

Creating Equity-Focused Networks of Support for Teacher Candidates Through Coaching: A Design-Development Study

Erica Holyoke

Colorado University Denver, Denver, Colorado

Melissa Mosley Wetzel

The University of Texas at Austin, Austin, Texas

Heather Dunham

Clemson University, Clemson, South Carolina

Kerry Alexander

Claire Collins

Lauren E. Hills

The University of Texas at Austin, Austin, Texas

Abstract

One teacher preparation program worked toward improving teacher preparation by strengthening the network of support among teacher candidates, mentor teachers, and teacher educators. Drawing on third-generation cultural historical activity theory, we modeled activity systems framing the experiences of teacher candidates and contradictions within and between activity systems. Using cycles of learning over one year, we learned 1) how direct and indirect activity systems interact and 2) how meaningful and influential contradictions erupt between two systems. Contradictions included the theory-practice divide alongside the implementation of equity supports, the teacher candidates' navigation of their role, and shifting rules during the transition to distance learning across contexts during COVID-19. This study has implications for enacting dynamic, program-wide change in teacher education programs.

Purpose of the Study

For decades, teaching and teacher education has been focused on stronger orientations and outcomes for equity and justice in schools (e.g., Ladson-Billings, 1995; Nieto, 2000). Research studies and programmatic efforts have been aimed at preparing teachers to address inequities in their teaching practices (Cochran-Smith, 1991; Eppley & Shannon, 2017; McDonald, 2005) while also creating high-quality field experiences, strong faculty development and external partnerships that support their equity commitments (Bomer & Maloch, 2019). Simultaneously, teacher education programs (TPPs) are tasked with navigating the political expectations of preparing teachers for standards-based education in a climate focused on accountability (Birdyshaw et al., 2017), which can be in tension with the TPPs' equity focus. The responsibilities of TPPs to navigate these priorities have only grown over time.

However, much of the scholarship on how TPPs grow towards an equity orientation focuses too narrowly. Researchers typically study a single course or field experience or arbitrarily focus on policy or practice (Darling-Hammond, 2006). Single sites or experiences, while often innovative, provide a limited view of programmatic gains and improvements in TPPs, especially

ensuring teachers are prepared to teach with an equity orientation. Further, this narrow focus may lead to programs embedding social justice frameworks only in some courses, field experiences, and interactions rather than programmatically (Zeichner, 2020; 2021) or ignores the importance of ensuring teacher candidates (TCs) experience programmatic alignment (Floden et al., 2021; Leonard et al., 2021). Further, equity-oriented revisions often continue to center on whiteness¹ (Sleeter, 2017), such as maintaining a Eurocentric curriculum or promoting perspectives of color-blindness or neutrality. We believe that teacher preparation programs must take an approach that centers on disrupting pervasive inequities and whiteness to ensure that teachers are prepared to create equitable learning spaces where each child thrives.

Using third-generation cultural historical activity theory (CHAT) (Engeström, 2001), we study systems that can respond to these critiques of existing scholarship on TPPs. The CHAT framework explores systems that influence experiences and tensions for individuals and groups, in our study, TCs' development of equity and justice-oriented professional practices within the network of support for TCs (course instructors, field supervisors, mentor teachers, and program coordinators and directors). We explore how this professional network enacts change to disrupt whiteness and deficit views of students, families, and communities often present in educational achievement discussions. Such transformative changes may better support TCs with inquiry stances in order to navigate tensions they will encounter in schools between an accountability and an equity focus on instructional practices (Kretchmar & Zeichner, 2016).

Our study asks: 1) What are the networks of support that TCs experience in a teacher education program, and 2) How do the tensions in and between the networks of support reinforce, mediate, or inhibit the pursuit of justice-oriented approaches in this program? We use CHAT as a critical interpretive lens (Lewis et al., 2007) in design and analysis, allowing for a broad exploration of the TCs' networks of support and how the systems supported, mediated, or inhibited a focus on justice orientations. This inquiry contributes to existing scholarship that examines programmatic iterations in bringing alignment toward social justice in TPPs. By programmatically exploring systems of support using activity theory, the study illustrates how policymakers and program leaders may conceptualize change through a lens of networks of support.

Literature Review

This review summarizes two decades of research on teacher education, focusing on how programs prepare teachers for equity perspectives and the tensions that emerge during this shift toward social justice approaches. To search the existing scholarship, we began with a selective sampling of key articles published in top journals in teacher education. Then, we used bibliographic branching to examine subsequent studies and present a comprehensive overview. We intentionally explore studies that focus on cultural consciousness, multicultural education, and social justice, terms that both pixilate *and* broaden conceptions of educational equity, given the broad views of scholarship.

In response to the dangers of racism, restrictive immigration policies, and xenophobia on students in educational settings, many TPPs increased their attention to these concerns in the 2000s (see Nieto, 2000). Programs began to infuse critical perspectives on social inequities and frameworks of social justice, both within methods courses and in additional courses added to

¹ As aligned with Critical Whiteness Studies and other scholars, such as Matias (2020), we intentionally use a lowercase “w” in white/whiteness to decenter the power in how whiteness is upheld and enacted in our society.

programs. Since most TCs in these programs come from a background of white-dominant schooling norms (Dunham & Alexander, 2022), TPPs prioritized fostering critical consciousness, cultural responsiveness, and increasing the recruitment of teachers of color (Zeichner, 2009). Despite these aforementioned efforts, it is essential to note that these initiatives did not necessarily shift the focus away from whiteness (Sleeter, 2017). Zeichner (2009) also argues that the social justice movement in teacher education had other shortcomings, such as neglecting to examine support systems across various contexts for teacher candidates nor bridging tensions between TPPs and communities.

The Turn to Equity in Teacher Education

Sleeter and Owuor (2011) reviewed research from 1980 to 2009 to take a broader look at how teacher preparation programs center equity. Their review focused on how TPPs effectively prepare teachers to take up culturally responsive, justice-focused stances across courses, over time, and into the first years of teaching. The studies revealed ways TPPs prepared future teachers to become “change agents” (p. 524) in response to pedagogical and instructional inequity with diverse student populations. The findings indicated that when a TPP focuses on *direct experiences*, such as incorporating multicultural literature or adopting constructivist and critical approaches, it strengthens a novice teacher’s resilience to endure institutional tensions. However, the effectiveness of these TPP experiences in preparing teachers to move beyond mere awareness of diversity and actively intervene in instances of injustice, particularly with students from different backgrounds, varied significantly. The findings highlighted gains in cultural awareness across studies, but inconsistencies or lack of ability to know if TPPs prepared teachers to build critical consciousness or simply cultural awareness. Finally, there was an absence of long-term and program-wide analyses because the majority of the studies were characterized as “small-scale case studies” (p. 535). Moreover, there is a notable absence of studies investigating the various networks of support for TCs.

Tensions in Equity Orientations for Teacher Preparation Programs

At the time of Sleeter and Owuor’s (2011) publication, TPPs across the U.S. were beginning to observe the impacts of an explicit focus on social justice, with scholarship illustrating the tensions associated with this focus. Chubbuck (2010) emphasized that a focus on social justice throughout the 2000s brought negative attention to TPPs for excluding perspectives of students who did not ascribe to critical social justice perspectives and/or positioning TCs as responsible for challenging and changing inequities, failing to interrupt whiteness. Chubbuck suggested that this pushback was also related to how a social justice perspective in teacher education asked TCs to not only consider inequities but also make changes in the classroom to address them. Relatedly, Pollock and colleagues (2010) pointed out in their research on race-focused teacher education courses many students resisted changing racist structures within or outside of schools that impacted students and resisted their program’s efforts as not aligning with their perspectives on the purposes and goals of education. Scholarship amplified how tensions and resistances can serve to position course instructors and program coordinators to provide pedagogical strategies to TCs without engaging them (or themselves) in the self-reflection using critical sociocultural frameworks that Brown (2013) and others argue are necessary to disrupt systems of inequality (see also Pollock et al., 2010; Sleeter & Owuor, 2011).

Equity Orientations in Teacher Preparation: 2011–Present

In the decade of teacher education and social justice research published since 2011, we found over 1,000 articles in teacher education journals focused on justice-focused TPPs. Preservice teachers *can* identify critical local issues and take action as part of their learning to teach (e.g., Payne et al., 2017; Picower, 2012; Skerrett & Williamson, 2015), especially through projects that center social justice in schools serving mostly Black and Latinx students. Teacher preparation for social justice takes many forms, including course-based experiences, field experiences, and coaching and mentoring using social justice frameworks (e.g., Land, 2018). For example, Land (2018) explored coaching discussions led by cooperating professionals and found that a targeted emphasis on equity in the field allowed for local and systemic explorations for teachers to situate their decision-making. Our synthesis of these studies suggests that teachers can be prepared to challenge inequalities while developing strong teaching practices (Bomer & Maloch, 2019; Cochran-Smith, 1991; Eppley & Shannon, 2017; McDonald, 2005). In sum, contradictions and tensions in teaching for educational equity since 2011 reveal pockets of resistance and the footing for pedagogical and instructional change. However, one overlooked area is broad programmatic change, or taking a birds-eye-view to examine structural efficacy and identify existing structures for pedagogical change.

Cultural Historical Activity Theory and Teacher Preparation Research

Responding to the limitations of the research and to critiques leveraged by the public on TPPs about the failed efforts to prepare teachers to address inequities in schools, Zeichner et al. (2015) argued for a new approach that examines programs in terms of how teachers build pedagogical knowledge within hybrid spaces. Leaning on CHAT, they defined hybrid spaces as spaces where knowledge from schools, universities, and communities is leveraged to make the work of the people in the system “less hierarchical and haphazard...to support teacher learning” (p. 124). The Zeichner and colleagues suggested that approaches to reforming teacher education may have overemphasized practical knowledge by accelerating students into early teaching experiences. Drawing on democratizing lenses, they argue for teacher educators to understand the multiple activity systems of when learning to teach (Foot, 2014; Yamagata-Lynch, 2010). Such an understanding would lead to more cohesive networks of support for TCs and, in theory, offer continued abilities for substantive change and enactment of equity-based teaching decisions. TCs must navigate the activity systems of the schools where they have their practicum experiences and their university, as well as other systems that support their progress in becoming teachers. It is important to examine how social justice-focused TPPs mitigate and address contradictions. Zeichner et al.’s (2015) democratizing approach and CHAT frameworks align as frameworks to analyze the activity systems that TCs experience.

As most scholarship explores single experiences or contexts (e.g., Land, 2018), there is a dearth of research on programmatic explorations of moving toward social justice orientations. Our study considers the need to look beyond single contexts and take a broader and holistic view of programs seeking transformation while involving multiple stakeholders and participants. Further, many studies highlight tensions only as limitations in the study design. As aligned with our research questions, our study exposes tensions as opportunities to identify areas for future improvement in the focal teacher preparation program and for others. Using third-generation CHAT in the analysis responds to these needs by examining the complexity of the networks of support for TCs.

Theoretical Framework

CHAT (Engeström, 2001) and critical sociocultural frameworks (Lewis et al., 2007) guided the design and analysis of this study. CHAT emphasizes the culturally and historically situated values people reference and enact in a community (Engeström, 2001; Foot, 2014) and draws on Vygotsky’s (1978) core tenets. These tenets include the collective nature of human action and how people make adaptations using tools to engage socially within communities (Foot, 2014). CHAT is a frame to map activity systems as units across tools, subjects, objects, and outcomes. In second-generation CHAT, scholars consider the collective work that people engage with toward a shared goal or outcome. We draw on third-generation CHAT, which evolved to consider the interaction of multiple activity systems and shape the nature of work in and across institutions. This wave of CHAT research “make[s] it a priority to ascertain the role of dialogue, multiple perspectives, and issues of power” (Roth & Lee, 2007, p. 200). Hereafter, when we use the acronym CHAT, we refer to the third-generation model.

CHAT analyses explore why systems might be more or less equitable or resistant to change. CHAT promotes a deep exploration of tensions and power dynamics within communities and systems striving for an aligned objective and goal by considering critical sociocultural perspectives that ask how systems are organized to benefit those with more power within the system and maintain oppressive conditions for those with less power (Lewis et al., 2007). Drawing on critical perspectives and CHAT, analysts may pursue questions about ways the tools, such as language, relate to the community within the activity system regarding access and diversity (Engeström & Glăveanu, 2012). CHAT accomplishes its critical goals by examining contradictions across multiple systems as spaces for generative change.

Using CHAT, analysts first use a triangular model to display the analysis of individual activity systems. Then, they map individual systems concerning other systems, focusing on the interactions between outcomes (Figure 1).

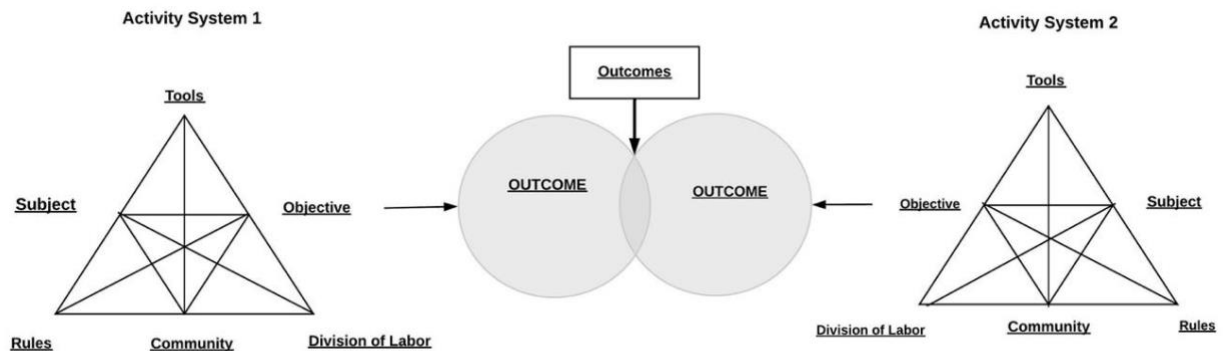


Figure 1. Third-Generation CHAT Model (adapted from Engeström, 2001)

The triangular model allows for focused and interpretive analysis (Engeström, 2001), prioritizing alignments and contradictions within and across systems. Contradictions within and across systems “are not points of failure or deficits in the activity system in which they occur. They are not obstacles to be overcome to achieve goals. Rather than ending points, contradictions are starting places” (Foot, 2014, p. 17). These *starting places* highlight where historically developed systems can flexibly adapt toward innovations. Contradictions are pivotal junctures and opportunities for change, and these changes can shift the system itself. We used CHAT as a critical

interpretive lens (Lewis et al., 2007) to interpret our findings, allowing for a broad exploration of how the systems supported, mediated, or inhibited a focus on justice orientations.

Methods

We used design-development methodology in this empirical study to recursively identify key lessons and apply them in action to inform the improvement of educational practice (Engeström, 2001; Edelson, 2002; Reinking & Bradley, 2008). In design-development research, creating theory requires an iterative process of reflection, planning, and action learning toward desired outcomes. The purpose is to recognize opportunities for innovations and reflective practice over time to ensure a continued systematic approach to transformative work within programs and teaching contexts (Stahl et al., 2019). Importantly, this approach also prioritizes connecting practitioners and researchers in identifying the principles of transformative change (Stahl et al., 2019). This methodology aligns with CHAT in focusing on the iterations at the pivotal junctures and tensions within and across the activity systems. For this paper, we focused on the second year of a four-year study, prioritizing equity-focused changes related to the network of support (2019–2020).

Context

Our TPP is located at a large public university in an urban setting, guided by principles that center on equity and anti-racism in teacher education. As part of this social justice initiative, our TPP published cross-cutting themes (see Mosely Wetzel et al., 2020) that explicitly state the program's commitment towards a common view of justice-oriented teaching. Program faculty prioritize TCs' aligned experiences in courses and field experiences, given the size and scope of our program. Aligned with design-development methods, these justice-centered themes were revised with practitioners (mentor teachers, TCs, and teacher educators) to solidify the TPP's focus on equity and justice. Used program-wide and recursively throughout TCs' experiences, the themes anchor the TPP towards justice and equity. EC-6 teachers engage in over 300 hours of pre-student teaching internships and 500+ hours of student teaching, complete their ESL or bilingual certifications, and are placed in schools with linguistic diversity in internships and student teaching. The TPP graduates about 300 elementary teachers a year with an ESL certificate, and about 70% on average stay in the profession for 3+ years, which far exceeds retention rates in the state.

Our study included participants across each facet of the program, focusing on groups of TCs, mentor teachers (MTs), and teacher educators (TEs) in EC-6 programs focused on ESL and bilingual education. Figure 2 displays the design development iterations.

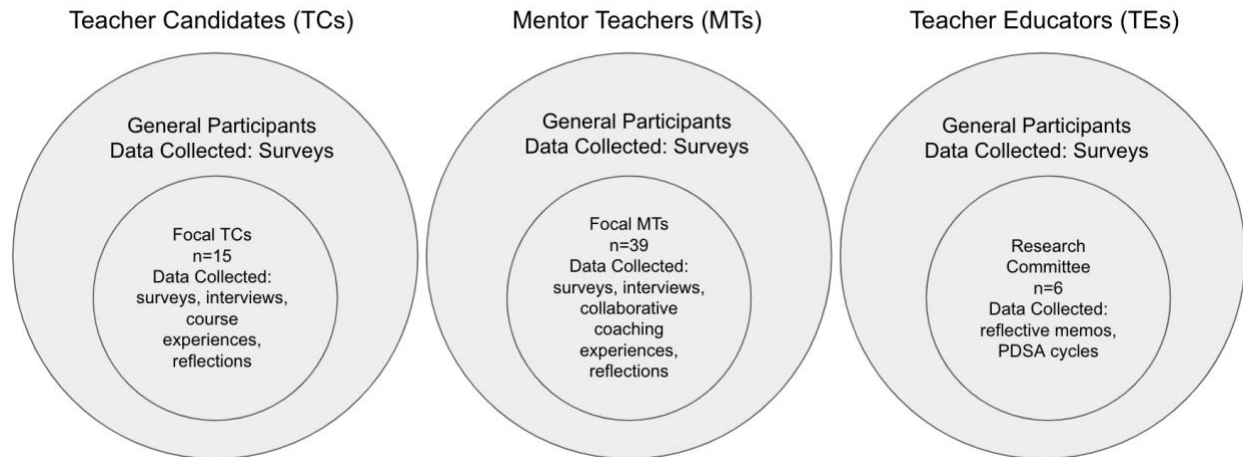


Figure 2. Nested Representation of Participant Groups

The teacher educators included course instructors, clinical and tenure-track faculty, field supervisors, and cohort coordinators. TCs were in their professional development sequence, which spans the last three semesters of their undergraduate degree. The teacher educators included in the study are all experienced across multiple years with the program and include field supervisors (both clinical faculty and graduate students) and course instructors (clinical faculty, tenure-track faculty, and graduate students). The mentor teachers in this study all previously participated in coaching professional development led by the university. The mentor teachers were willing to explore cross-cutting themes in the field experiences.

Our university team (two tenured faculty, four clinical faculty, and four graduate student representatives) systematically engaged in iterations of design-development cycles to align and increase the quality of TCs’ network of support toward equity-focused practices. Though we bring diverse backgrounds and experiences to the project, members of our authorship team all identify as white and female. Because of the pervasiveness of whiteness, our lack of racial diversity creates limitations in how we understand the intersection of race and racism within the activity systems. We attempted to mitigate these limitations by soliciting feedback and responding to a diverse group of researchers and members of our university team who identify as Black and Latinx. We also engaged in reflexivity in interrogating how our identities shaped our data collection, analysis, and writing to ensure a focus on equity and awareness of our limitations.

PDSA (Plan-Do-Study-Act) cycles, typical to improvement science, are a process of design development, creating sets of revisions to a program (i.e., 3A/3B), tracking learning across small iterations of change within a set focused on one goal (Bryk et al., 2015). We conducted six PDSA cycles during the focal year of this study. Goals included strengthening TCs’ network of support through equity-focused teaching, mentor teacher support, and coaching for justice. Table 1 displays the PDSA data cycles and activity system we drew on for this study.

Table 1.

PDSA Cycles–SY 2019–2020

PDSA Focus	Dates	PDSA Goal	Activity System
PDSA 1 Collaboration with MTs	Fall 2019	To determine if MTs access and use coaching tools	Indirect Support

PDSA 2 Collaboration with MTs	Fall 2019	To track and analyze MTs' implementation of coaching tools	Indirect Support
PDSA 3A/B Collaboration with MTs	Spring 2020	To examine and analyze the effect of collaborative meetings on MTs use of coaching tools	Indirect Support
PDSA 4 Course Alignment to Field Experiences	Spring 2020	To analyze the impact of teaching TCs coaching tools as a bridge between university and field-based work	Direct Support
PDSA 5 Collaborative Coaching for TCs	Spring 2020	To understand possibilities for centering equity into coaching cycles with TCs	Indirect/Direct Support
PDSA 6 Collaborative and Equity Coaching for TCs	Spring 2020	To understand possibilities for centering equity into three-way coaching cycles with TCs	Indirect/Direct Support

Data Collection

Data were collected through PDSA records, which are records of change ideas, inquiry questions, results, narratives of findings, and future actions. As change ideas are tweaked to respond to findings, new records are created and added to a set of PDSA records.

We enumerate the PDSA experience using PDSA 6 to illuminate the data collection processes. First, the PDSAs focus on goals that would strengthen the TC's network of support and experiences across the program. Before engaging in each iterative change, we asked what the goal was for the PDSA and how it attended and promoted equity. For example, in PDSA 6, the focus was on revising a three-way coaching cycle between a TC, mentor teacher, and field supervisor to center conversations of equity. Second, after goal setting, the PDSA worked through a series of planning, reflective questions, and monitoring of the goals. Again, in PDSA 6, the researcher asked, "What conversation moves work best to engage all team members in using the cross-cutting themes?" Third, the data collected for each PDSA responded to the specific goal set. In PDSA 6, the data collection included the field supervisor's ethnographic notes from the coaching sessions around language use. Fourth, the researcher completing the PDSA for that cycle would determine the salience of their findings and identify the next steps for future iterations in relation to the research questions and a focus on equity. These findings became the anchor for the analysis and findings in this paper.

These documents served as an audit trail during the collection process to support our ongoing analysis. Across the sets, we recorded results and findings from surveys administered at the close of each semester. The surveys analyzed included results from TCs (n=15), MTs (n=39), and TEs (n=6), interviews with focal participants (on average, the interviews spanned 45–60 minutes), and artifacts of experiences or courses (including instructor notes, syllabi, and in-class materials). Additional data sources beyond PDSA sets included monthly research team meeting minutes, historical surveys and records of program iterations, and ongoing analytic memos.

Data Analysis

For this empirical study, we engaged in seven rounds of analysis, beginning with open coding (Corbin & Strauss, 2015). In subsequent analysis cycles, we engaged in line-by-line a priori coding with the six elements of the CHAT system to identify the outcomes of each PDSA. Each cycle was

coded by two researchers independently before initiating a second review to resolve discrepancies. In the third round of analysis, the research team examined completed coding for emerging patterns across the PDSA cycles and categorized each cycle into direct or indirect systems. We then went back to our theory, CHAT, to make meaning with theory about what our coding revealed. We found that two activity systems were relevant to the network of support: the direct system of support (the community that supported the TCs in learning to teach) and the indirect support system focused on supporting the mentors and field supervisors. This finding guided the remainder of our analysis process. We were able to move from the first research question, which provided clarity on what the systems were, and allowed us to continue to examine *how* the systems did or did not provide opportunities to center equity.

In our fifth round of analysis, we coded each PDSA into the activity systems, direct or indirect, and reanalyzed the data by recoding PDSAs using the components of CHAT. Next, we looked within the direct system for contradictions, and then the indirect system. Finally, in our seventh and final round of analysis, we synthesized the results in a two-column table comparing the systems and contradictions. We wrote analytic summaries of each system and iteratively created CHAT diagrams based on our summaries. We again analyzed each PDSA cycle for contradictions revealed in the data and added them to our analytic summaries in response to the second research question. To conclude our analysis process, we synthesized visual representations of our findings for a final debrief as a research team.

Findings

We analyzed PDSAs using CHAT to theorize about the network of support for teacher candidates in our TPP toward justice-focused teacher education. This analysis allowed us to explore the tensions and subsequent responses in our program to address these pivotal points within the systems. We report on the two activity systems (direct and indirect) and the analysis of the contradictions within and between the systems.

The research questions intentionally offered guidance for what systems supported TCs on their preparation journeys (question one) and how the tensions within and across the systems allowed for innovations to center equity or uphold dominant views and perspectives of whiteness (question two). We found that two activity systems were relevant to the network of support: the direct system of support (the community that supported the TCs in learning to teach) and the indirect support system focused on supporting the mentors and field supervisors. The first two subsections address research question one, and the final subsection responds to research question two.

Direct System of Support for TCs

The direct system of support fostered TCs development when they were in seminars or methods courses with teacher educators, field supervisors, and peers, doing the work of planning for instruction and collaborating with peers to plan and debrief teaching. In addition, the direct system of support was evident when TCs participated in coaching cycles with field supervisors and mentors. The TCs were active members in pursuing change in this activity system.

Findings of the CHAT Analysis. We drew from our analysis of PDSAs 4, 5, and 6 to model the direct system of support (Table 2).

Table 2.

Activity System Directly Supporting TCs Experiences

Outcome	TCs are supported to build equity-focused competencies
Subject	Teacher Candidates (TCs)
Object	<ul style="list-style-type: none"> ● Involve TCs into coaching with shared language and equity frameworks ● Prepare TCs as advocates for their needs in field experiences
Rules	<ul style="list-style-type: none"> ● Complete all field experiences for certification ● Build professional and pedagogical competencies as defined by the university’s formative/summative assessment system and equity values ● Complete all related assignments to field experiences
Tools	<ul style="list-style-type: none"> ● Coaching language (huddle, co-teaching, active observation, shadow) ● Equity perspectives in cross-cutting themes ● Assignments to support language, theory, and practice
Community	Mentor teachers, field supervisors, course instructors, and cohort coordinators
Division of Labor	Course instructors provide assignments and opportunities for reflection; TCs apply new coaching language in the field experiences as facilitated by mentor teachers. Peers support learning in debriefing/reflective conversations.

Through the direct activity system, TCs are guided in experiences that *intentionally* prepare them to be equity-focused with coaches using tools and moves that support agentic learning experiences (Mosley Wetzel et al., 2023). The rules regarding coaching cycles, assignments, and assessments are well-established and available to all individuals.

Contradictions in the Direct Activity System. Contradictions are misalignments across elements of the activity system. For example, if a group does not have the tools (such as specific coaching language) to pursue the shared teaching goal, there was a contradiction between tools and objectives. Because they focus people on innovations and problem-solving, contradictions can be powerful spaces of learning for locating potential levers of change that can be transformative for systems (Engeström, 2001).

Figure 3 indicates contradictions in both systems of support, as marked by the colored lines. Here, we focus on the contradictions in the direct system.

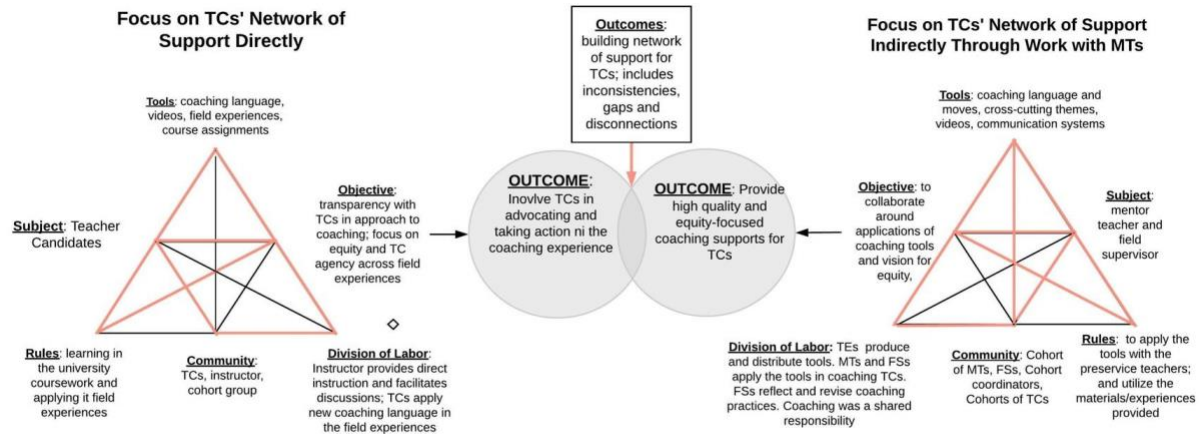


Figure 3. Structure and Contradictions in Activity Systems

Our analysis revealed contradictions at nearly all interaction points within the direct activity system. However, we were most interested in contradictions thwarting our objectives and outcomes regarding a pedagogical and instructional focus on equity.

First, we identified a contradiction between the rules, tools, and objectives of the direct activity system. This is consistent with literature describing how evaluative, accountability-oriented policy and institutional practices often distract from the equity focus of TPPs (e.g., Clayton, 2018). However, within this contradiction, we also found the requirement of mentors and coaches to evaluate TCs *illuminated the need for innovations* in how to center justice-focused perspectives. In this way, the data demanded field supervisors design new ways to incorporate equity lenses into the formal coaching experiences. For example, one field supervisor brought the university's justice-centered, cross-cutting themes as a tool to guide coaching conversations (PDSA 5 and 6). Serving first as an innovation, the data later revealed further contradictions, reigniting the inquiry cycle. The TCs experienced contradictions in authentically centering equity through their coaching conversations and instructional decisions *because of* the evaluation requirements. One TC reflected,

Part of me just hates standing up in front. [...] is it necessary for me to teach up front? What other ways can we do it? Or I can conference with everything they do, and I love that, because you can hear them learning from each other. It's more engaging. If you mix up a group [...] they can figure it out. I think it's richer. But then, *it's against tradition* [...] is there more value in teaching up front, Maybe? Maybe not.

The formal rules of the system required an evaluative report monitoring TC progress to the State Education Board for certification, but given that the evaluation only tangentially engaged issues of equity (i.e., through differentiation in the classroom), it deterred from the objective of the activity system: supporting equity-focused practices. This disconnect echoes the literature that suggests that standardization and accountability in TPPs can be in tension with movements towards more justice-focused teacher education practices (Bomer & Maloch, 2019; Sleeter & Owuor, 2011).

A second contradiction experienced by the subjects, TCs, was unique to our Intern I experience. Two TCs were paired together with one mentor teacher, which in some ways, limited how they navigated the social interactions necessary for mentorship. It was hard for two interns to receive the attention they needed (namely coaching interactions) with their mentor teacher in classrooms where teachers are always pulled in multiple directions. Per this contradiction between rules and division of labor, one TC noted: "So if Jessica was using one of the coaching tools, I would step back and let her have her chance to do it. I think for myself, I didn't really try any of these coaching tools until the end because I didn't feel comfortable" (PDSA 4).

The lack of clarity on who would assume the labor of coaching/requesting coaching moves reflected a disconnect between community members in the indirect system of support (i.e., mentor teachers and cohort members/colleagues). This tension caused interpersonal challenges (TCs-TCs) and uncertainty (TCs-MTs) on how to coach *while focusing on the intended outcome* of the system related to advocacy and equity. In addition, the time desired for authentic engagement diminished. Moving towards justice required coaching innovations to afford collaborative and non-hierarchical mentoring, where TCs become active decision-makers about their teaching. However, the pairings resulted in only some TCs becoming active decision-makers and others maintaining passive roles. This tension in passivity relates to the scholarship in moving beyond cultural awareness to more critical and active perspectives of their teaching (e.g., Land, 2018; Sleeter & Owuor, 2011).

A third tension arose around remote learning. TCs were unable to utilize all coaching tools because their internships halted when COVID-19 closed schools. Our interpersonal coaching tools were not yet nimble enough to adapt to the remote setting, and because our partnerships with communities and schools were grounded in known habits rather than authentic and bidirectional partnerships (Zeichner, 2021), the contradictions that emerged ranged across tools, community, and division of labor. Reorienting the rules of the system revealed, once again, a need for continued innovations by magnifying contradictions and shortcomings within the system. This tension highlighted the social and procedural disconnections between systems that interact in support of TCs.

Indirect System of Support for the TCs

We draw on data from PDSAs 1, 2, 3A, 3B, 5, and 6 to illustrate the indirect system of support. The indirect system of support reframes the activity system of “school” and includes community members from both the TPP and the school district.

Findings of the Analysis of PDSAs. Through our analysis of PDSAs, we found the indirect system of support can be generally described as follows (Table 3).

Table 3.

Indirect Support for TCs

Outcome	MTs and TEs support TCs to build equity-focused competencies.
Subject	Mentors field supervisors, mentor teachers, course instructors
Object	<ul style="list-style-type: none"> ● Bring Mentors into coaching through shared language and experiences ● Continue improving coaching by engaging with tensions
Rules	<ul style="list-style-type: none"> ● Mirror that of the direct system to utilize materials (e.g., assessments, coaching tools, Cross-Cutting Themes) to support TCs. Along with the rules of the direct system related to TCs expectations, the rules of the indirect system relate to utilizing the materials (e.g., assessments, coaching tools, Cross-Cutting Themes) in ways that support the TCs.
Tools	<ul style="list-style-type: none"> ● Coaching language ● Cross-Cutting Themes (equity), mentoring ● Assignments that include language, theory, and practice
Community	Mentor teachers, field supervisors, course instructors, cohort coordinators
Division of Labor	<ul style="list-style-type: none"> ● Course instructors provide reflective experiences. Peers support learning in debriefing/reflective conversations ● Directors and FSs distribute and monitor tools with MTs ● MTs and FSs apply the tools in coaching TCs ● FSs reflect and revise equity-centered coaching practices ● Shared responsibility is supporting TCs through coaching

The community is the same in both the direct and indirect systems, but the object and division of labor in the indirect system produce a more complicated route to supporting the TCs. The indirect system (as the subjects are the TCs’ mentor teachers, course instructors, and field supervisors rather than the TC) offers novel opportunities to *share responsibility* and center equity through coaching, making it an interesting focal point for design-development research.

Contradictions within the Indirect System. Given our emphasis on bringing alignment to two activity systems in terms of justice-oriented preparation, we anticipated contradictions (again, see Figure 3) related to the objective of preparing equity-focused TCs through the support of mentors and field supervisors. One example of a contradiction in the direct system included TCs experiencing a mismatch between what their TPP emphasized and what they saw in their schools (Mosley Wetzell et al., 2018). Zeichner et al. (2015) highlighted the ways social justice efforts embedded in TPPs often neglect to address true partnerships between TPPs, schools, and communities, requiring TCs to align their experiences independently.

The first contradiction related to the subject (mentor teachers), object (coaching), and tools (materials and shared language). Without strong relationships between the TPP and district partners, we needed a process for developing coaching tools with, or alongside, district partners. To remedy this, we introduced, explored, and reflected upon the coaching tools with mentor teachers via an in-person professional development (PD) model. The PD became a productive space to build understanding between the program and the mentor teachers. We identified tensions regarding how to access the tools and how to integrate the tools into their existing practices for mentoring. Finally, we identified tensions in terms of differentiation, as the tools were not tailored to account for prior knowledge. These tensions exacerbated already significant tensions related to contradictions that exist for mentor teachers who have competing objectives in their roles as classroom teacher and mentor teacher.

A second contradiction existed in mentors' negotiations between mandated assessment systems and justice-focused practices. Our analysis of PDSA 5 and 6 informed our modeling of both the direct and indirect systems, as we identified aspects of the direct system (field supervisor supporting TC) and indirect (field supervisor collaborating with the mentor teacher) within these PDSAs. The field supervisor wanted to follow the TCs' lead in disruption but also wanted to ground the conversation in the required evaluations. She reflected:

I was surprised how the (already trimmed down) questioning regarding equity was “too much” for the work of the mid-term conference. I felt that it was extraneous to the purpose of the meeting. However, when I asked them to just choose a word or words that resonated with them, it bridged the conversation into goal setting and focused the depth of why we do this work (PDSA 6).

The field supervisor community articulated the contradictions between the objective and the tools and rules of the system.

Examining Tensions In and Between Networks. This final section of the findings explores the second research question of how the tensions in and between the direct and indirect networks of support related to the pursuit of an equity focus in the TPP. Separating direct and indirect systems of support in the model brings attention to the TCs, mentor teacher, and field supervisor and the intersectional outcomes between activity systems. For example, the indirect system adds additional rules, division of labor, and objects because it focuses on the design, fieldwork, coursework, and mentoring relationships that support TCs. Typically, TCs are considered as working within competing activity systems based on settings (i.e., the university and K–12 schools). However, this new orientation allowed us to examine how partnerships, collaborations, and the roles of communities as embedded within these systems, related to the outcome of equity-focused experiences. Rather than settings being viewed as separate entities, we centered TCs' experiences amid the two activity systems, focusing on the outcome of their pedagogical and instructional decisions for and with children in schools. Further, by looking at the subjects of the

activities (in our case, the MTs and TCs separately), we uncovered and exposed how additional contradictions led to potential strengthening of the network of support.

Our historical analysis of the interactions took into consideration the influence of whiteness on the rules of the system, which often focus on directive and unidirectional relationships and processes (Zeichner, 2021). Since mentors and field supervisors assess TCs' performance individually, the roles are not oriented toward collaboration or reciprocity (Sleeter, 2017). Each PDSA cycle or set illustrated contradictions, leading us to revise our partnerships (Ladson-Billings, 2015). For example, because analysis revealed that the direct system interrupted patterns of TC passivity often seen in coaching conferences, we positioned TCs as active agents in their learning by giving them choices in how they used the cross-cutting themes to reflect on their teaching. Subsequent PDSAs reoriented participation in terms of whose experiential knowledge and voices were valued, disrupting the normative whiteness that is pervasive in teaching and education.

Through each design development iteration, we strengthened the network of support for TCs by bringing the rules, tools, and objectives of the systems into closer alignment. Our choices to innovate within these existing divisions of labor reflect the practicality of design-development research—we focused on small changes to shift the system. Contradictions between the activity systems reflected a lack of clarity of justice-focused coaching, different understandings of the tools, and whose responsibility it was to leverage the tools provided. While the outcomes were aligned in providing support for TCs to develop equity-focused pedagogical and instructional knowledge, the objectives' disconnections challenged people within each context to support the TCs through coaching. Thus, the contradictions between the systems highlighted spaces for continued inquiry around a shared vision and specific implementation of equity-oriented instruction and coaching. We engaged in three efforts that aligned with the activity systems in our existing partnerships.

The first contradiction *between the systems* was related to the different ways direct and indirect systems endeavored to center justice-focused language into coaching cycles. In the indirect systems, the tools were intended to disrupt expert-novice binaries in coaching, but they were not always explicitly centered around equity, leaving the implementation up to individual teachers. In response to this contradiction, one PDSA iteration explored preparing field supervisors to use equity-focused cross-cutting themes. However, we did not make the same design-development revision to the direct supports, nor did we explore how leveraging the same tools might bring more alignment between the two systems. This rupture between the systems created new areas to expose future iterations. We see a continued need to examine the alignment between the tools' practicality and an explicit focus on equity.

The second contradiction related to the lack of alignment in division of labor and community objectives. We made small changes in the division of labor among the community in both systems, but because the indirect system lacked clarity on the equity focus, mentor teachers felt burdened by the extra coaching. In the direct system, this created a tension in prioritizing labor (i.e., paperwork vs. cross-cutting themes). The lack of alignment between the two systems fueled competing tensions and confusion in the implementation of the objectives and outcomes.

Discussion

In the following discussion, we address the affordances and limitations of using third-generation CHAT, and how the results extend theoretical assumptions in the field—using CHAT allowed for a more objective view of the activity systems in the PDSAs to explore the

contradictions closely. The a priori coding of the records provided a lens for analysis that looked at networks from a wide-angle view rather than individual experiences, which is often the focus of research on TPPs' efforts toward equity (Darling-Hammond, 2006).

Limitations of this study stemmed from the structure of the analysis, de-emphasizing interpersonal and interactive aspects of the changes. Additional analyses might show how these individual changes contributed to TPP development and more specifically, in exploring challenges and resistance to equity and more diverse experiences in teacher education. Additionally, CHAT orients the analysis to the historical and critical aspects of activity systems. Still, it does not provide the analyst with the same kinds of tools of approaches such as critical race theory (Ladson-Billings, 1999), which could focus on the counternarratives of community members in each system as well as the ways the systems are resistant to change when such changes disrupt whiteness and privilege within it.

TCs' Networks of Support

As justice-focused teacher educators, we always consider systems and how to make sustainable and important changes to our program. The first system we analyzed was the direct network of support for TCs, which included moments where TCs were active members in pursuing transformation towards equity-focused instruction. By mapping out CHAT elements aligned (or misaligned) to the objective of the system, we determined that direct support for TCs occurred during coursework, during intentional planning and coaching cycles with mentor teachers and field supervisors, and when TCs collaborated with peers around instruction. The second system included indirect support when mentor teachers, field supervisors, and course instructors were the subjects of analysis. This process showed evidence of how the indirect system impacted TCs (e.g., when mentor teachers received professional development on specific coaching protocols). Examining the indirect system of support illuminated the importance of a shared responsibility in TPPs and opportunities for innovation by first supporting the TCs' mentors.

Included in equity-centered changes are how programs communicate and align for TCs across the network of support in their university experiences and field placements. Identifying the indirect and direct systems through our analysis of the systems' rules and division of labor disrupted the whiteness often centered in TPPs. Additionally, through our analysis across direct and indirect networks of support, we identified the importance of a coherent and collaborative network of support in preparing TCs with professional and pedagogical practices for equity.

The Role of Tensions Between Networks of Support

Our study explored a programmatic view of equity and justice transformations in a TPP by analyzing PDSAs in courses and field experiences. The networks of support became an essential tool for examining how tensions and disconnects occurred for TCs, especially regarding centering equity in their pedagogy and practice. Utilizing the CHAT framework to enhance our justice-focused language and tools through the indirect coaching system to position TCs as active participants. This allowed an exploration of how individual priorities align or contradict across individual coaching, course experiences, and peer supports that have been established as helpful in building cultural consciousness and reflexivity (e.g., Land, 2018; Payne et al., 2017; Skerrett & Williamson, 2015). Our analysis also revealed institutional barriers, such as tensions between teacher preparation accreditation requirements and social justice initiatives that hinder TCs and mentor teachers' abilities to embed justice-focused language and practices consistently.

Decades of previous research on teacher preparation for social justice illuminate the limitations of changing a single course or experience without looking at the larger systems that reproduce inequity. Our study expands on the current literature by expanding beyond “small-scale case studies” (Sleeter & Owuor, 2011, p. 535) of the theory-to-practice divide in enacting social justice (e.g., Chubbock, 2010; Pollock et al., 2010) furthering Zeichner et al.’s (2015) call for democratizing approaches to emphasize justice-focused praxis.

Implications

We are motivated by this research to explore future iterations of justice-focused changes to this system of support. We have identified three areas for future inquiry with design-development PDSA research:

- 1) How can we shift the division of labor in the direct system to provide TCs with ownership in the coaching process? We assume responsibility for their active growth as teachers, as *their future students* (the children) deserve teachers who possess habits of critical reflection and inquiry. Teachers can recognize when a system is not safe for all humans *while also working inside the system* to change it. What further curriculum refinements of the TPP are necessary to support agency and inquiry? What will it take to make justice-focused praxis the project of the TC moving through the TPP?
- 2) The premise of PDSAs is to make small changes to existing systems, document changes, and decide whether changes should be adopted, further changed, or abandoned. In our novice attempts to use this method, we have not asked the question of disruption: What are we ready to abandon that may no longer serve us or our teachers? Sending out materials with coaching tools and incorporating the university cross-cutting themes into the existing evaluation structures, we neglected to be truly disruptive. How can we better recognize and minimize burdens we place on our partners in teacher education, such as mentor teachers of color, when they navigate whiteness in implementing justice-focused reforms?
- 3) How do we increase the frequency and effectiveness of conversations and dialogue around tools for coaching, such as the language of equity-focused teaching? Recognizing the multiple pressures, powers, and players inside the process of “becoming a teacher” is one way also to pinpoint places to improve TPPs collectively. For example, if we’re not “on the same page” or “speaking the same language” as our community colleagues (mentor teachers, school district personnel, families, and students), then the complexity can feel more daunting than necessary, or worse, contain oppressive or harmful irregularities that are reproduced without scrutiny. Further, this dialogue should be centered around continued efforts to amplify the diversity of perspectives, voices, and experiences across both direct and indirect systems of support.

Our application of third-generation activity theory to studying program iterations to bring alignment towards social justice informs policymakers and practices in the field to be in solidarity with district partners and community stakeholders. Analyses of activity systems can be done in collaboration with program leaders to support their understanding of the numerous components of systems and the tensions, or opportunities, for change. Following such collaborative work, researchers can create policy briefs that illustrate the models of how change requires attention to tension within and between activity systems. Further, this analytic method could be used to research how policies impact practice. For example, recent legislation mandating the science of reading curriculum in teaching and teacher education could be studied using this approach,

informing policymakers of resources needed to support administrators, teachers, and programs to innovate, design, and implement new policies.

Conclusion

An expanded notion of communities, using CHAT, can aid researchers in understanding local perspectives of systems and potentially center the unique and diverse perspectives of all educators in the system, particularly in response to contradictions. When educational responsibility is distributed, we can collectively envision a research program that centers diverse and common perspectives on building theories of undertaking transformational change.

References

- Birdyshaw, D., McGriff, M., Ro, J., Fine, J., Swaggerty, E., Rutherford, A., Tancock, S., Leach, A. (2017) Beyond state requirements: Examining teacher preparation for literacy instruction in United States teacher education programs. *Literacy Practice & Research*, 43(1), 15–25.
- Brown, K. D. (2013). Trouble on my mind: Toward a framework of humanizing critical sociocultural knowledge for teaching and teacher education. *Race Ethnicity and Education*, 16(3), 316–338.
- Bomer, R., & Maloch, B. (2019). Lessons for leaders on the preparation of literacy educators. *Journal of Literacy Research*, 51(2), 259–264. <https://doi.org/10.1177/1086296X19833779>
- Bryk, A. S., Gomez, L. M., Grunow, A., & LeMahieu, P. G. (2015). *Learning to improve: How America's schools can get better at getting better*. Harvard Education Press.
- Chubbuck, S.M. (2010). Individual and structural orientations in socially just teaching: Conceptualization, implementation, and collaborative effort. *Journal of Teacher Education*, 61(3), 197–210. <https://doi.org/10.1177/0022487109359777>
- Clayton, C.D. (2018). Policy meets practice in New York State: Understanding early edTPA implementation through preservice candidates' eyes. *Teacher Education Quarterly*, 45(3), 97–125.
- Cochran-Smith, M. (1991). Learning to teach against the grain. *Harvard Educational Review*, 61(3), 279–311.
- Corbin, J., & Strauss, A. (2015). *Basics of qualitative research: Techniques and procedures for developing grounded theory* (4th ed.). Sage.
- Darling-Hammond, L. (2006). Constructing 21st-century teacher education. *Journal of teacher education*, 57(3), 300–314. <https://doi.org/10.1177/0022487105285962>
- Dunham, H. & Alexander, K. (2022). Applying an Intersectional Framework to the Literacy Worlds of Preservice Teachers. *The Journal of Language and Literacy Education*, 18(1), 1–23.
- Edelson, D.C. (2002). Design research: What we learn when we engage in design. *The Journal of the Learning sciences*, 11(1), 105–121. https://doi.org/10.1207/S15327809JLS1101_4
- Engeström, Y. (2001). *Activity theory and social capital*. Center for Activity Theory and Developmental Work Research, University of Helsinki.
- Engeström, Y., & Glăveanu, V. (2012). On third generation activity theory: Interview with Yrjö Engeström. *Europe's Journal of Psychology*, 8(4), 515–518. <https://doi.org/10.5964/ejop.v8i4.555>
- Eppley, K., & Shannon, P. (2017). Practice-based evidence: Intelligent action inquiry for complex problems. *Literacy Research: Theory, Method, Practice*, 66, 389–405. <https://doi.org/10.1177/2381336917719685>
- Foot, K. A. (2014). Cultural-historical activity theory: Exploring a theory to inform practice and research. *Journal of Human Behavior in the Social Environment*, 24(3), 329–347. <https://doi.org/10.1080/10911359.2013.831011>

- Floden, R. E., Carter Andrews, D. J., Jones, N. D., Marciano, J., & Richmond, G. (2021). Toward new visions of teacher education: Addressing the challenges of program coherence. *Journal of Teacher Education*, 72(1), 7–10. <https://doi.org/10.1177/0022487120976416>
- Kretchmar, K., & Zeichner, K. (2016). Teacher prep 3.0: A vision for teacher education to impact social transformation. *Journal of Education for Teaching*, 42(4), 417–433. <https://doi.org/10.1080/02607476.2016.1215550>
- Ladson-Billings, G. (2015). Social justice in education award lecture. *American Educational Research Association*.
- Ladson-Billings, G.J. (1999). Chapter 7: Preparing teachers for diverse student populations: A critical race theory perspective. *Review of research in education*, 24(1), 211–247. <https://doi.org/10.3102/0091732X024001211>
- Ladson-Billings, G. (1995). Toward a theory of culturally relevant pedagogy. *American educational research journal*, 32(3), 465–491.
- Land, C. L. (2018). Examples of c/Critical coaching: An analysis of conversation between cooperating and preservice teachers. *Journal of Teacher Education*, 69(5), 493–507. <https://doi.org/10.1177/0022487118761347>
- Leonard, S.Y., Moulton, M.J., & Andrews, P.G. (2021). Redefining “boundary-spanning teacher education” for critical clinical practice. *Peabody Journal of Education*, 96(1), 22–31. <https://doi.org/10.1080/0161956X.2020.1864243>
- Lewis, C., Enciso, P., & Moje, E.B. (Eds.). (2007). *Reframing sociocultural research on literacy: Identity, agency, and power*. Lawrence Erlbaum Associates.
- McDonald, M.A. (2005). The integration of social justice in teacher education: Dimensions of prospective teachers’ opportunities to learn. *Journal of Teacher Education*, 56(5), 418–435. <https://doi.org/10.1177/0022487105279569>
- Mosley Wetzel, M., Hoffman, J.V., Roach, A.K., & Russell, K. (2018). Practical knowledge and teacher reflection from a practice-based literacy teacher education program in the first years: A Longitudinal study. *Teacher Education Quarterly*, 45(1), 87–111. <https://www.jstor.org/stable/90018184>
- Mosley Wetzel, M., Skerrett, A., Maloch, B., Flores, T. T., Infante-Sheridan, M., Murdter-Atkinson, J., Charlene Godfrey, V., & Duffy, A. (2020). Resisting positionings of struggle in “science of teaching reading” discourse: Counterstories of teachers and teacher educators in Texas. *Reading Research Quarterly*, 55(S1). <https://doi.org/10.1002/rrq.358>
- Mosley Wetzel, M., Holyoke, E., Alexander, K., Dunham, H., & Collins, C. (2023). *Coaching in communities: Pursuing justice, teacher learning, and transformation*. Harvard Education Press.
- Nieto, S. (2000). Placing equity front and center: Some thoughts on transforming teacher education for a new century. *Journal of Teacher Education*, 51(3), 180–187. <https://doi.org/10.1177/0022487100051003004>
- Payne, K.A., Hoffman, J.V. and DeJulio, S. (2017). Doing democracy through simulation, deliberation, and inquiry with elementary students. *Social Studies Research and Practice*, 12(1), 56–69. <https://doi.org/10.1108/SSRP-03-2017-0009>

- Picower, B. (2012). *Practice what you teach: Social justice education in the classroom and the streets* (Vol. 13). Routledge.
- Pollock, M., Deckman, S., Mira, M., & Shalaby, C. (2010). "But what can I do?": Three necessary tensions in teaching teachers about race. *Journal of Teacher Education*, 61(3), 211–224. <https://doi.org/10.1177/0022487109354089>
- Reinking, D., & Bradley, B.A. (2008). *On formative and design experiments: Approaches to language and literacy research* (Vol. 3). Teachers College Press.
- Roth, W., & Lee, Y. (2007). Vygotsky's neglected legacy: Cultural-historical activity theory. *Review of Educational Research*, 77(2), 186–232. <https://doi.org/10.3102/0034654306298273>
- Skerrett, A., & Williamson, T. (2015). Reconceptualizing professional communities for preservice urban teachers. *The Urban Review*, 47(4), 579–600. <https://doi.org/10.1007/s11256-015-0325-x>
- Sleeter, C. E. (2017). Critical race theory and the whiteness of teacher education. *Urban Education*, 52(2), 155–169. <https://doi.org/10.1177/0042085916668957>
- Sleeter, C. E., & Owuor, J. (2011). Research on the impact of teacher preparation to teach diverse students: The research we have and the research we need. *Action in Teacher Education*, 33(5–6), 524–536. <https://doi.org/10.1080/01626620.2011.627045>
- Stahl, N. A., King, J. R., & Lampi, J. P. (2019). Expanding Approaches for Research: Design Research. *Journal of Developmental Education*, 42(3), 29–30.
- Vygotsky, L. S. (1978). *Mind in society: The development of higher psychological processes*. Harvard University Press.
- Yamagata-Lynch, L. C. (2010). *Activity systems analysis methods: Understanding complex learning environments*. Springer Science & Business Media.
- Zeichner, K. (2021). Critical unresolved and understudied issues in clinical teacher education. *Peabody Journal of Education*, 96(1), 1–7. <https://doi.org/10.1080/0161956X.2020.1864241>
- Zeichner, K. (2020). Preparing teachers as democratic professionals. *Action in Teacher Education*, 42(1), 38–48. <https://doi.org/10.1080/01626620.2019.1700847>
- Zeichner, K., Payne, K.A., & Brayko, K. (2015). Democratizing teacher education. *Journal of Teacher Education*, 66(2), 122–135. <https://doi.org/10.1177/0022487114560908>
- Zeichner, K. M. (2009). *Teacher education and the struggle for social justice*. Routledge.