's soul and the terrors of performativity. *Journal of Education Policy, 18*(2), 215–228. <https://doi.org/doi:10.1080/0268093022000043065>
- Bogdan, R. C., & Biklen, S. K. (2011). *Qualitative research for education: An introduction to theories and methods* (5th ed.). Pearson.
- Britzman, D. P. (1991). The structure of experience and the experience of structure in teacher education. In *Practice makes practice: A critical study of learning to teach*. (pp. 28–60). State University of New York Press.
- Brownlee, J. L., Ferguson, L. E., & Ryan, M. (2017). Changing teachers’ epistemic cognition: A new conceptual framework for epistemic reflexivity. *Educational Psychologist, 52*(4), 242–252. <https://doi.org/10.1080/00461520.2017.1333430>

- Buchanan, R., Byard, T., Ferguson, G., Billings, K., Dana, M., & Champagne, J. (2019). Navigating standardized spaces in student teaching. *The Educational Forum*, 83(3), 237–250. <https://doi.org/10.1080/00131725.2019.1599647>
- Carr, W. & Kemmis, S. (2009). Educational action research: A critical approach. In Noffke, S. E. & Somekh, B. (Eds.). *The SAGE handbook of educational action research* (pp. 74–84). SAGE Publications Ltd. <https://doi.org/10.4135/9780857021021.n8>
- CAST. (n.d.). *The UDL Guidelines*. <https://udlguidelines.cast.org/>
- Chant, R. H., Heafner, T. L., & Bennett K. R. (2004). Connecting personal theorizing and action research in preservice teacher development. *Teacher Education Quarterly*, 31(3), 25–42. <https://www.jstor.org/stable/23478882>
- Choi, J. (2011). A self-study of the teaching of action research in a university context. *Studying Teacher Education*, 7(1), 35–49. <https://doi.org/10.1080/17425964.2011.558351>
- Cochran-Smith, M., & Lytle, S. L. (2009). *Inquiry as stance: Practitioner research for the next generation*. Teachers College.
- Conner-Zachocki, J. M., & Dias, D. (2013). Colliding theories and power differentials: A cautionary tale of conducting action research while student teaching. *Networks: An Online Journal for Teacher Research*, 15(1). <https://doi.org/10.4148/2470-6353.1061>
- Conway, P. F., & Clark, C. M. (2003). The journey inward and outward: A re-examination of Fuller's concerns-based model of teacher development. *Teaching and Teacher Education*, 19(5), 465–482. [https://doi.org/10.1016/S0742-051X\(03\)00046-5](https://doi.org/10.1016/S0742-051X(03)00046-5)
- Cornett, J. W. (1990). Teacher personal practical theories and their influence upon teacher curricular and instructional actions: A case study of a secondary science teacher. *Science Education*, 74(5), 517-529.

- Crawford-Garrett, K., Anderson, S., Grayson, A., & Suter, C. (2015). Transformational practice: Critical teacher research in pre-service teacher education. *Educational Action Research*, 23(4), 479–496. <https://doi.org/10.1080/09650792.2015.1019902>
- Darling-Hammond, L., Amrein-Beardsley, A., Haertel, E., & Rothstein, J. (2012). Evaluating teacher evaluation. *Phi Delta Kappan*, 93(6), 8–15. <https://doi.org/10.1177/003172171209300603>
- Davis, J., Clayton, C., & Broome, J. (2018). Thinking like researchers: Action research and its impact on novice teachers' thinking. *Educational Action Research*, 26(1), 59–74. <https://doi.org/10.1080/09650792.2017.1284012>
- Dewey, J. (1938a). *Experience and education*. Kappa Delta Pi.
- Dewey, J. (1938b). *Logic: The theory of inquiry*. South University Press.
- Dewey, J. (1904/1965). The relation of theory to practice in education. In M. Borrowman (Ed.). *Teacher education in America: A documentary history*. (pp. 140–171). Teachers College Press. (Originally published in the *Third yearbook of the National Society for the Study of Education*, pp. 9–30).
- Dickson-Swift, V., James, E.L., Kippen, S., & Liamputtong, P. (2009). Researching sensitive topics: Qualitative research as emotion work. *Qualitative Research*, 9(1), 61–79. <https://doi.org/10.1177/1468794108098031>
- Dimitriadis, G. & Kamberelis, G. (2006). *Theory for education*. Routledge.
- Dodman, S., Growth, L., Ra, S., Baker, A. & Ramezan, S. (2017). Developing an inquiry stance through PDS action research: Does it maintain after graduation? *School-University Partnerships*, 10(4), 30–46.

Dumas, M. J. (2016). My brother as “problem”: Neoliberal governmentality and interventions for black young men and boys. *Educational Policy*, 30(1), 94–113.

<https://doi.org/10.1177/0895904815616487>

edTPA National Conference. (n.d.). edTPA. <http://edtpa.aacte.org/>.

Faikhanta, C., & Clarke, A. (2015). Thai pre-service science teachers engaging action research during their fifth year internship. *Asia Pacific Journal of Education*, 35(2), 259–273.

<https://doi.org/10.1080/02188791.2013.860011>

Ferlazzo, L. (2021, August 2021). ‘Ratchetdemic: Reimagining academic success’—An interview with author Christopher Emdin. EdWeek. [https://www.edweek.org/teaching-](https://www.edweek.org/teaching-learning/opinion-ratchetdemic-reimagining-academic-success-an-interview-with-author-christopher-emdin/2021/08?utm_source=nl&utm_medium=eml&utm_campaign=eu&M=62769672&U=&UUID=0c63154fc0834277eb5691e1f20bbbd8)

[learning/opinion-ratchetdemic-reimagining-academic-success-an-interview-with-author-christopher-](https://www.edweek.org/teaching-learning/opinion-ratchetdemic-reimagining-academic-success-an-interview-with-author-christopher-emdin/2021/08?utm_source=nl&utm_medium=eml&utm_campaign=eu&M=62769672&U=&UUID=0c63154fc0834277eb5691e1f20bbbd8)

[emdin/2021/08?utm_source=nl&utm_medium=eml&utm_campaign=eu&M=62769672&U=&UUID=0c63154fc0834277eb5691e1f20bbbd8](https://www.edweek.org/teaching-learning/opinion-ratchetdemic-reimagining-academic-success-an-interview-with-author-christopher-emdin/2021/08?utm_source=nl&utm_medium=eml&utm_campaign=eu&M=62769672&U=&UUID=0c63154fc0834277eb5691e1f20bbbd8)

Freire, P. (1970). *Pedagogy of the oppressed*. Continuum.

Freire, P. (1998). *Pedagogy of freedom*. Rowman & Littlefield.

Freire, P. (2000). Teaching is not just transferring knowledge (Chapter 3) in *Pedagogy of freedom: Ethics, democracy, and civic courage* (pp. 49–58). Rowman and Littlefield Publishers.

<https://doi.org/10.1111/rsr.13807>

Freire, P., and D. Macedo. (1995). A dialogue: Pedagogy, culture, language and race. *Harvard Educational Review*, 65(3), 377–402.

<https://doi.org/10.17763/haer.65.3.12g1923330p1xhj8>

- Fuller, F., & Brown, O. (1975). Becoming a teacher. In Ryan, K. (Ed.), *Teacher education, Part II: The 74th yearbook of the National Society for the Study of Education* (pp. 25–52). Chicago, IL.
- Gardner, D. P., & others. (1983). A nation at risk. *Washington, DC: The National Commission on Excellence in Education*, US Department of Education.
- Gay G. (2002). Preparing for culturally responsive teaching. *Journal of Teacher Education*, 53(2), 106–116. <https://doi.org/10.1177/0022487102053002003>
- Ginsburg, M. B. (1988). *Contradictions in teacher education and society: A critical analysis*. Falmer.
- Gitlin, A., Barlow, L., Burbank, M. D., Kauchak, D., & Stevens, T. (1999). Pre-service teachers' thinking on research: Implications for inquiry oriented teacher education. *Teaching and Teacher Education*, 15(7), 753–769. [https://doi.org/10.1016/s0742-051x\(99\)00015-3](https://doi.org/10.1016/s0742-051x(99)00015-3)
- Glaser, B. G., & Strauss, A. (1967). *The discovery of grounded theory: Strategies for qualitative research*. Aldine.
- Golafhsani, N. (2003) Understanding reliability and validity in qualitative research. *The Qualitative Report*, 8(4), 597–607. <https://doi.org/10.4135/9781412986274.n2>
- Gore, J. M., & Zeichner, K. M. (1991). Action research and reflective teaching in preservice teacher education: A case study from the United States. *Teaching and Teacher Education*, 7(2), 119–136. [https://doi.org/10.1016/0742-051x\(91\)90022-h](https://doi.org/10.1016/0742-051x(91)90022-h)
- Hansen, J. M., & Nalder-Godfrey, N. (2004). The Power of action research, technology and teacher education. *Computers in the Schools*, 21(1-2), 43–57. https://doi.org/10.1300/J025v21n01_04

Hanson, R. (2013, September 24.) *How to grow the good in your brain*. Greater Good Magazine.

https://greatergood.berkeley.edu/article/item/how_to_grow_the_good_in_your_brain

Harry, B., Sturges, K.M., Klingner, J.K. (2005). Mapping the process: An exemplar of process and challenge in grounded theory analysis. *Educational Researcher*, 34(2), 3–13.

<https://doi.org/10.3102/0013189x034002003>

Herr, K., & Anderson, G. (2015). *The action research dissertation: A guide for students and faculty* (2nd ed.). SAGE Publications. <https://doi.org/10.4135/9781452226644>

Hinchey, P. H., & Konkol, P. (2018). *Getting to where we meant to be: Working toward the educational world we imagined*. Myers Education Press.

Hirsch, M. (2014). In pursuit of a wild patience. *The Educational Forum*, 78(4), 402–408.

<https://doi.org/10.1080/00131725.2014.941122>

Hohloch, J. M., Grove, N., & Bretz, S. L. (2007). Pre-service teacher as researcher: The value of inquiry in learning science. *Journal of Chemical Education*, 84(9), 1530–1534.

<https://doi.org/10.1021/ed084p1530>

Hooley, N. (2013). Exposing the intricacies of pre-service teacher education: Incorporating the insights of Freire and Bourdieu. *Review of Education*, 1(2), 125–158.

<https://doi.org/10.1002/rev3.3011>

Hulse, B., & Hulme, R. (2012). Engaging with research through practitioner enquiry: The perceptions of beginning teachers on a postgraduate initial teacher education programme.

Educational Action Research, 20(2), 313–329.

<https://doi.org/10.1080/09650792.2012.676310>

- Kennedy-Clark, S., Eddles-Hirsch, K., Francis, T., Cummins, G., Feratino, L., Tichelaar, M., & Ruz, L. (2018). Developing pre-service teacher professional capabilities through action research. *Australian Journal of Teacher Education*, 43(9), 39–58.
- Kitchen, J., & Stevens, D. (2008). Action research in teacher education: Two teacher-educators practice action research as they introduce action research to preservice teachers. *Action Research*, 6(1), 7–28. <https://doi.org/10.1177/1476750307083716>
- Kitchen, J., & Stevens, D. (2004). Enhancing reflection by pre-service teachers through action research. *Ontario Action Researcher*, 7(3), 1–7.
- Kizilaslan, I. & Leutwyler, B. (2012). Pre-service teacher action research: Concept, international trends, and implications for teacher education in Turkey. *Bulgarian Comparative Education Society*, 10. <http://search.ebscohost.com/login.aspx?direct=true&db=eric&AN=ED567079&site=eds-live&scope=site>
- Klein, E. J., Taylor, M., Monteiro, K., Romney, W., Scipio, M., Diaz, A., Dunn, B. & Poole, S. (2015). Making the leap to teacher: Pre-service residents, faculty, and school mentors taking on action research together in an urban teacher residency program. *Networks: An Online Journal for Teacher Research*, 17(1), 547–547. <https://doi.org/10.4148/2470-6353.1034>
- Ladson-Billings, G. (1995). But that's just good teaching! The case for culturally relevant pedagogy. *Theory into Practice*, 34(3), 159–165. <http://doi.org/10.1080/00405849509543675>
- Ladson-Billings, G. (2017). The r(e)volution will not be standard: Teacher education, hip hop pedagogy, and culturally relevant pedagogy 2.0. In H. S. Alim & D. Paris (Eds.),

Culturally sustaining pedagogies: Teaching and learning for justice in a changing world (pp. 141–156). Teachers College Press.

Lammert, C. (2020). Preservice literacy teachers “bringing hope back” through practice-based research. *Literacy Research: Theory, Method, and Practice*, 69(1), 230–247.

<https://doi.org/10.1177/2381336920937263>

Lattimer, H. (2012). Action research in pre-service teacher education: Is there value added? *Inquiry in Education*, 3(1), 1–25.

Lees, A., & Vélez, V. N. (2019). Fugitive teacher education: Nurturing pedagogical possibilities in early childhood education. *The Educational Forum*, 83(3), 309–324.

<https://doi.org/10.1080/00131725.2019.1599658>

Levin, B. B., & Rock, T. C. (2003). The effects of collaborative action research on preservice and experienced teacher partners in professional development schools. *Journal of Teacher Education*, 54(2), 135–149. <https://doi.org/10.1177/0022487102250287>

Lincoln, Y. S., & Guba, E. G. (1985). *Naturalistic inquiry*. Sage.

Luttrell, W. (2010). Reflexive writing exercises. In W. Luttrell (Ed.) *Qualitative educational research: Readings in reflexive methodology and transformative practice* (pp. 469–480).

Routledge. <https://doi.org/10.1093/acrefore/9780190264093.013.553>

Lytle, S. L., & Cochran-Smith, M. (1992). Teacher research as a way of knowing. *Harvard Educational Review*, 62(4), 447–475.

<https://doi.org/10.17763/haer.62.4.4lm3811r1033431n>

Manfra, M. M. (2019). Action research and systematic, intentional change in teaching practice. *Review of Research in Education*, 43(1), 163–196.

<https://doi.org/10.3102/0091732x18821132>

- Marinho, P., & Delgado, F. (2019). A curriculum in vocational courses: The recognition and (re)construction of counter-hegemonic knowledge. *The Educational Forum*, 83(3), 251–265. <https://doi.org/10.1080/00131725.2019.1599650>
- Maxwell, J. A. (2010). Validity: How might you be wrong? In W. Luttrell (Ed.) *Qualitative educational research: Reading in reflexive methodology and transformative practice*. (pp. 279–287). Routledge. <https://doi.org/10.1093/acrefore/9780190264093.013.553>
- Merriam, S. & Tisdell, E. J. (2016). *Qualitative research: A guide to design and implementation (4th ed.)*. The Jossey-Bass.
- Miksza, P. & Berg, M. H. (2013). A longitudinal study of preservice music teacher development: Application and advancement of the Fuller and Bown Teacher-Concerns Model. *Journal of Research in Music Education*, 61(1), 44–62. <https://doi.org/10.1177/0022429412473606>
- Miles, M. B., Huberman, A. M., & Saldaña, J. (2014). *Qualitative data analysis: A methods sourcebook (3rd ed.)*. Sage.
- Moi Mooi, L., & Mohsin, M. (2013). How do pre-service teachers develop understanding of student learning through action research project. *Procedia - Social and Behavioral Sciences*, 114, 877–882. <https://doi.org/10.1016/j.sbspro.2013.12.801>
- Mok, A. O. (2016). A reflective journey in teaching: Pre-service music teachers' action research. *Australian Journal of Music Education*, 50(2), 58–70.
- Moran, M. J. (2007). Collaborative action research and project work: Promising practices for developing collaborative inquiry among early childhood preservice teachers. *Teaching and Teacher Education*, 23(4), 418–431. <https://doi.org/10.1016/j.tate.2006.12.008>

- National Council for the Accreditation of Teacher Education. (2010). *Transforming teacher education through clinical practice: A national strategy to prepare effective teachers: Report of the Blue Ribbon Panel on Clinical Preparation and Partnerships for Improved Student Learning*. Washington DC.
- National Governors Association Center for Best Practices & Council of Chief State School Officers. (2010). *Common core state standards*. Washington DC: Author.
- Ortlipp, M. (2008). Keeping and using reflective journals in the qualitative research process. *The Qualitative Report*, 13(4), 695–705.
- Parker, A., Bush, A., & Yendol-Hoppey, D. (2016). Understanding teacher candidates' engagement with inquiry-based professional development: A continuum of responses and needs. *The New Educator*, 12(3), 221–242.
<https://doi.org/10.1080/1547688X.2015.1027978>
- Paris, D. (2012). Culturally sustaining pedagogy: A needed change in stance, terminology, and practice. *Educational Researcher*, 41(3), 93–97.
<https://doi.org/10.3102/0013189X12441244>
- P. L. 107-110. (2002). *No Child Left Behind Act: Reauthorization of the elementary and secondary act*. <https://www2.ed.gov/nclb/landing.jhtml>.
- Price, J. N. (2001). Action research, pedagogy and change: The transformative potential of action research in pre-service teacher education. *Journal of Curriculum Studies*, 33(1), 43–74.
<https://doi.org/10.1080/00220270118039>
- Price, J. N., & Valli, L. (2005). Preservice teachers becoming agents of change. *Journal of Teacher Education*, 56(1), 57–72. <https://doi.org/10.1177/0022487104272097>

- Rice, B. J. (2015). Mapping relational models for online teacher preparation and professional development. *Advances in Research on Teaching*, 25(1), 187–207.
<https://doi.org/10.1108/s1479-368720150000027010>
- Richards, L. (2015). *Handling qualitative data* (3rd ed.). Sage.
<https://doi.org/10.1177/136078040501000407>
- Roulston, K., Legette, R., Deloach, M., & Pitman, C. B. (2005). What is “Research” for teacher-researchers? *Educational Action Research*, 13(2), 169–190.
<https://doi.org/10.1080/09650790500200283>
- Rudduck, J. (1988). Changing the world of the classroom by understanding it: A review of some aspects of the work of Lawrence Stenhouse. *Journal of Curriculum and Supervision*, 4(1), 30–42.
- Ryan, T. G. (2020). Action research journaling as a developmental tool for health and physical education teachers. *International Journal of Curriculum and Instruction*, 12(2), 279–295.
- Ryan, T. G., Young, D. C., & Kraglund-Gauthier, W. L. (2017). Action research within pre-service teacher education. *Transformative Dialogues: Teaching & Learning Journal*, 10(3), 1–18.
- Sacks, J. (2020). *Judaism’s life-changing ideas*. OU Press.
- Saldana, J. (2009). Writing analytic memos. In *The Coding Manual for Qualitative Researchers* (pp. 32-44). Sage. <https://doi.org/10.1108/qrom-08-2016-1408>
- Shulman, L. S. (1986). Those who understand: Knowledge growth in teaching. *Educational Researcher*, 15(2), 4–14. <https://doi.org/10.2307/1175860>

- Sleeter, C. (2019) Introduction to “Emerging from standardization: Learning to teach for cultural, cognitive, and community relevance.” *The Educational Forum*, 83(3), 231–236.
<https://doi.org/10.1080/00131725.2019.1599643>
- Smith, K., & Sela, O. (2005). Action research as a bridge between pre-service teacher education and in-service professional development for students and teacher educators. *European Journal of Teacher Education*, 28(3), 293–310.
<https://doi.org/10.1080/02619760500269418>
- Snow-Gerono, J. L. (2010). Living an inquiry stance toward teaching in school-university partnerships. *Teacher Education and Practice*, 23(3), 331–334.
- Stern, M. H. (2014). Inquiry as a path to professional learning: Preparing Jewish educators to improve teaching. *Journal of Jewish Education*, 80(1), 24–52.
<https://doi.org/10.1080/15244113.2014.880870>
- Stetsenko, A. (2016). *The transformative mind: Expanding Vygotsky’s approach to development and education*. Cambridge University Press.
- Stigler, W. & Hiebert, J. (1999). *The teaching gap*. Free Press.
- Stuart, G. (2020, March 12). *What is praxis?* Families, Community Engagement and Environmental Sustainability.
<https://sustainingcommunity.wordpress.com/2020/03/12/what-is-praxis/>
- Taylor, S. J., Bogdan, R., & DeVault, M. L. (2016). *Introduction to qualitative research methods: A guidebook and resource* (Vol. 4th edition). Wiley.
- Theisen-Homer, V. (2021). Preparing teachers for relationships with students: Two visions, two approaches. *Journal of Teacher Education*, 72(3) 271–283.
<https://doi.org/10.1177/0022487120922223>

- Ulvik, M., & Riese, H. (2015). Action research in pre-service teacher education – A never-ending story promoting professional development. *Professional Development in Education*, 42(3), 441–457. <https://doi.org/10.1080/19415257.2014.1003089>
- Villegas, A. M., & Lucas, T. (2002). Preparing culturally responsive teachers: Rethinking the curriculum. *Journal of Teacher Education*, 53(1), 20–32. <https://doi.org/10.1177/0022487102053001003>
- Villenas, S. (1996) The colonizer/colonized Chicana ethnographer: Identity, marginalization, and co-optation in the field. *Harvard Educational Review*, 66(4), 711–731. <https://doi.org/10.17763/haer.66.4.3483672630865482>
- Vygotsky, L. S. (1978). *Mind in society: The development of higher psychological processes*. Harvard University Press.
- Waff, D. (2009). An insider voice: Leading as a teacher. In M. Cochran-Smith & S. L. Lytle (Eds.), *Inquiry as stance: Practitioner research for the next generation* (pp. 310–324). Teachers College.
- Wallace, D. F. (2005, May). *This is water by David Foster Wallace (Full transcript and audio)*. <https://fs.blog/2012/04/david-foster-wallace-this-is-water/>
- Yeigh, M. J. (2017). Inquiry at the heart of teacher preparation. i.e.: inquiry in education, (9)2. <https://digitalcommons.nl.edu/ie/vol9/iss2/9>
- Zeichner, K. M. (1987). Preparing reflective teachers: An overview of instructional strategies which have been employed in preservice teacher education. *International Journal of Educational Research*, 11(5), 565–575. [https://doi.org/10.1016/0883-0355\(87\)90016-4](https://doi.org/10.1016/0883-0355(87)90016-4)
- Zeichner, K. M. (2010). Competition, economic rationalization, increased surveillance, and attacks on diversity: Neo-liberalism and the transformation of teacher education in the

U.S. *Teaching and Teacher Education*, 26(8), 1544–1552.

<https://doi.org/10.1016/j.tate.2010.06.004>

Appendix 1

Sample Questions for Pre-Action Research Focus Group

1. How would you describe your role as a teacher?
2. How do you envision solving problems you encounter in your day-to-day teaching practice in your future classroom?
3. How do you approach bringing about change in your classroom?
4. How is meaning made in the classroom? Who has the power to make meaning?
5. Some believe that knowledge about teaching comes from outside the classroom, from theorists and scholars and some believe it comes from teacher experience in the classroom. Where do you believe knowledge about teaching comes from and how it is produced?
6. What do you know about action research?

Appendix 2

Sample Questions for Post-Action Research Focus Group

1. How would you define ‘action research’?
2. What do you feel are the benefits and drawbacks of conducting action research?
3. How did your action research project influence your teaching practice?
4. What difficulties did you encounter during the action research cycles? How did you work through them?
5. As a result of the action research, was there any change to your educational vision or constructs of teaching? Please explain.
6. How did the action research influence or change your stance as a teacher?
7. Did experiencing action research change your understanding of Freire’s notion of “problem posing education”? Did it help you construct a vision of what problem posing education can look like in a classroom? Please explain.
8. How has the action research experience changed the way you position in terms your ability to generate teacher knowledge?
9. Do you envision using action research in the future? How?
10. Did engaging in action research open any new opportunities within your paradigm of the teaching profession? If so, how?
11. In your opinion, who are the authorities in terms of generating and contributing to the knowledge base about teaching and school?