Connecting University Course Work and Practitioner Knowledge through Mediated Field Experiences

By Sara Sunshine Campbell & Teresa K. Dunleavy

Teacher preparation in the United States, both university based and alternative, has been strongly critiqued as ineffective when it comes to preparing new teachers (Boyd, Grossman, Lankford, Loeb, & Wyckoff, 2009; Levine, 2006; Lortie, 1975; Walsh, 2001). Recent reports such as those by the National Council for the Accreditation of Teacher Education (2010) and the American Association of Colleges of Teacher Education (2013), while crediting teacher education for working toward making significant improvements, voiced concern for issues still needing improvement, including field experiences and the lack of diversity in the teacher workforce. Although many stakeholders would agree that there is room for improvement in teacher education in the United States, the country is deeply divided about how to accomplish such change (Levine, 2006; Zeichner, 2010). Although many criticisms have been directed at alternative teacher education, we center this article on university-based teacher education because approximately 70% of our nation's teachers are certified through these programs (U.S. Department of Education, 2013).

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Perhaps one of the most common critiques of university-based teacher education is the gap between what preservice teachers learn in their preparation programs and the implementation of those ideas and practices in the nuanced contexts of public schools (Darling-Hammond, 2009). This gap has been called the *two-worlds pitfall* (Feiman-Nemser & Buchmann, 1985) and the Achilles' heel of teacher education (Darling-Hammond, 2009), signaling the significance of the issue. Teacher preparation occurs in two distinct settings, university and field, and it is often left to the novice teacher to navigate the gap between course work and fieldwork (Britzman, 2003).

University-based teacher preparation is gaining attention for working to increase the level of connectedness between course work and teacher candidates' (TCs') experiences in the field. Brouwer and Korthagen (2005) found that teachers' performance during their induction years was positively influenced by opportunities they had been given to relate practical experience to their academic course work during their teacher education programs. Darling-Hammond (2006) studied several exemplary university-based teacher education programs, finding that teachers were better prepared for teaching when course work in the university was related to their practical experiences in the field. Allen and Wright (2014) found that when TCs' course work assessments were rooted in field experiences, TCs reported feeling more competent to teach. Horn and Campbell (2015) found that when mathematics methods instructors debriefed classroom observations with novice teachers and the classroom teacher, novice teachers were provided opportunities to develop their *pedagogical judgment*, or ways to become responsive to the particularities of students and contexts.

Findings on the importance of the relationship between course work and fieldwork are significant because they are a potential response to the critique of an overemphasis on academic course work disconnected from the realities of the classrooms and communities that teachers are being prepared to enter (Zeichner, 2010). Common responses to the overemphasis on course work are to increase the length and frequency of field placements. However, recent studies have also shown that although the quality of a field experience has significant positive effects on teacher candidate outcomes, such as perceived competence, the duration of field experiences had no significant effect (Caprano, Caprano, & Helfeldt, 2010; Ronfeldt & Reininger, 2012). Rather than simply recommend more time in the field, these studies advocate for research in teacher education addressing the structures and activities that constitute quality field experiences.

Recently, aligning course work and fieldwork has been constructed around practice-based teacher education where novices decompose, represent, and approximate key sets of teaching practices (see, e.g., Ball & Forzani, 2009; Forzani, 2014; Grossman et al., 2009; Lampert et al., 2013). McDonald, Kazemi, and Kavanagh (2013) provided novices opportunities to enact a core set of practices, first in a *controlled* setting (university methods course), then in a *designed* setting (methods course situated in a K–12 classroom), and finally in an *authentic* setting (student

teaching or practicum classroom). Whereas research in practice-based teacher education provides teacher educators with a pedagogy that aims to connect course work and fieldwork, this article responds to the need for further investigation of specific practices, activities, and structures in teacher education that can support the course work–fieldwork connection. Furthermore, this study features one way in which K–12 teachers' knowledge and expertise can be leveraged to connect course work and fieldwork.

This research study responds to the call for empirical evidence addressing the course work–fieldwork gap (Cochran-Smith et al., 2015). Because we know that teacher learning is supported by intentionally connecting teacher education programs to field placements, we assert that research must look more closely at the ways in which teacher education can successfully bridge what is learned in the university and what is learned in the field. In this study, we examine how one university-based secondary teacher education program utilized mediated field experiences (MFEs) during TCs' first quarter in their four-quarter master's in teaching program.

It is often the case in teacher education that TCs are first provided opportunities to learn about teaching in the university and then sent out into the field to practice what they have learned. It is not common for methods instructors, who are responsible for teaching the desired practices and pedagogy to the novices, to witness how the novices take up those practices in the field. Nor do methods instructors have a sense of the classroom environment, the school and community contexts, or the practices that are valued in the classrooms in which the novices are asked to observe.

The five methods faculty of this teacher education program designed MFEs as university–school partnerships that worked to bridge the course work–fieldwork gap. In the MFE, the methods instructors traveled into the field with the TCs and engaged with the partner teachers and TCs in activities centered on teaching and learning. The structures and activities of the MFEs varied across the five methods courses and included activities such as observing, interacting with students during small group work, and teaching lessons.

The MFEs at this university were enacted in different ways, yet they embodied a similar vision for supporting TC learning. One goal of the MFEs was to provide all TCs with a similar, shared experience in a classroom where the TCs, along with the university faculty and partner teachers, could raise questions about the relationship between teaching practices and student learning. With the goal of mediating the observation of teaching practices situated in the realities of urban, public school classrooms, the university instructors and partner teachers worked collaboratively to draw links between what the TCs were learning in the university and what they experienced in the field. The MFEs varied among the content methods courses, including variations in their content, in their length, and in the aspects of the MFE the instructors chose to mediate. However, each variation of the MFE enacted the program goal of connecting field experiences to what was learned in the methods courses and other university course work.

In this study, we explored the relationship between the university instructors' goals for the MFEs and the structures and activities of the MFEs. We asked the following:

1. What were the university instructors' goals for the MFEs?

2. What was the relationship between the university instructors' goals and the structure and activities for the MFEs?

3. In what ways did the structures and activities of the MFE become mediating tools for placing TC learning at the center of the activity system?

Theoretical Framework: Cultural–Historical Activity Theory

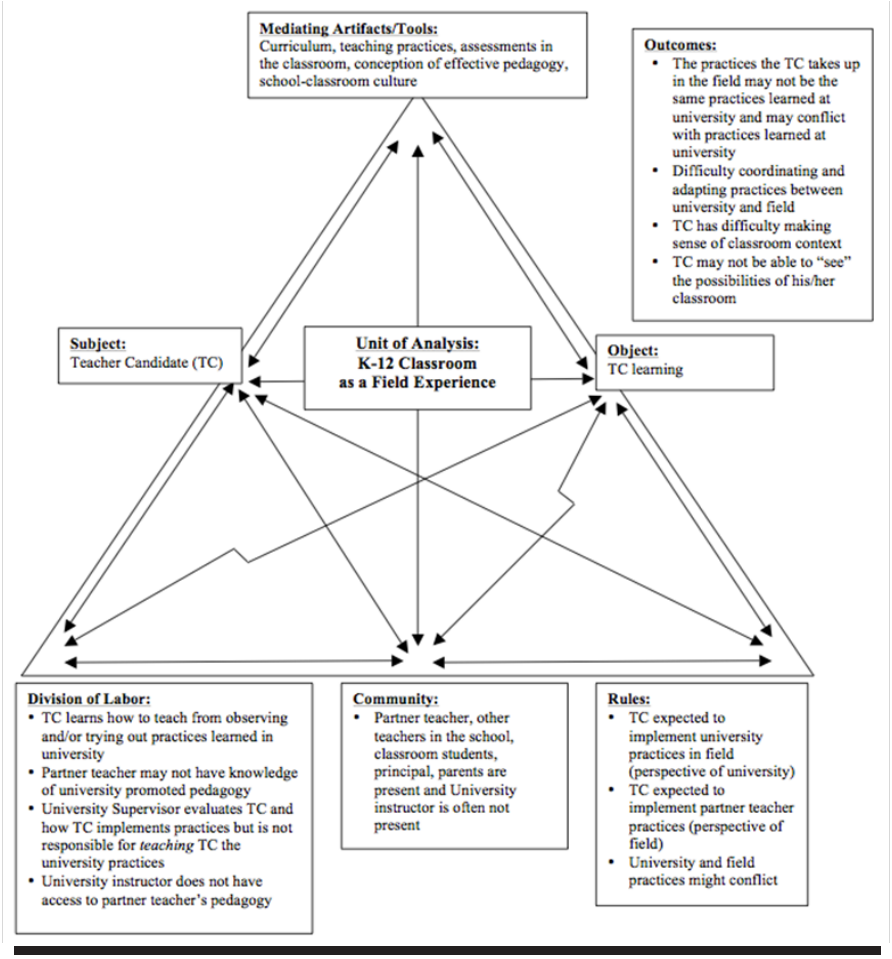
Cultural–historical activity theory (CHAT), which originated from activity theory, addresses the long-standing tension between the individual and society through developing the activity system as the unit of analysis (Roth & Lee, 2007). Activity theory focuses attention on the learning that is revealed by an individual's use of socially, culturally, and historically situated conceptual and material tools. CHAT expands on activity theory by viewing the act of learning as situated within cultural and historical contexts where interactions between the *subject* (learner) and the community are mediated by rules and artifacts and by the negotiation of power and responsibilities (Anderson & Stillman, 2012; Ellis, Edwards, & Smagorinsky, 2010).

Researchers argue that field experiences are not set up for TC learning because the primary goal of a public school classroom is K–12 student learning and not TC learning (Feiman-Nemser & Buchmann, 1985). We use this article to consider how field experiences can simultaneously center on both student and TC learning. Using field experiences in K–12 classrooms as the unit of analysis, we conceptualize the course work–fieldwork gap as a contradiction within the activity system (Engeström, 2001); that is, CHAT allows us to frame the K–12 classroom as an activity system with its own *division of labor*, *community*, and *rules*. In a classroom, the object, or what is being "worked on," is student learning. When a TC is placed in a K–12 classroom for a typical field experience, the *object* of the activity system does not necessarily shift to TC learning.

Drawing on Engeström's (2001) notion of contradictions in the activity system, we view typical classroom field experience as an activity system with contradictions, or deviations from standard scripts or ways of working toward the *object*, that work to alter the *outcome* of the system (Engeström, 2000). In this case, contradictions lie between the *division of labor* and the *object* and the *community* and the *object* (see Figure 1). When the university instructor is not part of the *community* of the activity system and the TC is responsible for learning to teach by attempting to implement practices learned in the university, without

appropriate supports, the field experience may fail to serve its intended purpose: TC learning. Often mentor teachers do not have the knowledge of practices that TCs are expected to implement in the classroom and cannot adequately support the TC (Borko et al., 2000). In addition, partner teachers are rarely proportionally compensated for their work in mentoring TCs, and they must do this work in addition to their primary responsibilities of teaching the K–12 students in their classrooms. This conflict results in an activity system that has K–12 students, rather than TC learning, as the *object* of the activity system. The lack of a shift

Figure 1
Contradictions in the K–12 Classroom as Typical Field Experience Represented by Jagged Lines



in the *object* of activity, from K–12 student learning to TC learning, contributes to the course work–fieldwork gap in teacher education.

In this study, CHAT allowed us to understand how the MFEs shifted the *object* of the activity system to TC learning through its structures, goals, and practices. Our analysis of each MFE focused on how the mediating tools and structures shaped participation as well as the ways in which the structures, activities, and goals of the MFEs held TCs' learning as the *object* of activity.

Methods and Data Sources

The data for this qualitative study were taken from a graduate teacher education program located in a large research university in the northwestern region of the United States. Data collection occurred in two stages. In the first stage, data were collected extensively from the secondary mathematics methods course and the MFE for the course. In the second stage, data were collected across all five secondary content methods courses. Collecting data in these two stages allowed us to consider both widely and deeply how the instructors' goals for the methods courses directed the structure and activities of the MFEs and how these structures and activities became mediating tools for TC learning.

Data Collection of the Secondary Mathematics Methods Mediated Field Experience

The math MFE entailed seven weekly classroom observations followed by 1-hour debriefing sessions. The TCs, the university instructor, and the partner teachers were present at each observation and debriefing. In addition to the MFE, the TCs attended a weekly 3-hour methods class held on the university campus and taught by the university instructor.

The first author collected extensive data from within the secondary mathematics methods course, including the MFE. Data from the mathematics MFE included field notes from the seven high school Algebra 1 classroom observations; video recordings of the seven debriefing sessions following each field experience visit; TC course assignments; and interviews with the partner teachers, the university instructor, and 4 of the 13 TCs. The partner teacher interviews focused on the participation of the partner teachers during the MFEs, their understanding of the function and purpose of the MFEs, and their ideas about TCs' learning. The university instructor interviews focused on asking about her role and what she thought the TCs were learning. The TC interviews focused on TCs' experiences during the MFEs, their learning, and their understanding of the MFEs' purpose and goals.

Data Collection Across Other Content-Area Methods Mediated Field Experiences

The second author collected two sets of data. Semistructured interviews were conducted with instructors for world languages, social studies, science, and language arts, and field notes were gathered during MFE observations. The world language, social studies, science, and language arts instructors were each interviewed once. The interview questions focused on the goals and structures of the MFEs while seeking to understand each instructor's experiences with and expectations for the MFEs. Each interview was transcribed and coded for MFE goals and structures.

World languages, social studies, and language arts. MFEs were observed two or more times. Ethnographic field notes focused on the structure of the MFE and the various activities in which the participants engaged. Notes also attended to the roles the TCs, partner teachers, and university instructors took on during the MFE. Where possible, full conversations were captured.

Data Analysis

We drew on inductive methods of analysis, using open coding, analytic memos, and interpretive code labels (Miles & Huberman, 1994). Because we were interested in the MFEs as situated and contextualized learning spaces, we looked for relationships between the structures and activities of the various MFEs and the stated goals and purposes of the university instructors (Merriam, 2009). The data allowed the authors to analyze the different models of the MFE and how the models were structured and implemented based on the ways in which the instructors conceptualized the purpose of their version of the MFE.

After open coding during a first read of all data sources, we created memos of potential emerging themes (Merriam, 2009). We then created data analysis tables to triangulate the data across different content areas, in search of emergent findings. We chunked the data into categories and assigned codes. Initial codes that surfaced included goals, structures, partner teacher knowledge, activities, roles, and context. Because we were interested in understanding whether and how the structures and activities of the various MFEs became mediating tools for TC learning, we used broad open coding. Through triangulation of participant observations, interviews, and an analysis of documents, we were able more clearly to validate patterns we were noticing in the data. We compared results of our coding process and resolved ambiguities (Silverman, 2006). Drawing on CHAT, we focused our analysis on the social and historical structures of the MFEs and how they mediated TCs' course work and fieldwork experiences.

Findings

In this study, we sought to understand the relationship between the structures and activities of the MFEs and the resulting connections between university course work and the field. First, we found that the content methods instructors held somewhat different goals for accompanying the TCs into the field. Second, we found that structures and activities of the MFEs were dependent on the instructors' goals for TC learning. Third, although the goals that determined the structures of the content-area MFEs were different, we found that all goals worked to bridge the course work–fieldwork gap.

Mediating Teacher Candidates' Understanding of Teaching Practice and Student Learning

Across each methods course MFE, the methods faculty shared a common purpose for taking their TCs into the field. We found that their shared goal centered on bridging the gap between the ideas and practices of the methods courses and the realities of public school classrooms. Each methods instructor designed his or her MFE in partnership with practicing teachers. We found that the university instructors and partner teachers collaboratively designed activities that mediated TC learning of the concepts in the methods courses. In this section, we provide examples of how the MFE was designed in relation to the specific goals each university instructor held for his or her methods course. We describe the nature of the activities and structures of each content methods course and how these activities and structures resulted from the university instructor's goal for the MFE. Finally, we demonstrate how the structures and activities mediated connections between campus course work and field experiences.

Social studies: "Creating a shared text." Barry, the social studies methods instructor, designed the social studies MFE so that he met with the TCs once at a middle school and once at a high school. Barry and the TCs arrived a few minutes before the lesson started, received brief instructions from the partner teachers about the roles they should enact during the lesson, observed the lesson, interacted with students through lesson participation, and debriefed the lesson with the partner teachers. Barry viewed the goal of the MFE as a way to offer a common field experience the TCs could interpret and analyze together. During an interview, he said,

> A key purpose [for the MFE] is to enmesh TCs in a school classroom, together with its teacher and the university content methods professor, so that they all share a text. In this case, an experience for observation and interpretation. . . . So now what we have in the MFE is a shared text, like we do in Socratic seminar, where everybody has the same text in front of them basically. So we're able to refer back to it, because we all share that text.

Barry suggested that one of the purposes for taking his candidates into the field was

to provide them with a "shared text," or shared experience, focused on understanding what it was like to be in an urban, secondary social studies classroom. He gave the TCs the same role for the MFE as he would for a shared text in Socratic seminar: to interpret, analyze, and discuss the "text." Guided by the idea of a shared text, the candidates observed, interpreted, analyzed, and discussed the same secondary classroom lesson, often referring back to events in the lesson later on in the quarter.

Barry's goal was for the TCs to collectively experience a social studies lesson in which the partner teacher implemented some of the practices he was teaching in his methods course, such as Socratic seminar and problem-based instruction. Related to this goal, Barry thought it important that the TCs were able to notice practical aspects of being a teacher as well. He said TCs should be able to

> observe and think about really common and mundane aspects of classroom life that they can't see without mediation. They're just invisible to the novice eye. Such as, the teacher reminding students of classroom norms. Or, the way teachers deal with status differentials in the classroom. Or, the way a teacher will manage multiple goals. Or, all the classroom management things that teachers are doing that [TCs] don't see until they're pointed out.

Supporting the TCs to "notice" (Sherin, Jacobs, & Philipp, 2011) particular aspects of classroom instruction, such as how a teacher attends to academic and social status or manages his or her classroom, was an important goal of the social studies MFE. Providing TCs opportunities to notice certain aspects of classroom life allowed them to then interpret and analyze what they noticed with the support of Barry and the partner teachers.

Barry's goal of a "shared text" led him to structure the social studies MFE so that TCs could participate in a social studies lesson. The social studies students were interpreting the Langston Hughes poem "Let America Be America Again." The TCs were invited to sit in small groups with the high school students and to take on the role of group member, soliciting students' thinking and interpretation of the poem. Interacting with students allowed the TCs to simultaneously observe, work with, and analyze the students' learning, in the context of the partner teacher's lesson.

Following the lesson, the TCs debriefed with the partner teacher. TCs were invited to pose questions while Barry purposefully took on the role of facilitator, mostly remaining quiet and listening and sometimes adding to what was said or naming an idea or practice. Barry reported that the social studies TCs used this experience as a shared text across the rest of their time together in the social studies methods course to interpret what they noticed during their time in the classrooms. This shared text became a bridge between the practices the TCs were learning in their methods course and how those practices might look in a high school social studies classroom.

The science instructor and world languages instructor both expressed similar goals around creating a "shared text." David, the science university instructor,

stated that taking the TCs into the field offered opportunities to observe aspects of classroom practice David saw as important in learning to teach science. For David, the advantage was not only providing the TCs opportunities to "hear this [student] conversation, but . . . it's commonly shared across the whole cohort. And it becomes a collective object of inquiry for us." Like Barry's idea of shared text, David saw the MFE as a way to create a common experience from which to analyze teaching and learning.

Mathematics: "Increase access." For the mathematics methods course, we found that the goal for participating in the MFE was to shift TCs' notions of what it means to teach and learn mathematics. Casey, the university instructor, stated that the mathematics TCs often came into the program with predominantly teacher-centered ideas about how mathematics should be taught, often based on their own experiences learning mathematics. One of the ways Casey said she tried to support the TCs in rethinking what it means to learn mathematics was to provide them an opportunity to see that Algebra 1 students, many of whom had not previously been successful in mathematics, were quite capable of making sense of challenging mathematical ideas. In addition, she stated that the TCs needed opportunities to witness productive discourse and collaborative work, along with multiple ways of solving a problem, to see that these ways of *doing math* are all important parts of learning mathematics in the secondary schools. Casey said,

> I think it is really easy to say, "I like math, therefore I should be a math teacher." And I think we have to try to, in this course, overcome that a little bit. So opening [TCs'] eyes a little bit and also encouraging them to think about teaching mathematics, besides just conceptual understanding, . . . but teaching mathematics equitably. [The goal is] to have students access mathematics who haven't, in the past, been able to access mathematics. I think the purpose of the MFE is to bring our TCs into the field and get them thinking about the ways that students are experiencing mathematics.

In bringing candidates into the field during her methods course, Casey said she wanted to introduce TCs to the idea of increasing access to mathematics for all students, especially students who have experienced mathematics as a gatekeeper.

Based on her goal to support TCs in reconsidering how students experience mathematics, Casey structured the mathematics MFE to observe the same students and the same teacher across several weeks. The mathematics MFE was held once each week for 7 weeks. In the university course, the TCs talked about and engaged in the practices they might observe in the field. Then they observed an Algebra 1 lesson in the partner teachers' classrooms and debriefed the lesson with the partner teachers who taught the Algebra 1 course. Casey asked TCs to focus each observation around a particular pedagogical idea or practice, such as how status interactions impacted students' opportunities to learn or how the partner teachers used manipulatives to support multiple solution strategies. During the debriefing

session, the classroom teachers shared their goals for the lesson and reflected on what they thought their students learned during the lesson and what more their students needed to learn. The TCs were able to make observations about what they noticed during the lesson, as it related to the particular focus of the day, and pose questions to the classroom teachers. In addition, the TCs each interviewed one student about the student's mathematical understanding of a particular lesson.

Casey noted two important structural aspects of the MFE that provided TCs with opportunities to examine the relationship between mathematics teaching practices and student learning. She said,

> I think that we very carefully select classrooms where we believe that the TCs are going to be able to see students thinking conceptually about mathematics and not just procedurally. The first facet of that is the actual observation—being able to observe these students in classrooms, being successful. We've also strategically chosen classrooms where students haven't necessarily been successful in mathematics and where we think they are being successful, many of them, for the first time. So there is that observation piece. And then the debrief piece is important. Part of the experience [is that] I think we are trying to help them [the TCs] filter some of what they are seeing, make sense of what they are seeing, and we're trying to facilitate ways of thinking about what they have observed.

In this excerpt, Casey emphasized the importance of supporting TCs in making sense of what they noticed during the lesson. First, she commented on how the TCs observed students successfully engaging in cognitively demanding mathematics instruction, many for the first time. Second, she noted how the debriefing session facilitated the opportunity for TCs to interpret the ways in which student learning took place. In other words, the partner teachers' reflections on the lesson allowed the TCs to notice and make sense of their own observations.

To support the TCs in considering alternative ways to teach and learn mathematics, Casey structured the MFE so that the TCs were able to observe mathematics classrooms with partner teachers who implemented practices that were the focus of the methods course. In one instance, the partner teachers assigned a *participation quiz* (Featherstone et al., 2011) to their students while the TCs observed. During the debriefing session, Casey asked the partner teachers to explain the goals behind a participation quiz and how the teachers used these quizzes to support productive and equitable group work (Cohen & Lotan, 2014). Although the TCs may not have noticed or understood the rationale behind the participation quiz, asking the partner teachers to discuss why they used it is representative of the way Casey mediated what the candidates observed.

Casey said her goal was to provide TCs with opportunities to redefine what it means to teach and learn mathematics. We found that this goal determined the structure and activities of the mathematics MFE. Providing the TCs opportunities to observe teachers who taught using equitable and progressive teaching practices allowed Casey to deliberately focus the TCs' attention toward specific practices and

how those practices may have impacted opportunities for student learning. These kinds of equitable teaching practices were often the practices that the TCs might not otherwise have noticed if they had been observing a lesson on their own.

Language arts: "Being with kids who are different than they are." Alexa, the language arts university instructor, said she brought her TCs into the field to help them learn ways to build relationships with students who were "different than they are." Alexa wanted the TCs to recognize that if the TCs were going to be able to help students realize a passion for language arts, they needed also to develop ways to learn about students' interests and life experiences to establish relationships with them. In one interview, she said,

> [In past cohorts,] there were issues with the TCs thinking they really wanted to teach in high-needs urban schools and getting there, and not liking it. And wanting to be in outlying [suburban] districts. I don't want this cohort to get to that spot. So one of the reasons for doing this [MFE] at [this school] is for them to be with kids that are different than they are. Figure out how to work with these kids. And feel much more comfortable with young people. [TCs] are going to be so far ahead. Just as far as relational pedagogy. Their relationships are going to be much better grounded.

In this excerpt, Alexa shared her goals for the language arts MFE, which included creating opportunities for TCs, who claimed they wanted to work with students in high-needs schools, to get to know students and therefore to value who the students are as individuals.

To support Alexa's goal for TCs to develop what she refers to as *relational pedagogy*, Alexa structured her methods course to meet twice a week on the middle school campus. Holding the methods course entirely at the middle school worked to develop TCs' knowledge of the community in which they worked. She said,

> [We are] starting with class community. First of all, we're meeting every week, both periods at [the middle school]. So class community. Starting them off with Linda Christiansen's book *Reading, Writing, and Rising Up*, about working with African American students. And then Ron Suskind, *A Hope in the Unseen*. So, situating our language arts TCs into an understanding of some of the dilemmas that high-needs kids have.

Alexa's structure offered the language arts TCs the opportunity to become enmeshed in what it means to develop relationships with students in a high-needs school context while also helping them better understand both the richness and complexities of the community in which this middle school was located. Because the TCs were able to spend 10 consecutive weeks in the school working with students, teachers, and other community members, the TCs were able to develop strong relationships with students. These relationships supported Alexa's goal of helping TCs see the value of working in diverse urban schools.

To further utilize the middle school campus location, Alexa invited students,

administrators, and three partner teachers to lead the methods course as guest panelists and guest teachers. During these visits, TCs asked questions of the student panelists, administrators, and partner teachers related to how they develop relationships in order to teach and learn in this school community. Over the course of the MFE, TCs were paired up with at least one student in one of the partner teacher's classrooms and regularly visited these classrooms to work one-on-one with students. Alexa said this TC–student partnership afforded TCs the opportunity to learn more about students as individuals and to support their students in developing a passion for language arts.

We found that the language arts MFE school site played an important role in supporting TC learning. Alexa's primary goal for the language arts TCs was for them to develop relationships with students. She recognized that the TCs needed a special set of skills for working with students in high-needs schools and that, if she were able to support the TCs in developing these skills, they would feel more successful teaching in these schools. We found that Alexa's goal was that the TCs would develop the relational pedagogy needed to be successful as teachers in a high-needs school.

Across all MFEs, the instructors designed their MFEs based on what they wanted the TCs to learn from both university course work and field experiences. We found that these learning goals shaped the structure of the MFEs and the activities within the MFEs in ways that intentionally bridged the field and course work experiences of the TCs.

Placing Teacher Candidate Learning at the Center

We found that the university instructor and the partner teachers mediated the relationship between teaching practices and secondary student learning. Using CHAT as a framework to analyze the MFE as an activity setting, we found that, through the use of mediating tools such as the structures of and the assignments associated with the MFEs, the object of activity shifted from secondary student learning to TC learning. This shift in the activity system worked to bridge the gap between the methods course work and field experiences. For example, in the language arts course, Alexa centered the MFE on the TCs' ability to build relationships with students in high-needs schools. The goal for relationship building was mediated through the structure and activities of the MFE, namely, by situating the MFE in an urban, high-needs school and by providing the TCs with several opportunities to interact with the students, partner teachers, and administration. The location and interactions with the students, partner teachers, and administrators became the mediating tools on which the TCs drew to learn how to develop relationships with students in high-needs schools. As the TCs increasingly became members of the classroom community, they had opportunities to get to know the middle school students and staff in ways that might have better supported their ability to, as Alexa

said, "get students into" language arts. Thus Alexa, the partner teachers, and the administration mediated TC learning of building relationships with students from high-needs schools.

In the mathematics MFE, Casey, the methods instructor, said her goal was to shift the TCs' understanding of what it means to teach and learn mathematics. She said she wanted the TCs to observe instruction different from the teacher-centered instruction they had experienced as mathematics learners and to support their investigation of ways in which students thought about mathematics concepts. The MFE was situated in classrooms where the partner teachers were implementing equity-oriented group work (Cohen & Lotan, 2014) and where students were expected to collaboratively explore mathematics and justify their ideas. In addition, the TCs met with the partner teachers after every observation, where the teachers reflected on their lesson and answered questions the TCs and instructors posed. The university instructors and partner teachers mediated the TCs' learning through creating mediating tools, including observing equity-oriented teaching practices, close investigation of student discourse, student interaction during mathematics lessons, and access to the knowledge and skills of the partner teachers that were revealed during the debriefing sessions. These mediating tools were an important aspect of the MFE, as these tools served to shift the TCs' initial conceptions about the teaching and learning of mathematics.

TC learning was also mediated across the other three content MFEs (see Table 1). In all cases, the university instructors participated in the field experiences, and in all cases, the TCs were provided opportunities to interact with students. In addition, the university instructors chose to situate all MFEs in urban school classrooms where the classroom teachers' pedagogy aligned with the methods course instructors' conceptions of effective teaching practice. In fact, the university and field were bridged through the MFEs in three ways: (a) alignment of university instructor and partner teacher pedagogy, (b) opportunities to practice the interactive aspects of teaching, and (c) drawing more intentionally on partner teacher knowledge. Each of these opportunities drew on mediating tools that placed the TCs as the object of the activity system of the MFE. In the following section, we describe how each of these aspects of the MFE worked to bridge the gap between university course work and the realities of the field.

Bridging the university and the field through the alignment of university instructor and partner teacher pedagogy. In our analysis, we found that, in addition to teaching in diverse urban schools, the partner teachers were chosen because their classrooms and teaching practices encompassed some of the critical pedagogical practices that were featured in the methods course. In all instances, the university instructors partnered with classroom teachers with whom they had previously established relationships, although these relationships were established in different ways. In some cases, the university instructor–partner teacher relation-

Table 1

Goals, Structures, and Mediation Across the Mediated Field Experiences

Content	*School level*	*University instructor's MFE goals*	*MFE structures (mediating tools)*	*Aspects of TC learning the university instructors and partner teachers aimed to mediate*	*No. visits/hours*
Science	high school	to develop a sense of how one coordinates multiple teaching practices; to learn from partner teacher knowledge; to bridge teacher preparation with working in schools	observations; eliciting students' scientific thinking; debriefing with partner teacher	**listening to and eliciting** students' scientific ideas	1/5
Social studies	middle school, high school	to develop adaptive expertise; to observe teaching unfold as a problem-solving process; to establish a shared text with partner teacher, TCs, and university instructor	observations; participating in secondary class; eliciting students' social studies thinking; debriefing with partner teacher	observing, teaching, and **participating** in a social studies lesson	2/6
World languages	middle school	to bridge TCs' real experiences with pedagogy	observations; planning with partner teacher; teaching lessons	**observing, planning, and teaching** world language	4/8
Mathematics	high school	to understand student thinking; to shift expectations for what qualifies as mathematical competence; to provide the teacher candidate with a vision of student-centered pedagogy	observations; one-on-one interviews with students; debriefing with partner teachers	develop new understanding of secondary students' **competence** in mathematics	7/21
Language arts	middle school	to support TCs to be comfortable working with urban, diverse students; to allow partner teachers and the principal to facilitate TC learning	observations; one-on-one literacy work with students; workshop sessions with partner teachers as instructors	understanding the importance of **relational pedagogy**	20/47

Note. MFE = mediated field experience; TC = teacher candidate.

ship had been created because the partner teachers were graduates of the teacher education program (TEP) and had taken the methods course while enrolled in the program. In other instances, the partner teachers had received professional development from the university instructors or from the university.

Eduardo, the world languages university instructor, chose partner teachers who had graduated from the TEP. For Eduardo, a partnership with TEP graduates ensured a level of alignment between the university methods course and the field experience of the MFE. He said, "The teachers know me, and since they were all trained here, we have very similar ways of looking at pedagogy." By partnering with teachers who had recently graduated from the TEP, Eduardo was able to work collaboratively with classroom teachers who understood the practices and goals he brought to the world languages methods course and were able to share similar ideas and practices.

The partner teachers of the mathematics MFE were asked to partner with the university instructors primarily because of the work they were doing to offer equitable teaching and learning opportunities for students. In addition, some of the teachers who participated in the MFE had recently participated in a multiyear grant that supported their teaching practice through professional development. Although the two partner teachers had varying types of experience using equity-oriented teaching practices, both were committed to supporting the TCs' learning of these practices through observations in their classrooms.

Although some of the university instructors partnered with particular classroom teachers because of the alignment between their teaching practices, this was not the only reason. Alexa, the language arts university instructor, spent a number of years building a strong relationship with one principal and a few language arts teachers at a high-needs, urban middle school. As a result of this relationship, Alexa and the school's principal collaboratively designed an MFE that would support Alexa's goal of developing the TCs' relational pedagogy.

To meet their individual goals and to connect the practices and principles of the methods course to the realities of the field, all university instructors partnered with teachers whose practices and school contexts supported the goals of the MFE. In field experiences that are typically disconnected from the course work of the university, the partner teacher's classroom is often positioned as a place for TCs to apply the practices they learned in their methods courses. Partner teachers may not have experience using such pedagogies because the field placement or school context differs in what it means to be a competent teacher (Eisenhart et al., 1993; Valencia, Martin, Place, & Grossman, 2009). Because the partner teachers had a mutual interest in student-centered teaching and learning, the role of the teacher was repositioned from cooperating teacher to teacher educator. The partner teachers' pedagogies became important mediating tools to support TCs' learning, as they examined the relationship between teaching practices and secondary student learning.

Bridging university and field by practicing the interactive aspects of teaching. Research in the field of teacher education has revealed that TCs are often provided many opportunities in their teacher preparation course work to investigate and practice the preparatory and reflective elements of teaching. Yet the interactive elements of teaching are often left to field experiences (Grossman, Hammerness, & McDonald, 2009). TCs may have experiences in methods courses planning lessons, teaching lessons to their peers, and reflecting on the teaching of their lessons. We note that the interactive aspects of teaching, arguably the most difficult aspects to learn, are commonly left for the candidates' field experiences.

Some teacher preparation programs may give assignments that attempt to get at the interactive aspects of teaching while candidates are in the field. These assignments attempt to link the course work knowledge of teaching to the events that might take place in classrooms. However, when there is no one to mediate the assignment's implementation, the TCs may apply the university knowledge problematically, or they may not notice or make sense of particular features of the teaching practice that produce unexpected results.

The mathematics MFE assignment to interview students addressed the interactive aspects of teaching by providing TCs with an opportunity to investigate student thinking. It also became a mediating tool that placed TC learning at the center of the field experience. This assignment was designed to reveal that students often understand mathematics in ways that are different from what a novice teacher might assume. Before the interview, one of the TCs said he assumed that the student did not understand the concept of multiplying binomials. After interviewing this student and learning more about the way in which the content was taught by talking with the partner teachers, the TC realized that the student did have a strong conceptual understanding of multiplying binomials. The TC shared that, during the class session, "she just didn't use the terminology to which [I was] accustomed." By observing students engaging in mathematics activities while questioning the students about their mathematical understanding, followed by focused discussions with the partner teachers, the TCs were able to use the interview to experience what students understood about the mathematics. This example illustrates how participating in the interview portion of the MFE disrupted particular assumptions the TCs made about student understanding.

The language arts MFE provided TCs opportunities to build relationships with students. These activities became mediating tools to support TCs in relationship building. Because Alexa's goal was centered on relational pedagogy with students in high-needs schools, the TCs were provided opportunities to work closely with individual students during their language arts methods classes. Furthermore, because the TCs worked in the schools biweekly for 10 weeks, the TCs were able to interact with, get to know, and observe these same students several times over a relatively long time period, thus allowing the TCs to make personal connections with students.

Bridging university and field by intentionally drawing on partner teacher knowledge. Drawing on a CHAT framework for examining teacher preparation as the interaction of multiple activity systems (Roth & Lee, 2007), we assert that partner teachers are often not included in the community component of the activity system of a methods course. Practitioner teacher knowledge is historically viewed as unimportant or irrelevant to what TCs must learn as part of campus course work. Likewise, during a typical field experience, the partner teacher is part of the classroom community but may not have the pedagogical knowledge to mediate TC learning as they move between the university and the partner teacher's classroom. Even when the partner teacher does possess knowledge of what a TC is learning in the university, the university instructor may not be aware of the partner teacher's practice and may be unable to connect the field experience back to practices and principles of the methods course. We found that the structures of the MFEs enabled both the university instructors and the partner teachers to become simultaneous members of the community of the MFE in ways that transformed TC learning.

In all cases, the MFEs in this study drew on partner teacher knowledge by providing the TCs opportunities to extensively interact with the partner teachers. In most cases, time was structured in ways that allowed the partner teachers time away from their secondary students to reflect on and debrief their lesson with the TCs. The teachers were the focus of the debriefing sessions, and through discussions facilitated by the university instructors, the TCs were able to hear from the partner teachers about how particular decisions in the lesson were made, what the partner teacher intended his or her students to learn, and what more the students needed to learn. The focused discussions during the lesson debriefings were significant opportunities for both the partner teacher and the university instructors to mediate TC learning.

Resolving the Contradictions in the Activity System

In this article, we argue that the MFEs at this university worked to bridge course work and fieldwork experiences by placing the TCs as the object of the activity system. We found that the MFE afforded the TCs opportunities to practice the interactive aspects of teaching through both alignment of learning-to-teach contexts and access to partner teacher knowledge. From a CHAT perspective, we conceptualize the MFEs as a way to address contradictions in field experience activity systems. By partnering with classroom teachers who implemented practices that were aligned with those of the methods course, the division of labor in the activity system shifted from a university-based hegemony to a more democratic division of labor between university knowledge and partner teacher knowledge. Rather than positioning the partner teacher's classroom as a place to apply newly acquired practices, the partner teachers were positioned as teacher educators, thereby resolving the contradiction between division of labor and the object of the

activity system. In each of the MFEs in this study, the TCs tried out a few teaching practices in a supportive context while receiving feedback from both the partner teacher and the university instructors. For example, in the mathematics MFE, the TCs practiced high-press questioning strategies (Kazemi & Stipek, 2001) with students as a way to uncover what the students understood about mathematics. MFEs across the program provided TCs with opportunities to work on the teaching practices that are often the most challenging to teach in a university methods course absent K–12 students.

The MFEs also worked to address the contradiction between community and object in the activity system of a field experience. In traditional field experiences, the university instructor is often unaware of the teaching practices taking place in the field and is unable to mediate what the TCs learn during the field experiences. In all of the MFEs in this study, the university instructors and the partner teachers were members of the same *community* of the activity system, giving TCs access to both university and practitioner knowledge. With the partner teachers as educators who could provide critical knowledge about the school, classrooms, students, and the interaction between teaching practices and these contexts, the TCs were able to more effectively draw on the classroom teachers' knowledge in significant ways. The MFE activities provided critical knowledge about students' learning that TCs need from field experiences but that is not often available. In this study, we found that a new activity system was created, one in which TC learning became the object of the activity, through the activities and structures of the MFEs as mediating tools, and that this new activity system transformed learning opportunities for TCs.

Conclusion

For the past few decades, teacher education has most often been modeled on university instructors first teaching theory and then sending TCs into the field to practice the theory they have learned. In this study, our findings indicate that each university instructor organized the MFE around TC learning while drawing on practitioner knowledge. TCs were provided opportunities to make sense of their university experiences within the context of an MFE. Although the university instructors in this study were driven by different goals about what they wanted their candidates to learn during field experiences, their goals created structures and activities that positioned the partner teachers as teacher educators and worked to bridge the course work–fieldwork gap through mediating theory and practice.

Drawing on CHAT, we have argued that the mediating tools in this study created an activity system in which TC learning became the object of the activity. Contradictions within the activity system of a typical field experience were mitigated through aligning the pedagogical focus of the two sites (university and classroom) and by providing the TCs opportunities to learn from the partner teachers. The innovative pedagogy of the methods courses at this university provided unique opportunities

for TCs to engage with secondary students and teachers in their classrooms in ways that connected university course work and field experiences.

The logistics of designing and enacting an MFE are nuanced. In all cases, the methods instructors and partner teachers built trusting and, in some cases, long-standing relationships. In addition, the methods instructors described the need to be flexible because of the unpredictable nature of teaching and learning; they said they often modified what was mediated according to what happened during the observations. Although establishing relationships with teachers and schools is often logistically challenging, this study demonstrates the value of designing experiences in teacher education with TCs as the object of the activity system.

If teachers are to be prepared to meet the needs of the students in our country, teacher education needs ways to better connect TCs' university and school experiences (Zeichner, 2010). This study reports on the way one university responded to that call.

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