

PRESERVICE TEACHER ACTION RESEARCH: MAKING MEANING AND GENERATING KNOWLEDGE THROUGH INQUIRY

Rachel Ginsberg

Montclair State University, United States of America

✉ racheginsberg@gmail.com

ABSTRACT

This article analyzes the ways in which action research during preservice teacher education influences the development of a critical inquiry stance. By following eight preservice teachers as they conducted action research in their final semester of student teaching, this article demonstrates how action research created the space for preservice teachers to engage in practical and critical inquiry, which allowed participants the opportunity to develop a critical inquiry stance, to varying degrees. Discussed are the disparate ways participants thought about the meaning they made and the knowledge they generated during their action research assignment. The freedom action research granted preservice teachers to make meaning of their classroom instruction, generate knowledge, and bridge the gap between theory and practice, instruction and learning, and their students and themselves, allowed for the development of a critical inquiry stance. Findings suggest that through inquiry, preservice teachers disrupted the hierarchy of knowledge generation in teaching, as they theorized instruction, problematized pedagogy, and improved their teaching practices.

KEYWORDS

Action research, critical inquiry stance, generating knowledge, inquiry, meaning making, preservice teachers

HOW TO CITE

Ginsberg R. (2023) 'Preservice Teacher Action Research: Making Meaning and Generating Knowledge Through Inquiry', *Journal on Efficiency and Responsibility in Education and Science*, vol. 16, no. 1, pp. 1-11. <http://dx.doi.org/10.7160/eriesj.2023.160101>

Article history

Received

July 18, 2022

Received in revised form

September 5, 2022

Accepted

February 13, 2023

Available on-line

March 31, 2023

Highlights

- Action research was a vehicle for preservice teachers to develop, enact, and make meaning of critical teacher inquiry.
- Teacher inquiry was a means of disrupting the hierarchy structures that value scholarly generated knowledge over teacher generated knowledge for education.
- There was a fluidity between the moments of critical and practical inquiry.
- Action research helped bridge the gaps between theory and practice, practical/critical praxis, and teaching and student learning.

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 and Lytle, 2009). Similarly, Britzman (1991: 39) held that from the university perspective, 'the work of teachers is viewed as technical rather than intellectual'. 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 (Lytle and Cochran-Smith, 1992).

Current neoliberal agendas and policies in education fortify and strengthen this hierarchy. 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 the No Child Left Behind Act (2002) and the scrutiny of teacher quality that permeates our educational landscape (Sleeter, 2019). 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.

Thus, there is a need for classroom teachers to reclaim their role as decision makers and knowledge generators. There are numerous calls within the literature (Freire, 1970; López-Gopar et al., 2021; Pennycook, 2004) for teacher education programs to play a part in the disruption of the knowledge hierarchy and the nurturing of critical pedagogy in preservice teachers. Aligning with López-Gopar (2014), I contend that 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, decision makers, 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 and advocates for a moral and equitable education for all students.

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 speaks to this untapped arena and it is therefore the focus of this qualitative study. This study was situated in a large state university in the Northeast United States and followed the experiences of preservice teachers conducting action research in their full-time clinical placements at the end of their two-year teacher preparation program. The participants were all enrolled in a seminar course in which they were assigned an action research project to complete within the context of their clinical placement. The aim of the study was to follow the development of preservice teachers, looking specifically at how action research influenced their ability to hold up a critical lens to their teaching, incorporate that critical lens into their teaching stance, and use that stance to generate knowledge for teaching. 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 the United States education system.

This 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?

Critical Teacher Inquiry – A Theoretical Framework

The theoretical framework that guides this 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 views 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.

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, which draws on Zeichner's (1987) work on action research; (b) Knowledge is arrived at through the struggle of inquiry with one's world and with one another, much like Dewey's (1904) and Waff's (2009) notion of teacher and classroom inquiry; (c) Critical teacher inquiry is a reorientation of knowledge production (Cochran-Smith and Lytle's, 2009); (d) Critical teacher inquiry is a means of disrupting the scholar/teacher hierarchy, aligning with Rudduck's (1988) scholarship on creating a role for teachers in the production of educational knowledge; and (e) Teachers, not policy makers, should control the decisions in classrooms, rejecting current paradigms of 'teacher as technician' (Sleeter, 2019).

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 (Cochran-Smith and Lytle, 2009; Freire, 1970).

LITERATURE REVIEW

Engaging preservice teachers in conducting action research in their clinical placements is one possible way teacher education programs can create opportunities for preservice teachers to inquire into their teaching and generate knowledge about teaching and learning. For the purposes of this study, I adopt Zeichner's (1987: 568) definition of action research: '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'. Applied in 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 and Rock, 2003; Ulvik and Reise, 2015).

Action research methodology involves a series of iterative inquiry cycles, beginning with the identification of a question or concern. Next, an action is planned to address the identified question. The action is enacted and results are 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 and Clarke, 2015; Kennedy-Clark et al., 2018; Lattimer, 2012). According to 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 and Nadler-Godfrey, 2004).

Within the literature, preservice action research serves various goals and functions. In Price's (2001) study of four preservice teachers engaged in action research, he found that each participant experienced change in disparate ways. 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' changes were different in nature, these changes were situated in their personal experiences, positionality, contexts, and histories.

Building on Price's (2001) view of change brought about by action research, Hulse and Hulme (2012) found that action research encouraged change in preservice teachers, as they transgressed the boundaries of current educational practice to arrive at and develop new ideas and approaches to teaching, pushing back on the notion of teachers as technicians. 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. Preservice teachers in this study viewed professional knowledge as evolving rather than static, and saw themselves as contributors to the process of knowledge generation.

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 authors described action research with preservice teachers as 'a process of learning with community to think and act critically' (2012: 155), illustrating the explicit connection between critical pedagogy and the disruption of the knowledge hierarchy in education.

The above findings suggest that action research is an effective systematic approach to changing teaching practices and a way for preservice teachers to push back on the 'teacher as technician' paradigm, as they critically interrogate their teaching practices and generate educational knowledge. Studies have investigated the type of questions preservice teachers ask, their ability to be critical in their problem posing, and their ability to view themselves as knowledge generators. This study addressed a gap in the literature by

investigating the process of change and development that occurs when preservice teachers engage in action research and how preservice teachers make meaning of their experience generating educational and pedagogical knowledge.

METHODOLOGY

This study was conducted using qualitative research methodology. The study design was inductive and I served as the primary instrument of data collection and analysis (Merriam and Tisdell, 2016). As I was the teacher of record for the seminar course in which data was collected, I was positioned as an insider because I was affiliated with the setting and participants of the study, as they were my students. 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 as I had full control over the way in which I constructed, framed, and presented the action research to the students in my class. As a result of my positionality, I do not claim to be indifferent in this process, I understood that I brought a level of subjectivity to the research. I monitored and discussed how these subjectivities influenced interpretation of the data, making them visible through my audit trail and my researcher journal (Merriam and Tisdell, 2016).

Setting

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 data was collected from a required undergraduate seminar-style course which supported preservice teachers' final full-time student teaching placements in K-12 classroom in urban and suburban public schools. The course was structured to support the investigation of democratic classroom practices regarding planning and implementation of curriculum, instruction, and assessment of student learning. Embedded in this course was an assignment that asks preservice teacher to engage in an action research cycle. The goal of the assignment was to provide preservice teachers with a tool to systematically reflect on their work to improve and develop as teachers.

Participants

The participants in this study were selected using a purposeful sampling that would yield as much insight as possible (Merriam and Tisdell, 2016). I obtained approval for the study from the University Institutional Review Board. All participants submitted written consent to participate in the study. All names that appear below are pseudonyms to protect participants' privacy and confidentiality. The criteria for participant selection were: participants in a full-time student teaching placement enrolled in the accompanying required course called, Advanced Seminar in Inclusive Pedagogy. I secured eight participants that met the above criteria, three females and five males. The three female participants' content area were Math, English Language, and Physics, and the five male participants' content areas were Art, Social Studies (2), Dance, and Teaching English to Speakers of Other Languages (TESOL). Two participants taught in suburban school districts

while the remaining six participants taught in urban school districts. All participants were pursuing undergraduate degrees and were teaching online, as the study took place in the fall of 2020, during the Covid pandemic.

Table 1 below describes the context, research question, and theme of participants' action research. The theme refers to the nascent conclusions participants reached based on the data they analyzed in their action research.

Participant	Context	Research Question	Theme
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?	Visual cues help students 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?	Planning using the principles of Universal Design for Learning helps meet all students' needs.
Alonzo	Middle School Dance	Will a daily journal help students stay on track with important ideas during lesson(s) and unit progression?	Students need 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 English Language Arts (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	7 th and 8 th 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 makes 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 peer-to-peer interaction support higher student achievement

Table 1: Context, research question, and theme of action research

Data Collection

Data collection began at the start of the Fall 2020 semester and concluded at the end of that same semester. Data collection included two focus group interviews, artifacts from the seminar course such as action research assignments, reflections and oral presentations, and a researcher journal.

Focus Group Interviews

Two focus group interviews were conducted, one at the start of the Fall semester, prior to engaging in action research, and one at the conclusion of the Fall semester, after action research projects were completed. The focus group interviews were held on Zoom, as the university was operating remotely at the time. The focus group interview sessions were recorded and transcribed. The questions that guided the first focus group interview consisted of six open-ended questions that were related to the notion of critical teacher inquiry, scholar/teacher hierarchy of knowledge production, and action research. The second focus group interview consisted of 11 open-ended questions that asked preservice teachers to reflect on 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 interview 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.

Artifacts

The action research assignments that preservice teachers produced for the seminar course served as artifacts for the study. The assigned action research proposal, product, and final reflection were collected as data. All participants' oral presentations were recorded and transcribed, including all follow up questions, and discussion. What was of particular interest to me in the artifacts 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.

Researcher Journal

As the collection of data took place over the course of a 14-week semester, I documented 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. This journal provided organization of my thoughts as it documented a research ‘trail’ of gradually altering methodologies and reshaping analysis (Ortlipp, 2008: 696).

Data Analysis

Once the semester was complete and grades were distributed, I analyzed the data sources inductively using the constant comparative method (Glaser and 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 interview transcripts and the action research documents. 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. 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).

The data sources described above included rich data in that they were detailed and sufficiently varied to capture and reveal a full picture of what is happening in the study (Maxwell, 2010). During the data analysis stage, I used the strategy of triangulation, as my data sources included a diverse range of data collection methods, sources, and settings. Using the transcripts

from the focus group interview discussions, classroom artifacts, 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 to further substantiate the findings and conclusions of the study.

Findings

Throughout the study, there were numerous ways in which action research was a vehicle for preservice teachers to develop a critical inquiry stance. Action research created a space 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*, contributed to this foundational theme in a multitude of ways. 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 developing a critical inquiry stance by making meaning, generating knowledge, and bridging spaces occurred simultaneously, each process exerting influence over the other and contributing to the progression of each process, indicated by the arrows pointing back-and-forth.

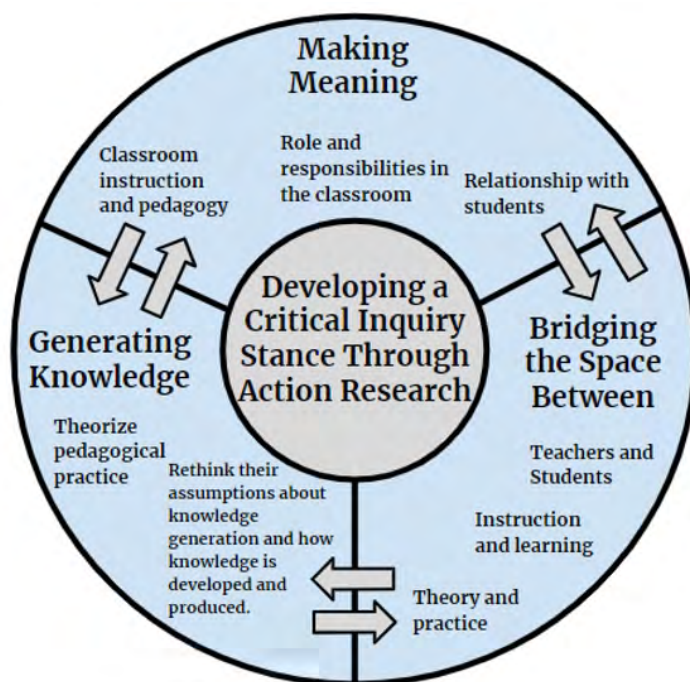


Figure 1: Developing a critical inquiry stance through action research

Developing a Critical Inquiry Stance Through Action Research

As participants conducted action research, they recognized the processes that were at play. They understood that they enacted, made meaning, and developed, to varying degrees, a critical

inquiry stance. When asked about their definition of action research, Mara, a preservice English teacher, stated, “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 Interview

Transcript). Alonzo, a preservice dance teacher, 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 Interview Transcript). Both definitions referenced the processes that were happening for the participants as they conducted their inquiry, that of enacting an intentional action, the generative process of making meaning, and the resulting change that developed.

As Jillian acknowledged the way action research has supported her growth as a new teacher, she alluded to the idea of *becoming*. 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 Interview Transcript). While Jillian credited the action research with helping her evolve and grow as an educator, there is an awareness that she is experiencing a process of becoming, becoming a teacher, becoming a problem poser, becoming a life-long learner.

Within participants’ action research, there is evidence of both practical and critical aspects of the work. Justin, Joshua, and Jillian’s research questions probed issues related to the student achievement gap, lack of representation in curriculum, and grouping students heterogeneously respectively, 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. However, over the course of the action research, their inquiry weaved in and out of the practical realm, as they were inquiring into living, breathing classroom, which necessitated a practical aspect to the inquiry.

Joshua, a middle school preservice social studies teacher, 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), situating his action research in a very critical dimension. However, he then moved into the practical dimension of classroom life when discussing classroom participation, “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). His action research moved back and forth between the critical and practical realms of classroom life.

Alternately, Claire’s research question was quite practical, but her inquiry led her to critically look at facets of her classroom assessment strategies. 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. Her trajectory went from practical to critical, a different experience than Joshua, Justin, and Jillian’s.

In contrast to Justin, Joshua, and Jillian, 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 Interview Transcript), omitting any connection to a critical component to the work. He valued the systematic approach of action research and 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.

Making Meaning

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. Amal and Felipe both explored principles of Universal Design for Learning pedagogy and made meaning of the benefits of structuring lessons with multiple means of student expression. Amal, a preservice middle school TESOL teacher 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).

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. Claire, a preservice high school physics teacher, acknowledged the pressure teachers feel to cover material but sought to prioritize social and emotional learning as part of her responsibilities as 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... 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 Interview Transcript)

Finally, many of the preservice teachers made meaning about their relationship with students through their action research. Jillian shared very clearly and succinctly during our second focus group interview 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). Similarly, Claire found that her relationships with students were impacted through her action research, she stated, “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” (Action Research Reflection Assignment, p. 2).

Generating Knowledge

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 Interview Transcript)

Engaging in action research invited preservice teachers to theorize pedagogical practice as they experienced it. Justin, a middle school social studies teacher, 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.

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. After the conclusion of his action research, Joshua 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” (Action Research Reflection Assignment, pp. 8-9). Claire explained, “I think the responsibility is on teachers to generate knowledge about teaching and learning” (Action Research Reflection Assignment, p. 2). 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).

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 teachers and students, instruction and learning, and theory and practice.

Participants commented on how their action research helped them bridge gaps relationally, between themselves and their students and between their students to one another. 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.

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. 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). 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. She explained in her Action Research Reflection, “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).

Additionally, some students observed that their inquiry helped them bridge the space between their teaching to student learning, as evidenced in Alonzo’s action research reflection, “Action Research is an amazing way to gain insight on the students, it helped me figure out ways to guide students learning” (p. 9). Additionally, during our second focus group interview, 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). Both examples highlight the space that was bridged between participants teaching and student learning.

And finally, it helped some participants bridge the space between theory and practice. Claire used her action research to apply principles from the theory of Universal Design for Learning 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 could comprehend the Multiple Means of Expression principle after having enacted her action research, thus bridging the gap between the theory and practice.

DISCUSSION

With Freire’s (1970: 65) assertion that, ‘Education is thus constantly remade in the praxis. In order to be, it must become’, 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. 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.

Both of these arguments undergird the findings of the study, that of action research as a vehicle to develop a critical inquiry stance as action research is the praxis of critical inquiry. As Jillian stated, and many of the other participants' definitions of action research pointed to, as they engaged in action research, they saw themselves becoming, changing, developing, through the connections and meaning they made of their action research experiences, through the theories they developed, through the relationships they forged, and through the knowledge they generated. For most of the participants, their self-view was not static but rather quite dynamic; they fully embraced the change and growth inherent in learning to teach and honored the developmental process of becoming a problem-poser.

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 critical approach towards teaching, thus authentically making meaning of the teacher as problem-poser paradigm. Engaging in this inquiry process is what supported the development of a critical inquiry stance. For some participants like Joshua, Jillian, Claire, and Justin, 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, evidencing the development of a critical inquiry stance. For others, like Felipe, development towards a critical inquiry stance was slower and less apparent however it was clear, based on his research question, that Felipe was further behind in his development of a critical inquiry stance from the onset of the study.

In line with Price's (2001) and Parker et al.'s (2016) findings, I observed how varied the critical component was in participants' action research experiences. Ultimately, the questions asked and the meaning participants made were driven by participants' lived experiences, educational experiences, and where they were on their journey towards a critical inquiry stance. In analyzing the above set of action research questions, it is quite clear that there is a spectrum of preservice teacher's critical thinking that intersects with their development as educators. Some preservice teachers, like Joshua and Jillian, 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 participants, like Felipe, came to their work with a very practical lens, unable to think beyond the utilitarian purpose of their question. Participants' development along the spectrum of a critical inquiry stance influenced the course of their action research.

Congruent with the literature on preservice action research (Manfra, 2019; Price, 2001), 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. Jillian, Joshua and Justin all problematized issues of equity and justice but inevitably shifted into practical classroom concerns, indicating the complexity and interconnectedness of these two dimensions of problem posing in action research. As they engaged in the praxis of action research, the practical and critical aspects of the work became enmeshed and intertwined. Claire's experience was the opposite, it began in the practical realm but shifted into a more critical stance as she began to problematize current assessment strategies. Because all of 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 action research prompted meaning making about how the experience influenced their understanding and meaning making of the pedagogy that grounds the action they chose to implement. They were learning to make meaning beyond the isolated moments of instruction towards a more comprehensive understanding related to educational pedagogy. Both Amal and Jillian developed their understanding around UDL and groupwork pedagogues and began to think about ways these pedagogues create access to learning for all students. In that sense, pedagogy was viewed from both a practical and critical stance within the inquiry.

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. The findings suggested that action research may serve as a portal or window into this arena of classroom life, despite the 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. The lack of research surrounding this topic is notable and it is important to address this overlooked area of teacher development in future research.

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. As found in the research (Lattimer, 2012; Parker et al., 2016), many participants began to develop and build upon theory as a result of their action research. Identifying an action or intervention that would address the stated problem of their action research necessitated the type of thinking that led to nascent theories, as participants hypothesized actions that had the potential to improve a problem of practice. In doing so, they narrowed the gap between consuming outside knowledge to generating their own knowledge. When Felipe and Justin presented their action research, they framed their conclusions as theories. The work they conducted was generative and meaningful to them and they valued it by naming it as theory.

Furthermore, 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.

Responses from their action research reflections and during our second focus group interview, both completed after the action research studies, suggested 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 found in the literature on action research (Hulse and Hulme, 2012; Kizilaslan and Leutwyler, 2012; Roulston et al., 2005). Claire, Joshua, and Mara's thinking about who generates knowledge for teaching evolved over the course of the action research, the inquiry positioned them as knowledge generators, empowering them and giving them the confidence to believe that they, as classroom teachers, could contribute to the canon of knowledge in education. 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.

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.

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. 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 now have to create spaces where preservice

teachers can explore what it means and looks like to teach for social justice.

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.

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, 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 and Hulme, 2012; Kizilaslan and 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. Further, 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 critical aspects of action research influenced how participants thought about their process of meaning making and knowledge generation. As they fluidly crossed the boundaries between critical and practical inquiry, they began to develop an understanding of the relationship between the two and understood the need to be critical about instruction and classroom life. This understanding supported the development of a critical inquiry stance. The action research allowed participants to problematize pedagogy, theorized instruction, shift into a problem poser mindset and develop a critical inquiry stance. This critical stance supports the ability to generate knowledge, as it sets the stage for inquiry into the work of teaching, bringing about a more sophisticated and nuanced understanding of teaching and learning.

CONCLUSIONS

Within this study, action research was a vehicle for preservice teachers to develop, enact, and make meaning of critical teacher inquiry. These processes occurred simultaneously and fluidly, they exerted influence over one another in multi-directional ways, were iterative, and non-linear. Preservice teachers became critical inquirers and problem posers as they engaged in the critical praxis of action research. Future research should investigate different and disparate pedagogy that supports the development of a critical inquiry stance in preservice teachers.

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. In light of the evidence presented above, we, as an educational community 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.

REFERENCES

- Alim, H. S. and Paris, D. (2017) 'What is culturally sustaining pedagogy and why does it matter?', in Alim H. S. and Paris D. (eds.) *Culturally sustaining pedagogies: Teaching and learning for justice in a changing world*, New York: Teachers College Press.
- Ball, S. J. (2010) 'The teacher's soul and the terrors of performativity', *Journal of Education Policy*, Vol. 18, No. 2, pp. 215–228. <https://doi.org/doi:10.1080/0268093022000043065>
- 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*, New York: State University of New York Press.
- Cochran-Smith, M. and Lytle, S. L. (2009). *Inquiry as stance: Practitioner research for the next generation*, New York: Teachers College.
- Dewey, J. (1904) 'The relation of theory to practice in education', in Borrowman, M. (ed.) *Teacher education in America: A documentary history*, New York: Teachers College Press.
- Dodman, S., Growth, L., Ra, S., Baker, A. and Ramezan, S. (2017) 'Developing an inquiry stance through PDS action research: Does it maintain after graduation?', *School-University Partnerships*, Vol. 10, No. 4, pp. 30–46.
- Faikhamta, C. and Clarke, A. (2015) 'Thai pre-service science teachers engaging action research during their fifth year internship', *Asia Pacific Journal of Education*, Vol. 35, No. 2, pp. 259–273. <https://doi.org/10.1080/02188791.2013.860011>
- Freire, P. (1970) *Pedagogy of the oppressed*, London: Continuum.
- Freire, P. (1998) *Pedagogy of freedom*, Maryland: Rowman and Littlefield.
- Gay, G. (2002) 'Preparing for culturally responsive teaching', *Journal of Teacher Education*, Vol. 53, No. 2, pp. 106–116. <https://doi.org/10.1177/0022487102053002003>
- Glaser, B. G. and Strauss, A. (1967) *The discovery of grounded theory: Strategies for qualitative research*, London: Aldine.
- Hansen, J. M. and Nalder-Godfrey, N. (2004) 'The Power of action research, technology and teacher education', *Computers in the School*, Vol. 21, No. 1-2, pp. 43–57. https://doi.org/10.1300/J025v21n01_04
- Harry, B., Sturges, K.M. and Klingner, J. K. (2005) 'Mapping the process: An exemplar of process and challenge in grounded theory analysis', *Educational Researcher*, Vol. 34, No. 2, pp. 3–13. <https://doi.org/10.3102/0013189x034002003>
- Hulse, B. and Hulme, R. (2012) 'Engaging with research through practitioner enquiry: The perceptions of beginning teachers on a postgraduate initial teacher education programme', *Educational Action Research*, Vol. 20, No. 2, pp. 313–329. <https://doi.org/10.1080/09650792.2012.676310>
- Kennedy-Clark, S., Eddles-Hirsch, K., Francis, T., Cummins, G., Feratino, L., Tichelaar, M. and Ruz, L. (2018) 'Developing pre-service teacher professional capabilities through action research', *Australian Journal of Teacher Education*, Vol. 43, No. 9, pp. 39–58. <http://dx.doi.org/10.14221/ajte.2018v43n9.3>
- Kizilaslan, I. and Leutwyler, B. (2012) 'Pre-service teacher action research: Concept, international trends, and implications for teacher education in Turkey', *Bulgarian Comparative Education Society*, Vol. 10. Kyustendil, pp. 155–162.
- Ladson-Billings, G. (1995) 'But that's just good teaching! The case for culturally relevant pedagogy', *Theory into Practice*, Vol. 34, No. 3, pp. 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 Alim, H. S. and Paris, D. (eds.) *Culturally sustaining pedagogies: Teaching and learning for justice in a changing world*, New York: Teachers College Press.
- Lattimer, H. (2012) 'Action research in pre-service teacher education: Is there value added?', *Inquiry in Education*, Vol. 3, No. 1, pp. 1–25.
- Levin, B. B. and Rock, T. C. (2003) 'The effects of collaborative action research on preservice and experienced teacher partners in professional development schools', *Journal of Teacher Education*, Vol. 54, No. 2, pp. 135–149. <https://doi.org/10.1177/0022487102250287>
- López-Gopar, M. E. (2014) 'Teaching English Critically to Mexican Children', *ELT Journal*, Vol. 68, No. 3, pp. 310–320. <https://doi.org/10.1093/elt/ccu017>
- López-Gopar, M. E., Cordova, V. H., Sughrua, W. M. and Jiménez, E. N. L. (2021) 'Developing Decolonizing Pedagogies with Mexican Pre-Service "English" Teachers', in Hawkins, M. R. (ed.) *Transmodal Communications: Transpositioning Semiotics and Relations*, Bristol: Multilingual Matters (Translanguaging in Theory and Practice, Vol. 1), pp. 152–175. <https://doi.org/10.21832/9781788926379-010>
- Lytle, S. L. and Cochran-Smith, M. (1992) 'Teacher research as a way of knowing', *Harvard Educational Review*, Vol. 62, No. 4, pp. 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*, Vol. 43, No. 1, pp. 163–196. <https://doi.org/10.3102/0091732x18821132>
- Maxwell, J. A. (2010) 'Validity: How might you be wrong?', in Luttrell, W. (ed.) *Qualitative educational research: Reading in reflexive methodology and transformative practice*, London: Routledge. <https://doi.org/10.1093/acrefore/9780190264093.013.553>
- Merriam, S. and Tisdell, E. J. (2016) *Qualitative research: A guide to design and implementation*, 4th edition, San Francisco: The Jossey-Bass.
- Mok, A. O. (2016) 'A reflective journey in teaching: Pre-service music teachers' action research', *Australian Journal of Music Education*, Vol. 50, No. 2, pp. 58–70.
- No Child Left Behind (NCLB) Act of 2001, Pub. L. No. 107-110, § 101, Stat. 1425* (2002) [online], Available: https://www2.ed.gov/nclb/landing_jhtml [17 Jul 2022].

- Ortlipp, M. (2008) 'Keeping and using reflective journals in the qualitative research process', *The Qualitative Report*, Vol. 13, No. 4, pp. 695–705.
- Paris, D. (2012) 'Culturally sustaining pedagogy: A needed change in stance, terminology, and practice', *Educational Researcher*, Vol. 41, No. 3, pp. 93–97. <https://doi.org/10.3102/0013189X12441244>
- Parker, A., Bush, A. and Yendol-Hoppey, D. (2016) 'Understanding teacher candidates' engagement with inquiry-based professional development: A continuum of responses and needs', *The New Educator*, Vol. 12, No. 3, pp. 221–242. <https://doi.org/10.1080/1547688X.2015.1027978>
- Pennycook, A. (2004) 'Critical Moments in TESOL Praxicum', in Norton, B. and Toohey, K. (eds.) *Critical Pedagogies and Language Learning*. Cambridge, England: Cambridge University <https://doi.org/10.1017/cbo9781139524834.017>
- Price, J. N. (2001) 'Action research, pedagogy and change: The transformative potential of action research in pre-service teacher education', *Journal of Curriculum Studies*, Vol. 33, No. 1, pp. 43–74. <https://doi.org/10.1080/00220270118039>
- Roulston, K., Legette, R., Deloach, M. and Pitman, C. B. (2005) 'What is "Research" for teacher-researchers?', *Educational Action Research*, Vol. 13, No. 2, pp. 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*, Vol. 4, No. 1, pp. 30–42.
- Sleeter, C. (2019) 'Introduction to "Emerging from standardization: Learning to teach for cultural, cognitive, and community relevance"', *The Educational Forum*, Vol. 83, No. 3, pp. 231–236. <https://doi.org/10.1080/00131725.2019.1599643>
- Villegas, A. M. and Lucas, T. (2002) 'Preparing culturally responsive teachers: Rethinking the curriculum', *Journal of Teacher Education*, Vol. 53, No. 1, pp. 20–32. <https://doi.org/10.1177/0022487102053001003>
- Waff, D. (2009) 'An insider voice: Leading as a teacher', in Cochran-Smith M. and Lytle, S. L. (eds.) *Inquiry as stance: Practitioner research for the next generation*, New York: Teachers College.
- 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*, Vol. 11, No. 5, pp. 565–575. [https://doi.org/10.1016/0883-0355\(87\)90016-4](https://doi.org/10.1016/0883-0355(87)90016-4)