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Mentor & Intern Teacher Boundary Practices: Integrating Theory and Practice in Effective Alternative Certification Programs

By

R Page Tompkins II

A dissertation submitted in partial satisfaction of the

requirements for the degree of

Doctor of Education

in the

Graduate Division

of the

University of California, Berkeley

Committee in charge:

Professor Cynthia Coburn, Chair
Professor Judith Warren Little
Professor Susan Stone

Spring 2011

Mentor & Intern Teacher Boundary Practices:
Integrating Theory and Practice in Effective Alternative Certification Programs

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By

R Page Tompkins II

Abstract

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Doctor of Education

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Professor Cynthia Coburn, Chair

Alternative certification programs for primary and secondary school teachers face a difficult challenge: they must develop highly qualified and high quality teachers while adapting to the unique on-the-job training needs of their participants. Research literature indicates that many programs suffer from a lack of cohesion between coursework and fieldwork, with a resulting sense of fragmentation on the part of participating teachers. The literature points to relevant and applied coursework combined with mentoring as possible remedies. However, little in the research literature describes the actual mentor practices and program design features that can accomplish this integration. This study addresses that gap, describing mentor practices and program design elements that foster theory and practice integration in effective alternative certification programs. Utilizing a cross case study design, I studied four mentor-novice pairs in two alternative teacher credential programs. Drawing conceptually on the theoretical literature on situated learning in communities of practice, I develop a means of categorizing mentor and novice practices as planned integration boundary practices, emergent integration boundary practices, program practices, and school site practices.

I found that the mentors in this study, to varying degrees and with varying consistency, engaged in boundary practices that assisted novices in connecting coursework with fieldwork. Integration was most pronounced when mentors used their knowledge of the program's practices, their knowledge of classroom instruction generally, and their novice's instruction and teaching context specifically, to capitalize on opportunities for integration. Mentors made both spontaneous and structured connections between instruction and school site demands on the one hand; and coursework, assignments, and program conceptions of effective teaching on the other hand. Mentor practices were shaped by the design of the programs in several ways, including: programs sparing use of prescribed activities, intentional inclusion of mentors in the program community, flexible and adaptive protocols guiding mentor and novice interactions, and relevant and applied coursework. These conclusions have implications for program leaders seeking to foster deeper integration between theory and practice in alternative teacher certification programs.

Dedication

For Megan

Without your constant love, support, and sacrifice, this would never have happened.
Without you, I would not be who I am.

And for Skyler and Hazel

You asked me everyday: “Are you done yet?” and “How many pages is it now?”
I can’t wait to spend the days with you instead!

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Chapter 1: Introduction

Educational Leadership Problem

A critical challenge faces educational leaders who lead or work with alternative teacher certification programs and intern teachers: these programs must develop highly qualified and high quality teachers while adapting to the unique on-the-job training needs of their participants. Simply replicating traditional pre-service certification programs' coursework and processes, as many alternative certification programs do, fails to respond to the unique needs of full time, working novice teachers (Walsh & Jacobs, 2007). Eliminating requirements, on the other hand, may fail to develop the pedagogical skills and professional knowledge base essential to quality teaching (Darling-Hammond, Chung, & Frelow, 2002; Walsh & Jacobs, 2007). Since alternative certification programs place more novice teachers in hard-to-serve, high poverty, urban districts than do their traditional counterparts (Darling-Hammond, 2004; Mitchell, et al., 2007), finding effective ways to improve these programs is both a critical equity issue and a pressing concern for educational leaders working in these settings.

Effective integration of coursework and fieldwork is a promising approach to improving alternative teacher support (P. Boyd, Boll, Villaume, & Brawner, 1998), and there is evidence to suggest that under the right circumstances, mentor teachers may play an important role in this integration (Humphrey, Wechsler, & Hough, 2008). However, while related research from pre-service credential programs (i.e., "traditional" programs) and new teacher induction programs are instructive, there is little research on mentors' practices in alternative certification programs generally, and even less regarding their role in and practices for integrating theoretical and job-embedded aspects of learning to teach in these programs specifically. Furthermore, the research that does exist is frequently based on proxies for mentor quality such as participating teachers' perceptions, mentor selection criteria, amount of release time for mentors, and the amount of training mentors receive. There is a need for more descriptive research on understanding how mentors work with novice teachers, in alternative certification programs specifically, to integrate the knowledge base of teaching with the practice of teaching.

This study addresses this gap in the research literature. It examines how mentors foster the integration of theory and practice by studying mentor and novice teacher pairs drawn from effective alternative certification programs in California. By studying four mentor-novice pairs in two alternative teacher credential programs, I show that mentors in this study, to varying degrees and with varying consistency, assisted novices in connecting coursework with fieldwork. Mentors used their knowledge of the program's practices, their knowledge of classroom instruction, and their novice's teaching context to capitalize on opportunities for integration, making both spontaneous and structured connections between instruction and school site demands. In describing each case, I provide a rich description of the mentor and novices' shared practices, and I discuss how those practices contributed to or undermined the connections between coursework and teaching. Further, I describe aspects of the programs' designs that shaped these practices.

Literature Review

A growing body of theoretical and empirical work related to alternative certification programs specifically, and teacher credentialing programs more broadly, points to the promise and pitfalls of coursework, fieldwork and mentoring as components of effective alternative certification programs. In the following review of literature, I survey the research on alternative certification to establish the context for this study. I then examine the literature on coursework and mentoring in more detail, drawing on studies of alternative certification programs as well as evidence from studies of pre-service teacher credentialing and mentoring in other contexts. Based on this review, I argue that coursework and fieldwork, particularly in on-the-job learning settings, are most efficacious when designed to be mutually relevant and integrated. Additionally, I argue that while the evidence on mentoring in alternative certification is limited, the existing evidence combined with research from other learning to teacher contexts suggests that mentoring can be a resource for addressing coursework/fieldwork integration.

Alternative certification programs offer different approaches and pathways into the field of teaching (McKibbin & Ray, 1994). Typically, these programs ease entry requirements, minimize the preparation needed prior to paid teaching, and emphasize on-the-job training (Zumwalt, 1996). However, in the United States there is considerable variation between the policy frameworks of differing states and between different programs within those frameworks (McKibbin, 2001; Wilson & Tamir, 2008). Further, the research suffers from a lack of an operational definition for the term "alternative certification" (J. W. Miller, McKenna, & McKenna, 1998) with widespread disagreement about what constitutes traditional versus alternative certification (Zeichner & Conklin, 2005). Some have made a distinction between alternative certification, defined as programs that eliminate requirements to becoming a teacher, and alternative routes to certification, that adapt requirements to the needs of working teachers without reducing the licensure requirements (Darling-Hammond, Pacheco, et al., 2005). Under the auspices of alternative certification, in fact, many candidates complete relatively traditional paths to full certification (Wilson & Tamir, 2008). For the purposes of this study, alternative certification programs are defined as those programs that include the following characteristics (McKibbin, 2001): They are designed for candidates to simultaneously begin working as a teacher while completing licensure requirements; they are specifically designed to recruit, prepare and license individuals who meet minimum qualification standards (such as holding a bachelor's degree, demonstrating subject mater competence, etc.); they require candidates to pass a screening process including, for example, examinations, interviews, and demonstrated mastery of content; they are field based and have as their goal a permanent teaching credential; they include coursework or equivalent experiences in professional education studies while teaching; and teacher candidates work with a trained support provider (mentor or coach).

In California, the knowledge and skill levels of intern teachers (the local term for teachers enrolled in approved alternative certification programs) are assessed using the same tests and measurements used for pre-service credential candidates, including basic skills and subject matter exams, and teaching performance assessments (Mitchell, et al., 2007). All these are required either prior to beginning the program or prior to completion. Even with these criteria in place, however, alternative certification allows participating teachers to enter the classroom as the teacher of record prior to meeting many of the criteria required by traditional teacher preparation programs (D. Boyd, Goldhaber, Lankford, & Wyckoff, 2007).

Increasingly, alternative routes to teacher certification have become a significant pathway into teaching in California. The number of intern teachers increased ten fold to 8,000 participating teachers between 1993 and 2001 (McKibbin, 2001). The number of university intern credential participants jumped from approximately 3,700 to 6,200 between 2001 and 2003, an increase of 64 percent (Esch, et al., 2005; McKibbin, 2001). Between 1995 and 2007, the number of interns in California eligible for state funding increased from 1,238 to 8,171 while the taxpayer contribution to these programs rose from $2 million to $24.9 million (McKibbin, 2007).

In addition to California, forty-six states currently have some form of alternative certification (Walsh & Jacobs, 2007). Despite their numbers and intentions, in many cases these programs have either become a mirror image of traditional certification programs or have tended to eliminate requirements rather than adapting them to the unique on-the-job training needs of teachers pursuing certification while working (Walsh & Jacobs, 2007). A study by Walsh & Jacobs (2007) surveyed a stratified random sample of alternative certification program directors from 49 programs across 11 states. The authors concluded that the majority (69 percent) of the programs in their study were operated by traditional schools of education and that these programs, in most cases, did not differ discernibly from the traditional pre-service teacher preparation program at the same institution. Those programs that did have significantly different structures from traditional certification programs frequently did not meet my operational definition of alternative certification programs because they appeared to simply eliminate rather than adapt requirements to the unique needs of working teachers. Such programs are disallowed within the policy context of California (McKibbin, 2001). Also worthy of note, another study found that of the states offering alternative certification, only 13 required classroom training prior to teachers assuming full responsibilities for a classroom, and only 19 states, including California, required a mentoring component (Zeichner & Conklin, 2005).

There is significant debate in the literature regarding the merits and consequences of having alternative certification programs at all.[1] However, the debate over alternative certification versus traditional certification has done more to obscure the facts than to illuminate critical questions, advance the research, or address the practical challenges that arise from alternative certification (Humphrey & Wechsler, 2005; Mitchell, et al., 2007). In fact, although differing pathways into teaching are sometimes characterized as being in opposition to one another, the two broad categories of programs do not comprise monolithic communities, and there is a great deal of variability among and between them (Cochran-Smith & Zeichner, 2005; Humphrey & Wechsler, 2005; Wilson & Tamir, 2008). In California, as is the case in many other contexts, teachers in alternative programs eventually must complete all of the traditional requirements to gain permanent certification (McKibbin, 2001; Wilson & Tamir, 2008).

Given the prevalence of alternative certification programs and the reality that they are an expanding gateway into the teaching profession for many thousands of teachers, the challenge of how to most effectively design and deploy these programs is compelling and urgent. This review, therefore, will put aside the debate on the merits of alternative certification and instead examine the qualities that have frequently been found to be important to effective alternative certification.

---

[1] For arguments against alternative certification programs, see for example (Darling-Hammond, 2004; Darling-Hammond, et al., 2002). For arguments in favor of alternative certification, see for example (Chin & Young, 2007; Feistritzer, 1994; Haberman, 1994; McKibbin, 2001).

The research on alternative certification programs indicates that relevant and applied coursework (Humphrey & Wechsler, 2005; Humphrey, et al., 2008; J. W. Miller, et al., 1998; Mitchell, et al., 2007; Nakai & Turley, 2003), along with mentoring (Adcock & Mahlios, 2005; Esch, et al., 2005; Humphrey, et al., 2008; Jorissen, 2002; Maloy, Seidman, Pine, & Ludlow, 2006; J. W. Miller, et al., 1998; Mitchell, et al., 2007; Nakai & Turley, 2003; Rochkind, Ott, Immerwahr, Doble, & Johnson, 2007; Walsh & Jacobs, 2007) constitute two important features of effective programs. Research on coursework/fieldwork integration and mentoring in more conventional settings, such as pre-service certification programs and new teacher induction programs, supports these conclusions and further indicates that these components can be mutually reinforcing (Blocker & Mantle-Bromley, 1997; Darling-Hammond, 2006). The relationship between mentoring and theory/practice integration may be particularly important in alternative certification settings given the unique demands of learning to teach on-the-job. The following review of literature will briefly examine research findings supporting this supposition, highlighting findings related to program design features, the relationship between coursework and on-the-job training, and the importance of mentoring in novice teachers' learning to teach experience.

In order to be effective, teacher education programs must be designed to support the novice teacher's development of a foundation of professional knowledge; to support their ability to understand facts, concepts, and ideas in the context of a conceptual framework for teaching; and to support their ability to organize that knowledge in a way that leads to action in the classroom (Hammerness, et al., 2005; National Research Council, 2000). To accomplish this, alternative certification programs typically include program components designed to address the theory or knowledge base of teaching on the one hand, and program components designed to develop the actual practice of teaching in the classroom on the other hand. In some cases, a mentor plays a bridging role between the two (Humphrey & Wechsler, 2005). While I pay particular attention to the benefits of congruence between these program components, it should be noted that frequently novice teachers receive conflicting messages from the different components of their learning to teach experience. For example, instruction received through coursework may be contradicted by what the intern teacher learns from peers or their mentor at their school site (Humphrey & Wechsler, 2005).

Effective alternative certification programs have deliberate strategies for developing the knowledge of teaching, usually through some form of coursework designed to be relevant to practice (Humphrey & Wechsler, 2005). Coursework in an on-the-job certification setting is most effective when it focuses on specific skills and knowledge that teachers need in the classroom (Humphrey, et al., 2008), and when it is explicitly linked to the actual on-the-job training participants receive (Humphrey & Wechsler, 2005; Johnson, Birkland, & Peske, 2005). Evidence from research on pre-service teacher training suggests that this may be accomplished by including learning activities such as observing experienced teachers, practicing key teaching concepts and receiving feedback, and examining student work together with an experienced teacher (Darling-Hammond, 2006).

Additionally, effective alternative certification programs typically include a carefully constructed curriculum that combines and integrates this type of coursework with intensively supervised on-the-job training experiences (Humphrey & Wechsler, 2005; L. Miller & Dilvernail, 2005; National Commission on Teaching and America's Future, 1996). While relatively little is known about actual field experiences in alternative certification pathways (National Research Council, 2010), some research indicates that this integration is particularly efficacious when the connection between theory and practice becomes cyclical (P. Boyd, et al., 1998), with an intentional pattern of learning (in formal coursework, from peers and colleagues, and with a mentor), planning (independently and collaboratively with a mentor), practicing (in the classroom, sometimes while being observed by a mentor), and reflecting on evidence from practice (individually, with peers, with course instructors and/or with a mentor).

Despite the importance of providing candidates with ongoing support in the field, certification programs may have limited capacity to do so (Johnson, et al., 2005). This limited capacity may have repercussions; some evidence indicates that there can be negative consequences when teacher preparation programs only poorly connect fieldwork and coursework. These consequences can include novice teachers feeling angry and isolated (Clift & Brady, 2005), floundering in terms of planning and implementing instruction (Clift & Brady, 2005; Dooley, 1998), and experiencing loneliness and fear (Bruckerhoff & Carlson, 1995; Clift & Brady, 2005; Dooley, 1998).

Supervised field experiences that are designed to facilitate a connection between coursework and classroom teaching frequently prominently feature the role of a mentor (Humphrey & Wechsler, 2005). Quality mentoring can have significant impacts on the success of intern teachers in alternative certification programs (Adcock & Mahlios, 2005; Esch, et al., 2005; Humphrey, et al., 2008; Jorissen, 2002; Maloy, et al., 2006; J. W. Miller, et al., 1998; Mitchell, et al., 2007; Nakai & Turley, 2003; Rochkind, et al., 2007) and is sometimes a distinguishing feature of the on-the-job training aspect of effective programs (J. W. Miller, et al., 1998). The research on mentoring in these programs, while not conclusive, suggests that it can be an effective strategy for improving beginning teacher quality (Humphrey, et al., 2008; Lopez, Lash, Schaffner, Shields, & Warnger, 2004). There is little research that has addressed itself directly to actual mentor practices in alternative certification programs (Humphrey & Wechsler, 2005). One qualitative cross-case study (Feiman-Nemser & Parker, 1993) that did look closely at mentor practices in alternative certification programs found that mentoring in several programs in California in the late 1980's lead to mentor dominated interactions, a procedural orientation on the part of mentors, and a lack of development of novice teacher thinking and understanding. Nevertheless, several researchers maintain that mentoring is an important feature of alternative certification programs, despite the paucity of evidence regarding its effective use (Humphrey & Wechsler, 2005; Humphrey, et al., 2008; Walsh & Jacobs, 2007). While this may be plausible, the evidence for these claims is weakened by the tendency of the research to rely on indirect indicators of mentor quality such as amount of training received, the nature of the mentor's job-description, available time for mentoring, and novice teacher self reports on the importance of mentoring. There is, however, some evidence to suggest the negative, that placing alternatively certified teachers in the classroom without carefully controlled mentor interactions can lead to ineffective practice (Grossman, 1989; McKibbin & Ray, 1994; J. W. Miller, et al., 1998).

The research on mentoring in pre-service programs and mentoring of novice teachers in induction programs, by contrast, provides more concrete evidence that mentors can play an important role in supporting novice teachers in understanding and applying teaching concepts and practices, and examines the practices of mentors more directly. This body of research indicates that, ideally, mentoring pedagogy includes modeling, coaching, and instruction on practice (Darling-Hammond, 2006), all focused on instructional issues (Strong, 2009). Furthermore, high quality mentoring is characterized by collaboration on practical challenges, instructional planning, and modeling target behaviors (Feiman-Nemser, 2001); and it addresses student assessment results, instructional alignment, and evidence-based formative assessment of novice teachers aligned with explicitly defined expectations for teacher practice (Athanases & Achinstein, 2003). The degree to which mentors are directly involved in making coursework relevant through connecting the coursework and fieldwork components of the teacher education program is, again, an important factor (Blocker & Mantle-Bromley, 1997; Darling-Hammond, 2006). This aspect of the mentor and novice teachers' work requires complex negotiation of a common understanding of what should be taught in the context of the novice teacher's assignment, even when this might differ from the certification programs agenda (Haggar & McIntyre, 2000).

There are a few studies that further describe the mechanism by which mentors work one-on-one with novice teachers to integrate these various components. Two of these studies draw on a theoretical approach called situated learning theory, which is a social theory of learning that provides an explanation for how practitioners of a given practice move from novice status to full participation. As described by the theory, moving from novice to full participation may be assisted by experienced practitioners (Lave & Wenger, 1991). The first study (Eick, Ware, & Williams, 2003) looked specifically at situated learning in a science methods course that consisted primarily of learning in a partnership relationship between a novice teacher and a master teacher. The study points to the importance of the experienced practitioner modeling, instructing, and guiding novice teachers; and it found that the partnership had positive effects on learning to teach including: critical reflection on the components of a lesson plan, increased confidence on the part of the novice teacher, and the development of the habits and skills for turning inquiry into practice. The second study examined a program that placed situated learning at the center of a methods practicum through a mentoring relationship (Fairbanks, Freedman, & Kahn, 2000). The study indicated that when the mentoring relationship itself was co-created, contextually understood, and was the basis for collaboration, participating teachers discovered that learning to teach, like teaching itself, is neither simple nor explicit. Instead, all participants, including the mentors and novice teachers, were involved in complex meaning development. The researchers concluded that, in contrast to traditional university student teaching that emphasizes concrete activities and specific directions, effective mentoring in a situated context provides the novice teacher with a collaborator, a guide, and supporter while sharing his or her wisdom and experience.

In sum, the literature reviewed here indicates that the relationship between coursework, fieldwork, and mentoring contributes to the effectiveness of alternative certification programs. While coursework and fieldwork can provide contradictory messages for the novice teacher, it operates best when designed to be mutually relevant and integrated. Research on mentoring from pre-service teacher certification and new teacher induction, combined with the limited research on mentoring in alternative certification programs, suggests that mentors can play an important role in the intern teacher's learning experience, especially augmenting an intern teacher's ability to integrate the theoretical and practical aspects of learning to teach, both in the program coursework and on-the-job. These conclusions, however, rely on blending research findings from multiple learning to teach contexts. More research on mentor practices in the specific context of alternative certification programs is necessary to more thoroughly understand how mentors might address the unique demands on novice teachers in these programs.

Research Questions

To address these gaps in the research literature, this study asks the following research questions:

1) How do mentors in high quality alternative teacher credential programs help novice teachers integrate the theoretical and practical aspects of teaching, if at all?
2) How does program design (i.e. the designed relationship between coursework, job-embedded learning, and mentoring) shape how mentors work with novice teachers to integrate theoretical and practical aspects of teaching?

Conceptual Framework

I draw on situated learning in communities of practice theory for a set of theoretical tools to understand and examine the ways mentors might assist novice teachers in negotiating between multiple and overlapping learning communities. I do so, in part, because while the literature discussed above evokes the possibility that a mentor can play an important role in supporting the intern teacher's ability to navigate these program dimensions, it is insufficient to fully conceptualize the specific functions a mentor might fulfill. In this section, I provide a brief overview of the most relevant aspects of situated learning in communities of practice theory, followed be an explanation of how that theory forms the conceptual framework for this study.

Situated learning in communities of practice theory is a social theory of learning based on the supposition that learning is an aspect of all activity and is the result of legitimate participation in a community of practice (Lave & Wenger, 1991). This participation, termed by Lave and Wenger (1991) as "legitimate peripheral participation," is not, in their conception, an educational form or pedagogical strategy. Instead, it is a way of describing how practitioners of a given practice move from formal or informal novice status to full participation. The theory finds its origins in socio-cultural and socio-historical conceptions of learning (Greeno, Collins, & Resnick, 1996) and stands in contrast to the conception of knowledge as an abstraction and or generalization, decoupled from experience or social relationships, that prevails in formal schooling (Lave, 1996) and, I submit, in teacher education.

Wenger (1998) later extended this theory, more fully describing the communities of practice in which situated learning takes place, and placing communities of practice in an organizational context. Communities of practice, he asserted, should be viewed as units, situated between formal organizational structures and the behaviors of individuals (Stein & Coburn, 2008). Practice is the source of coherence in such communities when it incorporates mutual engagement, a joint enterprise, and a shared repertoire. Meaning within a community of practice is always being negotiated through the convergence of participation in the practices of the community by its members and in the reification of those practices (Wenger, 1998). Participation refers, simply, to the process of taking part with others (Wenger, 1998). For example, taking part in the practices of a teacher education program course on teaching methods would be a form of participation in the teacher education program's community of practice. Reification refers to the process of giving form to experience by producing objects that define the experience into a "thing," creating a point of focus around which to organize the negotiation of meaning (Wenger, 1998). An example of reification could be a course syllabus, an artifact that objectifies the expected learning experiences in a methods course. Similarly, routines of participation in a course, grading systems, and processes for feedback may all become reifications around which meaning is negotiated.

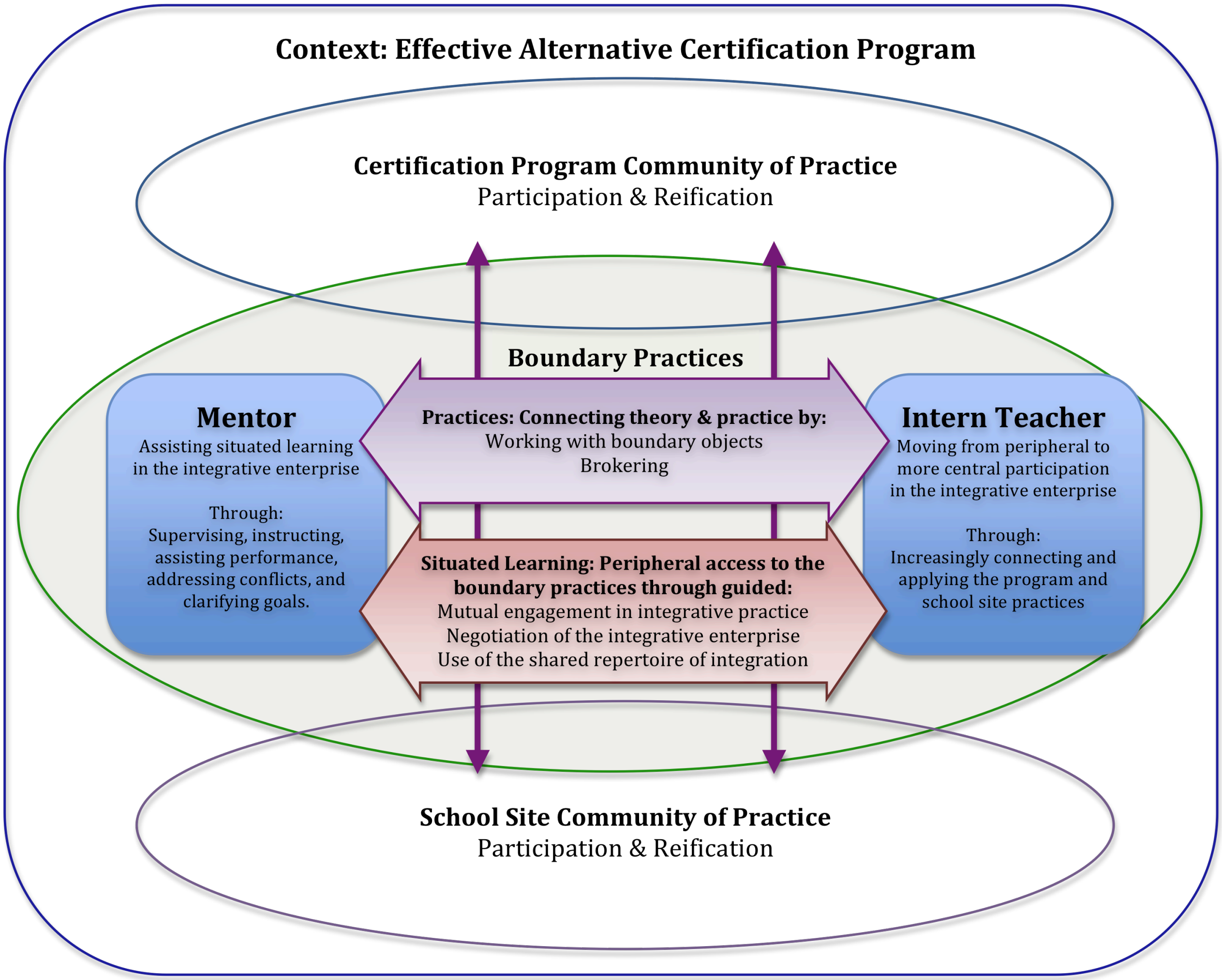
In order to learn a community's practices, a novice must participate in those practices. However, their participation is initially limited, supported, or scaffolded, providing an approximation of full participation that gives exposure to the actual practices of a community (Wenger, 1998). Over time, as novices gradually become more fluent in the community's practices, they move from more peripheral participation to more central participation, gradually shedding their novice status. At first glance, peripherality is a concept more easily applied to student teachers in pre-service teacher education programs than to intern teachers. Traditional student teachers often experience graduated responsibilities in the classroom beginning with observing experienced teachers and progressing through stages toward assuming responsibility for teaching independently (Darling-Hammond, 2006) mirroring the notion of moving from peripheral to full participation as described in situated learning theory (Lave & Wenger, 1991). Conversely, intern teachers, by virtue of their job, can be seen as having full participation in the practice of professional teaching from the outset. However, peripherality can be conceptualized in a variety of ways, including special assistance and close supervision provided to practitioners new to a community of practice (Wenger, 1998), both of which apply to mentoring as conceived in the present study. In fact, systematic mentoring is a frequent method used in mature communities to legitimate the participation of new members without distracting the community from its practice (Wenger, McDermott, & Snyder, 2002). However, in order for a mentoring relationship as a form of peripheral participation to effectively open up practice, it must provide exposure to all three dimensions of practice: mutual engagement with other members, negotiation of the enterprise, and the repertoire in use (Wenger, 1998).

From this perspective the practice of the community, in this case learning to teach, creates the potential "curriculum" in the broadest sense: that which may be learned, with the guidance of a mentor, by newcomers with legitimate peripheral access (Lave & Wenger, 1991). Learning, in this context, requires clear goals so that the novice can develop a wide view of the landscape of teaching. The relationships are dynamic between the formal pedagogy of the institutional organization, the learning curriculum that unfolds in opportunities for mentor-guided engagement in practice (which is often improvised or responsive in nature), and the circulation of knowledge amongst peer groups. Consistent throughout, though, is the notion that engagement in practice, rather than being the object of practice, is a condition for effective learning (Lave & Wenger, 1991).

A conception of how communities of practice overlap is also important to this study (Wenger, 1998). The work of the mentor and the novice does not occur in isolation. Instead, both are participants in a larger, varied, and overlapping constellation of communities of practice (Coburn & Stein, 2006; Lave, 1996). Almost always, communities of practice rely on connections to other communities of practice in order to fulfill their purpose. Additionally, individuals may participate in multiple communities of practice at the same time. Connections are made across these overlapping boundaries and perspectives through a variety of connective practices and through the use of connective tools including boundary objects and brokers. Boundary objects are reifications around which communities of practice can organize their connections and thus require negotiation of meaning as they cross between communities (Stein & Coburn, 2008), and can serve to connect or disconnect (Wenger, 1998). On the one hand, they can enable coordination. On the other hand, they can fail to actually create a bridge between the perspectives and the meanings of various constituencies. For instance, a tool for examining student data could be a boundary object. Such a tool could be distributed in a methods class with the assignment that participating teachers collect and analyze data related to their students as prescribed by the tool, thereby connecting objects from the coursework (student data collection processes) with objects from the classroom (actual student data). Boundary objects, as described here, provide connection between the reificative aspects of a community of practice. By contrast, "brokering" connects forms of participation. Brokers are participants in the practices of the overlapping communities who can introduce elements of one community's practice into another. Brokering is a complex process of translation, coordination, and alignment between perspectives (Wenger, 1998). As described by Wenger (1998), brokers must have sufficient legitimacy to influence the development of a practice, mobilize attention, and address conflicting interests. Further, they must be able to link practices and foster learning between communities.

Connective practices can be conceptualized in several ways. Most relevant to this study, however, is the idea of boundary practices (Wenger, 1998). Essentially, boundary practices are a form of collective brokering and meaning making. When a boundary encounter becomes established and provides for ongoing mutual engagement, a practice begins to emerge, the shared enterprise of which is to negotiate and sustain the other practices. This boundary work is accomplished through addressing conflicts, reconciling perspectives, and finding solutions. Boundary practices combine participation and reification, and thus can offer an opportunity for practices that support the meaning making between communities of practice. Simultaneously, as with any community of practice, boundary practices run the risk of erecting their own boundaries, becoming isolated from the very practices that they are meant to connect. For the purposes of this study, I view the mentor and novice's shared work as a boundary practice (see Figure 1 below).

Figure 1
Conceptual Framework for Mentor/Novice Interactions as Boundary Practices


Context: Effective Alternative Certification Program
Certification Program Community of Practice
Participation & Reification
Boundary Practices
Mentor
Assisting situated learning in the integrative enterprise
Through:
Supervising, instructing, assisting performance, addressing conflicts, and clarifying goals.
Practices: Connecting theory & practice by:
Working with boundary objects
Brokering
Intern Teacher
Moving from peripheral to more central participation in the integrative enterprise
Through:
Increasingly connecting and applying the program and school site practices
Situated Learning: Peripheral access to the boundary practices through guided:
Mutual engagement in integrative practice
Negotiation of the integrative enterprise
Use of the shared repertoire of integration
School Site Community of Practice
Participation & Reification

While not stated by the theorists explicitly, as a community of practice in its own right, a boundary practice would follow the same principals of situated learning as any other community of practice, with novice participants being granted legitimate peripheral access and learning being conceived of as the novice's movement from more peripheral to more central forms of participation.

Four aspects of situated learning in communities of practice theory in particular inform the conceptual framework for this study. First is the extent to which mentor and novice teachers, as a boundary community of practice between an alternative certification program and a school site, collectively act as brokers who bridge between the activities of the various communities. They would do so by facilitating the translation, coordination, and alignment of perspectives and meanings (Cobb, McClain, Lamberg, & Dean, 2003); and by negotiating meaning through working with boundary objects (Wenger, 1998). Figure 1 captures this function of the boundary practice in the purple horizontal arrow at the center of the diagram. Second is the degree to which the novice teacher moves from assisted performance to unassisted performance though participation in the full range of practices of the boundary community, including mutual engagement between the mentor and the novice in the practice of integrating theory and application, negotiation of the integrative enterprise, and use of a shared repertoire to foster this integration. In Figure 1, situated learning as supported participation in the full range of the boundary practices is described by the red horizontal arrow connecting the mentor and the novice as the members of the boundary practice community. Third are the roles that each member of the boundary community, particularly the mentor, play in integrating these overlapping communities of practice (Stein & Brown, 1997; Tharp & Gallimore, 1988). While the novice's role is to learn the practices of integrating knowledge and skills, the mentor's role is to aid the novice's learning through supervision, assisted performance (Tharp & Gallimore, 1988) ,[2] performance enhancement through clear goal setting and co-participation in the tasks associated with the goals (Stein & Brown, 1997), instruction, and through addressing conflicting interests or confusion. In Figure 1, the situated learning of the novice and peripherality in the form of mentor supervision and guidance are described in the blue boxes, with the collaborative nature of this learning described by the connecting horizontal arrows. The purple arrow describes their shared practice and the red arrow describes situated learning as participation by the novice, supported by the mentor, in the full range of boundary practices.

The final theoretical element important to this study relates to issues of program design. In the context of communities of practice, design is a resource for negotiating meaning (Wenger, 1998). The relation of design to practice is always indirect and takes place through a community's ongoing engagement in a shared enterprise. Practice is not the result of design but is a response to design, creating an inherent uncertainty between design and its realization in practice. When it comes, therefore, to a design for learning in communities of practice, a robust design is a minimalist design, allowing sufficient space for emergent, opportunistic, and spontaneous learning. In this context, detailed prescriptions carry the risk of being realized in practice in unintended ways, particularly when tied to accountability. Members of a learning to teach community, for instance, may respond to a prescriptive design by developing practices of compliance and "just fill in paperwork." Similarly, protocols guiding mentor and novice interactions run the risk of fostering form over substance, potentially resulting in superficial examination of the salient issues of teaching and learning as the mentor and novice respond to the strictures of the protocol rather than exploring the underlying concepts and skills (Little & Curry, 2008). In the context of this study, then, to be effective the program's design for boundary crossing, represented by the vertical arrows in Figure 1, must foster opportunistic and emergent learning within the boundary community or risk the mentor and novice responding to the design with a compliance orientation.

The theoretical construct of situated learning in communities of practice provides a way to examine the mentor and novice teacher's interactions in the context of the formal learning organization (the certification program), conceptualizing those interactions as boundary practices between connected communities whose respective practices incorporate coursework and job-embedded learning opportunities. Within these boundary practices, the mentor assists the novice teacher's performance as he or she develops the ability to independently integrate the knowledge and practices of teaching. More specifically, situated learning theory leads me to focus on particular tasks that a mentor and novice may undertake together. These include negotiating understanding between communities of practice through brokering and working with boundary objects (Cobb, et al., 2003; Lave & Wenger, 1991), focusing on how the mentor supports the situated learning of the novice through assisting novice performance in the form of guiding (Eick, et al., 2003), collaborating (Fairbanks, et al., 2000; Feiman-Nemser, 2001; Stein & Brown, 1997), modeling (Darling-Hammond, 2006; Eick, et al., 2003; Feiman-Nemser, 2001), instructing (Darling-Hammond, 2006; Eick, et al., 2003), and clarifying goals (Lave & Wenger, 1991; Stein & Brown, 1997). All of these practices occur in the organizational context of the alternative certification program.

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[2] Tharp & Gallimore's conception of assisted performance is drawn from socio-cultural, socio-historical theoretical roots and is closely related to concepts found in situated learning theory.

This conceptual framework suggests that attention must be paid to the methods by which mentors assist novice teachers in developing the ability to negotiate between two communities of practice; the degree to which mentors develop the novice's ability to understand, apply, reflect on, and enhance the multiple forms of skills and knowledge to which they were exposed while learning to teach; and the degree to which the mentor's effectiveness was, in turn, impacted by the program context. In this study, the mentoring took place in alternative certification programs that were designed to have explicit strategies, with associated program components and communities of practice, for developing the knowledge of teaching, represented by the upper set in Figure 1. They also were designed to have connected strategies, again with associated program components and communities of practice, for developing the practice of teaching, represented by the lower set in Figure 1.

Applying this conceptual lens to the cases in this study provides a way to examine how mentors and novices connect the theoretical aspects of learning to teach, encompassed here in the coursework and other formal elements of the credentialing program, and the practical aspects of teaching, comprised in this study of on-the-job teaching at a school site.

Chapter 2: Research Design

I employed a qualitative cross-case study design to investigate how mentors help novice teachers integrate theory and practice in high quality alternative certification programs. Case study research is an effective tool for studying this kind of phenomena because it is particularly suited to understanding the "how" of a contemporary phenomena (Yin, 2003). I employed a cross-case design for two reasons: First, analytical conclusions arising across multiple cases are more powerful than those coming from an individual case (Yin, 2003). Second, an important reason for doing cross-case studies is to examine how the phenomena occurs in different settings (Stake, 2006). This research relied on a range of qualitative research methods including interviews, video analysis, document analysis, and observations.

Sampling

Cases were purposefully selected to allow for close examination of issues of interest in this study (Creswell, 2009) and case selection proceeded in two stages, program selection followed by case selection. In the first stage, I selected two effective alternative certification programs from which the four cases were subsequently drawn. In order to understand how differing program designs might impact mentors' work with novice teachers, I selected programs whose program structures varied in the way they attempted to intentionally integrate theory and practice. I selected one program, the Teacher Institute (a county office of education district internship program), reputed to have a particular focus on job-embedded experiences, and a second program, City State University's Multiple Subject Intern Teacher Credential program, which had a relative emphasis on coursework.

The programs were selected using the following method. First, I created an initial list of alternative certification programs based on nominations from experts in the field of alternative certification and based on effectiveness criteria established in the research literature (Appendix A). Experts included people who were in a position to know the reputations of many programs and who had had the opportunity to review several programs through the accreditation process, including the President of the California Teacher Corps and Intern Program Regional Coordinators. I used indicators drawn from the research literature, primarily in the categories of the structure of mentoring and the design of coursework. From the initial list of potential programs, based both on expert recommendations and on the feasibility of their inclusion in the study, I selected two programs for further review.

Next, I investigated the extent to which the two initially selected programs matched the established criteria of effective alternative certification programs. The purpose of this initial review was to ensure that the program met at least a minimum level of effectiveness, especially related to coursework and mentoring. Related to mentoring, I investigated the program's design for the selection, training, and on-going development of mentors. I also considered the extent to which the program sought to provide relevant coursework that was meaningfully integrated with job experience. I also considered other effectiveness criteria, such as school site selection and candidate selectivity, as contextual factors in program selection and data collection, but these were less important to the central purpose of this study. I reviewed the program's literature (Appendix B), visited the program, and did initial interviews of program leaders to understand the program's match to the selection criteria (Appendix C). Finally, I reviewed selected items from the 2008-2009 California Statewide Survey,[3] which participating interns had completed relative to each program (Appendix D). Based on these data points, I rated programs on a 1-4 scale on criteria related to mentoring, relevancy of coursework, school site selection, and participating teacher selection (Appendix E). Stronger ratings indicated that the particular criteria were consistently present, were a defining factor of the program, and were structurally integrated into the program design. Weaker ratings indicated that the particular criteria were absent, undefined, or unclear. While each of these methods for evaluating the program's effectiveness had limitations, I used a combination of measures to provide reasonable assurances that the programs from which the cases were drawn met a minimum threshold related to the effectiveness criteria. Using this approach, I determined that the two initially selected programs were sufficiently well suited to the questions of interest in this study.

Specifically, I found that the City State University program had a process for mentor professional development that was consistently structurally integrated into the program. Mentor selection, time dedicated to mentoring, the mentor's connection to and knowledge of coursework were consistently present, although not always structurally integrated. Other selection factors included elements associated with coursework, including: coursework tailored to the participant's teaching context, the degree to which participants valued their coursework, coursework that was designed to be applied in practice, and the link between coursework and fieldwork through mentoring. Each of these elements were consistently present in the program, but were not consistently structurally integrated.

For the Teacher Institute, I determined that mentor selection, time for mentoring, and mentor professional development processes, along with coursework that was supported by formative assessment processes with a mentor, were consistently present and structurally integrated into the program design. On the other hand, some elements were consistently present in the program, but inconsistently integrated. These included the mentor's structural link to coursework and coursework that was intentionally tailored to the intern's teaching context. Further, the direct link between the coursework and supervised fieldwork in the Teacher Institute determined to be inconsistently present and weakly integrated into the program design.

The programs were not reassessed based on these criteria following the completion of the study, owing to the fact that evaluating programs for effectiveness was not the purpose of this research. However, it is safe to say that following the more in-depth examination of the programs that occurred through this study, and partially as a result of changes that occurred in the programs between selection and the program year in which the study took place, several of these ratings would merit adjustment. Nevertheless, I judged these ratings sufficient to determine that these two programs were appropriate for inclusion in this study.

In the second stage of case selection, I selected two mentor and intern teacher pairs from each program. To select these pairs, I relied on recommendations from the program leader. I asked the program leaders to recommend mentor and intern teacher pairs that were functioning normally and as the program intended. These criteria were important in order to avoid inadvertently studying dysfunctional pairings within an overall effective program or selecting pairs who were exceptional. It was the nature of the work between the mentor and the novice that was of interest in this study, not the relative abilities of individual teachers or the mentors. By selecting two normally functioning cases from each program, I mitigated the possibility that a selected mentor or teacher was an outlier and that their efficacy was based on personal exceptionality rather than the result of program intentionality or design elements. This would have blurred my ability to understand how program structures facilitated the mentor and novice's work. Furthermore, examining two cases from each program increased the likelihood that themes emerging from the data were the result of the programs' structures, not exceptionality. Four cases were sufficient to get the benefits of cross-case analysis, allowing for enough interactivity between mentor-teacher pairs and their respective situations (Stake, 2006). Finally, in order to limit the extraneous factors that could have interfered with cross-case analysis, I selected novice teachers from multiple subject programs that were in similar stages of their preparation. Each of the participating interns was in the first year of their two-year multiple subject intern program.

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[3] In California, intern teacher program participants who are completing accredited intern programs participate in an annual survey conducted by the California Commission on Teacher Credentials. Statistical reports are derived from these surveys with aggregate statewide results published online and with program specific results being provided to program leaders. (Source: California Commission on Teacher Credentials (2010). Intern Programs Webcast. Retrieved from: http://video.ctc.ca.gov/2010%2D11%2D16%5Fintern%2Dwebcast%2D10am%5F02pm%5Fctc%5Fpsd/). Program leaders provided the survey results for their program for the 2008-2009 year as part of the program review process.

Data Collection

Data collection for this study included all four basic types of qualitative data collection: interviews, audio/visual materials, document reviews, and observations. In this section, I review the sequence of data collection in this study, followed by a description of each type of data collection method and how it was used in this research.

The unit of analysis for this study was each mentor and teacher pair. Of interest were the mentor and novice's practices that facilitated (or failed to facilitate) theory and practice integration, how the pair bridged the instructional and structural aspects of the certification program (such as course curricula, intended relationship between coursework and fieldwork, mentor selection and training aspects, mentor and instructor collaboration) with the job/practice aspects of the program (such as implementation of methods or concepts from the courses into teaching methods in the classroom), and how the intern teacher attempted to enact these knowledge and skill sets. Data collection occurred in five phases: 1) initial data collection on the program design, which included program leader interviews and document analysis; 2) initial interviews with each mentor and novice individually; 3) a coaching cycle that included a pre-interview, observations and video analysis of instruction and conferencing, and a post-interview; 4) a second coaching cycle with similar data collection as the first; and 5) a final set of interviews with each mentor and novice. The following discussion of each of these phases provides details about the purpose of each component of the data collection process. The actual data collection was adjusted slightly from this general sequence for each case, and the case-by-case adaptations are also outlined.

First, data collection on the programs was conducted in order to understand the structure, purpose, and expected outcomes, as well as variations between the two programs (Appendices B and C). This data informed the second research question and helped me to evaluate the ways that program design features shaped mentor and novice work. This phase of data collection on the programs included document reviews and interviews with program leaders. Document reviews included reviews of program handbooks, course descriptions, training materials, and other materials provided by the programs.

After completing the initial data collection on the programs, I began data collection with mentor-intern teacher pairs. For each pair, I conducted initial interviews with the mentor and intern teacher respectively (Appendix F and G) in which I sought to understand their view of the program's strategies for conveying theory and developing practice, how they understood their respective roles in the learning to teach process, and the degree to which their conceptions were consistent with the program's intentions. Additionally, I sought an initial understanding of the mentor and teacher's perspectives on the specific learning goals of the teacher and the focus of their combined work. Finally, during this initial interview I sought to determine the form of the inquiry cycles, if any, in which the mentor and novice pair engaged. This information was important to determine adjustments to the next phase of data collection.

Following the initial interview, and based on the pair's natural inquiry cycle, a data collection sequence was adapted as appropriate to the work of each pair. Generally, the data collection sequence included a series of video and in person observations bracketed by pre- and post-interviews with the mentor and the intern teacher respectively. The pre-coaching cycle interviews (Appendices H and I) served to clarify the mentor and the novice teacher's intentions for the observation cycle and to describe how, if at all, they related to the connections between the expectations and demands of the teacher education program and the needs of applied practice. The subsequent video (Appendix J) and in person observations (Appendix K) followed the "plan, teach, reflect" cycle of interaction between the mentor and the teacher to the degree that the cycle or something similar to it was a part of the mentor and novice's repertoire of practices. Specifically, I sought to video record a pre-teaching observation conference between the coach and the intern teacher pair, followed by a classroom observation of the intern teacher together with the mentor, followed by a video observation of the subsequent mentor and teacher conference about the classroom observation. Data collection on each coaching cycle concluded with post-coaching cycle interviews with the mentors and novice teachers respectively, which served to help me understand the participants' interpretation of the preceding events (Appendices L and M). In most cases, the data collection process centered on a coaching cycle was repeated, with another round of pre-interviews, observation of teaching, video of mentor and novice conferencing, and post-interviews.

The last piece of data collection for each case was a final interview with each mentor and novice teacher respectively (Appendices N and O). The final interview helped me to understand or confirm themes that arose in prior data collection and to verify evidence.

After determining the natural inquiry cycle of each mentor and novice teacher pair, and after evaluating the feasibility of conducting interviews and observing in person versus by video or phone, specific data collection was tailored to each case and differed from the designed data collection plan as follows:

- Case #1: Data collection for this case included initial and final interviews with the mentor and novice. The complete coaching cycle included pre- and post-interviews, video analysis of the pre- and post-conferences, and video analysis of the teaching event (a sudden schedule change made the planned in person observation of the teaching event impossible). A second, less formal coaching cycle was scheduled for inclusion in the study, however one of the subject's personal circumstances led them to postpone and then cancel those activities, at which point it was too late to schedule an alternative.
- Case #2: The unorthodox approach used by this pair required some adjustments in the data collection for this case. Data collection included initial and closing interviews, two

video observations of collaborative planning sessions, one of which was preceded and followed by interviews, and the other of which was followed by interviews.

- Case #3: In addition to initial and final interviews, data collection for this case included two supervisory cycles, each consisting of an observed segment of instruction, during which I took field notes, followed by a post-observation conference which was video recorded. Each cycle was preceded and followed by separate interviews with the novice and mentor respectively.
- Case #4: Data collection included initial interviews, two cycles of observations, during which I took field notes, and post-observation conferencing, which were video recorded. Each cycle was preceded and followed by separate interviews with the mentor and novice respectively. There was also a final interview with the mentor.

Over the course of this data collection process, four types of qualitative data were collected: interview data, video data, documents, and observation data. Each type of data served a different purpose, and here I describe the utility of each for this study.

Interviews are one of the most important sources of case study research data (Yin, 2003), and were a critical source of evidence in this study. In all, 35 interviews were conducted, approximately 28 of which were conducted in-person and 7 of which were conducted via telephone. Interviews were conducted using semi-structured protocols (Appendices C, F, G, H, I, L, M, N, and O) and were structured to ask questions in a fluid rather than rigid manner, while taking care to ensure that questions were asked in an unbiased fashion (Creswell, 2009; Yin, 2003). Interview protocols served as a guide; actual interviews allowed for the possibility that the interviewee could lead the data collection in unexpected and fruitful directions (Seidman, 2006). All interviews were recorded and transcribed, with both the audio and transcription files being carefully labeled to ensure they could be properly placed in sequence during data analysis (Creswell, 2009).

Video recordings served as a tool for capturing fine-grained interactions between the mentor and novice. Drawing on methods used by Judith Warren Little in her study of teacher community (2002), I used video records, 2 from each case and 8 in all, to capture ongoing occasions of mentor and novice collaborative work as part of their normal inquiry, a practice that Little termed stream-of-practice sampling (2002). These stream-of-practice records provided an intensive look at the mentor and novice teachers' collaboration in the context of their regular work. Such records revealed mentor and novices' practices for connecting the theoretical and practical aspects of the learning to teach experience. They illuminated the situated learning experiences associated with ongoing collaboration. They provided data on materials that mentor and novices used in their practice. They also provided an additional source of data for interpreting and confirming themes from other data collection activities, including interviews and document analysis. Video recorded interactions offered the virtue of manageability while the opportunity for multiple viewings and repeated analysis increased internal validity. Shortcomings of this form of data collection included the exclusion of contextual factors that arise when only relatively short fragments of longer processes between the mentor and novice were collected for detailed analysis (Little, 2002). In order to mitigate this limitation, the data collected through video were supplemented by interview data and direct observations as part of the same coaching cycle in which the video recorded event took place, allowing for additional nuances to be captured.

Program documents were a useful data source in this study, even though they were not always accurate or unbiased (Creswell, 2007). Documents reviewed included course syllabi, program handbooks, practicum field guides, teacher assessment systems, teacher course schedules, program protocols for guiding fieldwork, program narratives submitted to the California Commission on Teacher Credentials for the purposes of program accreditation, program memoranda of understanding with school districts, and mentor training agendas and materials. These documents were used in corroborating, contradicting or augmenting other evidence; and verifying terms, titles, and or organization names. Additionally, they were used to make inferences about the intended implementation of the program, leading to areas for further investigation through interviews (Yin, 2003).

In case study research the use of direct observation to provide contextual evidence in support of other forms of data, primarily interviews and video evidence in this instance, can be a useful tool for providing additional information about how concepts derived from those data are understood in other contexts (Yin, 2003). Direct observations allowed me to witness relevant behaviors and environmental conditions. This study included both formal observations, utilizing an observation protocol, and informal observations that provided additional context and descriptive elements to the study (Yin, 2003). Informal observations included visits to the program sites and schools. Formal observations focused on mentors observing novice teachers instructing students in their classroom. Although this study was not concerned with teacher's effectiveness in the classroom, these formal in-person observations allowed me to gain additional context for the issues referenced in the interviews and conferences, and to see how those concepts were applied in practice. Formal observations were conducted using a protocol (Appendix K) that allowed for both descriptive and reflective notes (Creswell, 2007). In all, 4 in-person observations of instruction and 1 video observation of instruction were included in the study.

Data Analysis

Qualitative data analysis involves making sense of text, audio, and video data by preparing the data for analysis, conducting different analyses, moving deeper into understanding the data, representing the data, and interpreting the larger meaning of the data (Creswell, 2009). Data analysis for this research was ongoing, with early phases of data analysis taking place while data collection was continuing. I analyzed each of the four sources of data for this study in slightly different ways. The data from case interviews and video were primarily analyzed using codes derived from the conceptual framework (Figure 1), with additional codes added inductively from particular data points to emerging themes (Creswell, 2007). Data derived from the program leader interviews and document reviews were used to provide additional context, perspective, corroboration, or disconfirming evidence on the mentor and the intern teachers' conception of the programs design for the integration of theory and practice. Below I discuss how the data were analyzed from each data source.

Interview data were analyzed using Creswell's six stages of data analysis in qualitative research (2009). First, the data were organized and transcribed. Second, I did an initial analysis to gain a general sense of the information and to reflect on its overall meaning. Specifically, I listened to each interview in its entirety while making corrections to any errors in the transcription and recording initial impressions in the margins. This phase of data analysis occurred during data collection, allowing me to adjust protocols for upcoming interviews or observations based on emerging themes and questions. Third, I began detailed analysis and the coding process. Coding occurred in layers, including initial codes derived from the literature review and conceptual framework, codes that emerged through data analysis, and codes that addressed larger theoretical perspectives and themes (Creswell, 2009). Specifically, using the HyperRESEARCH[4] software program, I initially analyzed the data using codes derived from the conceptual framework (In the case of interviews with program leaders, I used codes derived from the literature on effective alternative certification program detailed in the literature review in Chapter 1). At first, I focused on some key early interviews for analysis. Following a review of the initial analysis, I revisited and clarified the definitions for each code, added new codes based on emerging themes, and re-coded the data of those key early interviews. Then, with clearer codes in place, commenced coding the remaining interviews. From that point, new codes were added only when new and as yet unseen phenomena emerged. Through these phases a coding schema emerged that included the four main categories of practice described in the study, characteristics and descriptors of situated learning, characteristics and descriptors of communities of practice, and characteristics of effective alternative certification programs. Analysis at this stage also included counting the frequency of codes and comparing code frequencies between cases. The fourth stage of the data analysis process involved using the codes to generate descriptions of each case (together with video evidence), which became the basis for determining either themes across cases or contrasts between cases. Fifth, the combined data were used to construct a narrative for each case. And finally, sixth, I used the data to make interpretations based on the descriptions, cross-case comparisons, and themes that I had developed.

Video data analysis was similar in some ways to the analysis of interview data, with a few important differences. I conducted the initial analysis of the video data by utilizing a simplified version of the procedures recommended by Christian Heath and colleagues (Heath, Hindmarsh, & Luff, 2010). First, a preliminary review of the video was conducted within one to five days after collection and prior to subsequent data collection, taking the equivalent of field notes (in some cases, when the video was taken in person, this initial review was conducted simultaneously while recording). From this initial review I generated general classifications and questions to be asked in follow up interviews. Second, I conducted a more substantive review. I viewed the video while simultaneously following a transcript of the audio portion of the recording. In addition to making correction to the transcript, I noted specific materials or tools used by the mentor and or novice, adding descriptions of their actions to the transcript in brackets. By the third step, video analysis dovetailed with interview analysis process. I conducted an analytical review focusing on coding the transcript over multiple rounds, with repeated viewings of the video as necessary for clarification. This was followed by a description of each case based on combined video, interview, document evidence; followed by representation in the narrative and interpretation of the data.

Documents were used as secondary data sources and I analyzed them differently. Documents were used to corroborate, contradict or augment other evidence; verifying terms, titles, and organization names; and to help provide a description of the organizational contexts in which the mentor and novices were working. Also, they were used to make inferences about the intended implementation of the program, leading to areas for further investigation through interviews (Yin, 2003). Due to the difficulty of managing documents of varying formats in

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[4] HyperRESEARCH is a product of ResearchWare, Inc.

HyperRESEARCH, documents were analyzed by hand. The first step in the process included printing and organizing each relevant document in binders. Next, each document was reviewed and highlighted based on information relevant to the program design. Of particular interest were program design features related to mentoring, such as elements of job descriptions and training materials; aspects of courses that required fieldwork; descriptions of the practicum experience; and other evidence of program design features aligned with the characteristics of effective programs established in the selection criteria. Relevant excerpts were noted and labeled for future reference. In the description stage of data analysis described above, these referenced items were converted into aspects of the narrative for each case. Additionally, program documents corroborated or clarified issues that emerged from interview or observation data.

Field notes from observations of instruction were analyzed using the emerging list of codes similar to interviews and video evidence. However, observation data played a limited role in this study and were therefore analyzed somewhat differently. The purpose of this research was not to evaluate teacher effectiveness, and therefore the purpose of the observations was not to draw conclusions about the teacher's instructional skills. Instead, it was to provide context and a point of reference for the mentor's boundary practices. This occurred in two ways. First, observations provided evidence of concepts discussed between the mentor and novice being implemented in the classroom. Second, it provided a reference point for understanding the post observation conferences with the mentor. This use of observational evidence to provided additional contextual information is often a useful tool in understanding other data sources in case study research (Yin, 2003).

The primary data sources in this study were analyzed through a systematic and spiraling process of careful preparation, initial review to gather a general sense of the data, coding, creating case descriptions, representation of themes and contrasts, and finally interpretation. Through this process, and by combining interview, video, document, and observational data, I was able to produce well-grounded assertions regarding each case's boundary practices and situated learning.

Validity and Reliability

Qualitative validity relates to the procedural steps taken to ensure the accuracy of the findings (Creswell, 2009). To ensure qualitative validity, this study incorporated three strategies: First, I used multiple forms of data collection for each case including interviews, observations, multiple types of information from the program, and course syllabi (Creswell, 2009). Second, I mitigated the potential for an advocacy bias by continuously reflecting. An advocacy bias occurs when the values of the researcher potentially affect the conduct of the study or the findings (Stake, 2006). Among the factors that can contribute to an advocacy bias are the researcher's hope of finding a program, practice, or intervention that is working, the desire to reach conclusions that are useful to others, and the desire to generate findings that will stimulate action (Stake, 2006). There was a substantial risk of advocacy bias in this research. I have spent my career as an education activist. I am currently the director of an alternative certification program that aspires to many of the effectiveness criteria included in this study. Confirmation of the conceptual framework posited at the outset of this study could serve both to justify the rationale for the program I administer and provide practical direction for me as a practitioner. In order to limit this bias, throughout the research process I reflectively examined and discussed how my background and work as a practitioner could shape my findings (Creswell, 2009). Additionally, I sought and reported negative or discrepant information. As themes emerged from the data, I intentionally sought, reported, and discussed evidence that contradicted the general perspective and emerging themes of the study. By presenting this contradictory evidence, the reader can weigh for themselves the merits of the findings, increasing the credibility of this study (Creswell, 2009).

Qualitative reliability, as separate from validity, rests on the researcher's approach to data collection and analysis being consistent across different cases (Creswell, 2009). Three reliability procedures were employed. First, protocols were used for data collection. Case study protocols are an important means of increasing the reliability of case study research and are particularly important in cross-case studies (Yin, 2003). Second, transcripts were checked to make sure they did not contain obvious mistakes made during transcription (Creswell, 2009). Last, as themes began to emerge from the data, codes were more clearly defined. As the data were sorted, they were constantly compared with the code definitions to ensure that the definitions accurately captured the data and to ensure that there was minimal unintentional drift or change in the definition of the codes (Creswell, 2009).

Ultimately, it was my aim to describe the mentors' practices within the context of their programs, and in so doing to describe some possibilities and limitations of mentor practices as a means of fostering the integration of theory and practice in alternative certification programs. Additionally, I hoped to provide some directions for future research and some issues for program leaders to consider in evaluating the design of their own programs. In conducting the research, I attempted to enhance the utility of the findings by providing a rich and thorough description of the research context and the assumptions central to the study so that readers can assess their relevance to other contexts (Creswell, 2009; Stake, 2006). In discussing each case, I drew on the qualitative data; including significant excerpts of the participants' own words. Providing a rich and detailed description of each mentor and novice pair individually, and allowing for subsequent cross-case comparison, as well as a comparisons between the programs. Because the focus in this study was on mentor and intern practices and the related credential program design features, the case studies did not emphasize the teachers' instructional practices, the characteristics of their schools, or the nature of their students unless those issues arose as part of the novice and mentors' efforts to integrate theory and practice. Further, I did not evaluate the effectiveness of the mentoring taking place. Instead I tried to describe how the pair navigated the expectations of the program and the demands of learning to teach on-the-job.

Chapters 3: City State University Intern Credential Program

In this chapter I analyze two of four cases included in this study. These first two cases were drawn from the City State University Intern Credential Program[5]. I start by providing a description of the program, including key design elements, in order to provide context. Subsequently, I analyze each of the two case studies individually, drawing on the theoretical constructs of situated learning (Lave & Wenger, 1991) in communities of practice (Lave & Wenger, 1991; Wenger, 1998) to describe the types of practices each mentor-novice pair utilized to link coursework to the classroom; the degree to which the novice was engaged in situated learning within those practices; the strategies deployed by the mentor within those boundary practices; and to describe ways in which those practices constituted a community of practice. Additionally, I discuss how these practices interacted with and were shaped by the program design. I argue that the pairs differed in their response to the program design, with one pair engaging in more integrative practices than the other. However, I also argue that both pairs perceived a significant portion of the coursework as lacking relevance to classroom practice, which undermined the sense of integration for both.

Before delving into the descriptions and findings related to these cases, I first must delineate the four broad categories of practice that emerged over the course of this study: planned integration, emergent integration, situated learning in the program community, and situated learning in the school community. I contend that these categories provide a useful framework for understanding how mentors connected the theoretical and practical aspects of learning to teach and how the programs' designs impacted these experiences.

Planned and emergent integration are categories of practice that I have described as "boundary practices." These sets of interactions were intended to connect concepts from the program with applications in practice, and served, or were intended to serve, an integrative purpose. While these boundary practices emerged as a result of the mutual engagement in practice of the mentor and intern, they were always a response to program design in some sense. Therefore, my analysis incorporates both descriptions of practice and the program design elements that shape those practices. The following is a brief description of the two categories of boundary practices:

- *Planned integration boundary practices*: Planned integration describes practices that were designed by the program and included elements or routines intended for bridging program expectations and application in the classroom or at the school site. Planned integration was characterized by explicit goals for a given interaction, prescribed routines or protocols, and prescribed products that were expected to be generated through a given interaction. A pair's boundary practices in planned integration interactions were a response to the program's design for the interactions, but may or may not have led to the intended integrative purposes as the pair negotiated meaning around boundary objects (such as scripted questions) and connected practices.
- *Emergent integration boundary practices*: When the mentor and novice integrated program expectations with applications in practice in response to emergent issues or opportunities, I called it emergent integration. Emergent integration was influenced by

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[5] All program and people's names have been changed to ensure anonymity.

the program design, especially the degree to which the program allowed sufficient flexibility for the pair to negotiate meaning and address issues that emerged, the types of protocols used to guide interactions, and the strategies used for engaging the mentor in the programs practices.

Two additional categories of practice served to assist the performance of the novice teacher within the school or program community, without appearing to draw connections between the two communities. For this reason, these categories are more accurately described as situated learning within a community of practice, as opposed to boundary practices that connect two distinct or overlapping communities of practice. I include these non-integrative interactions in my analysis because these practices related to stated and designed functions for the mentor role, and they affected the integrative functions of the mentor role, sometimes undermining them.

- *Situated learning in the school community of practice*: At times, coaches worked with mentors to assist performance in negotiating the school site community of practice. Interactions in this category tended to be focused on the practices in the school site with little or no attention to boundary practices or program goals or intentions. While the programs differed in the explicitness of school site situated learning as a stated goal of the mentor and novice work together, the program design in all cases was informal regarding the specific expectations for situated learning at the school site, leaving this category of practices largely up to the mentor and novice pair to create.
- *Situated learning in the program community of practice*: Finally, there were interactions in which the mentor assisted novices in negotiating the credential program community of practice. Interactions in this category tended to be focused on programmatic issues and practices with little or no attention to boundary practices or applications for the school site or classroom. Neither program appeared to have an explicit design for situated learning in the program community of practice and instances of this form of situated learning appear to be spontaneous or responsive to needs that arose.

While each mentor and novice pair's practices moved fluidly between these categories, I use these categories to provide an overall characterization of each case. Doing so enables me to argue that mentors support the integration of theory and practice within the selected programs by engaging in boundary practices, assisting the novice teacher in developing the ability to connect the conceptual model of instruction embodied in the program's practices with the experience of instructing students on-the-job. Further, I argue that program design components influenced these practices, and their relative efficacy, in terms of how they balanced planned boundary practices with emergent boundary practices, the degree to which they created the conditions for effective emergent integration, and the degree to which situated learning that was non-integrative affected the sense of integration between program practices and site based interactions.

At the conclusion of this chapter, I will argue that the cases drawn from the City State University Intern Credential Program had both internal consistencies and inconsistencies, each influenced by the program's design. On the one hand, both pairs regularly engaged in practices that situated learning within the school community and both pairs wrestled with how to respond to coursework that was perceived to be irrelevant to practice. Additionally, there were similarities in how the pairs approached emergent integration opportunities. On the other hand, there were significant differences in how the pairs responded to the planned integration aspects of the program, with implications for how mentors served, or failed to serve, an integrative role in the novices' learning to teach experience. I then argue that the nature of the mentor roles as designed by the program allowed for some limited forms of emergent integration and for a substantial focus on situated learning practices that, at times, did not have an effect on integration, and, at other times, undermined the sense of integration. Finally, I argue that the perceived irrelevance of much of the coursework created a barrier to integrative practices between the mentor and the novice.

City State University: Classroom Teachers as Mentors

City State University is a public university located in an urban area. The University was accredited by the California Commission on Teacher Credentials to offer a variety of credential programs in both the pre-service and intern formats, including multiple subject credentials, single subject credentials, and special education credentials.

In the City State University program, mentors were referred to as "faculty associates."[6] Faculty associates consisted primarily of working classroom teachers. The faculty associate's responsibilities, as described in the memorandum of understanding between the university and the partner school district,[7] included: conferring weekly, observing or modeling instruction every other week, attending monthly professional development sessions, supporting interns in developing products for assessment, and providing support for navigating the school culture and resources. The faculty associates' roles overlapped with the university field supervisor's role, described in the student teaching field guide,[8] which included regular classroom visits and assistance with developing a portfolio for assessing of the intern's work in the program. However, the university supervisor played a more supervisory role for both the faculty associate and the intern, and their responsibilities included planning and facilitating a series of practicum seminars for the intern that met weekly. Additionally, the university supervisor facilitated the faculty associates' professional development sessions. One of the explicit roles for the faculty associate, as distinct from the university supervisor, was to "introduce the intern to the school and its culture and resources"(p. 1).[9]

Faculty associates were selected based on an application that was intended to ensure that "faculty associates are those highly competent teachers in the classrooms and retired teachers who will work to support interns during their two year teaching preparation… In addition to being exemplary teachers, they must view the process of becoming a teacher as a developmental, inquiry-based endeavor" (p. 2). [10] The application process included a self and supervisor assessment of teaching practice based on the California Standards for the Teaching Profession.

Once selected, faculty associates were trained as instructional coaches through regular monthly sessions (totaling approximately seven sessions per year), which also included information about the interns' coursework and required assessments. The program coordinator and a university supervisor facilitated these sessions.

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[6] In the City State University program, mentors are referred to as "faculty associates" and the two terms will be used interchangeably in this chapter. The novice teacher is referred to as an "intern" and those terms will be used interchangeably.

[7] Source: City State University, Department of Elementary Education school/university memorandum of understanding (pseudonym)

[8] Source: City State University Department of Elementary Education (2009). Elementary education student teaching field guide: DEE122 (pseudonym)

[9] Source: City State University, Department of Elementary Education school/university memorandum of understanding (pseudonym), Pg. 1

[10] Source: City State University, Department of Elementary Education school/university memorandum of understanding (pseudonym), Pg. 2

The intern and the faculty associate worked together as part of a two-year practicum course series. *The Student Teaching Field Experience Guide*[11] described the goals of the practicum experience, which included "contextually integrated methods and practice" and "collaboration between school administrators, [faculty associates] and university faculty" (Pg. 12).

The practicum course incorporated field experiences that included collaboration with the faculty associate and the university supervisor, as well as a seminar component. The field experience prominently featured a complete coaching cycle each semester. The coaching cycle included planning, teaching, assessment, and reflection segments, each of which was accompanied by protocols and conversation guides incorporating specific reflective questions to be answered. The guide stated that the process be conducted "with the supervision and support of the faculty associate and the university supervisor" (Pg. 7), and specified the faculty associate's responsibilities in each stage. The guide also delineated specific items that were to be developed and placed in a portfolio, inclusive of the evidence generated from the coaching cycle described above, but also including meeting notes using a "collaborative log" (Pg. 23) and other activities broken out over specific periods during the year. The seminar component of the practicum course provided an opportunity for the cohort of intern teachers, led by the university supervisor, to reflect on their practice, problem solve, and plan for the implementation of the practicum requirements. The practicum course design encompassed student teachers participating in pre-service preparation as well as intern teachers and it was not specifically designed for intern teachers learning to teach on-the-job. However, the cohort of interns met separately from their non-intern peers in the class meetings associated with the practicum course, and the department chair indicated that the practicum course experience was somewhat differentiated for the intern teacher program.

In addition to the practicum requirements, each intern attended classes at the university approximately twice weekly for six hours after school (the number of days and hours varied with each semester). Key courses had associated signature assignments[12], including, for example, a video analysis of aspects of instruction, a unit plan focusing on different aspects of instruction, student case studies, or the coaching cycle as part of the practicum.[13] These signature assignments were designed to sequence towards the state mandated Performance Assessment for

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[11] Source: City State University Department of Elementary Education (2009). Elementary education student teaching field experience guide: DEE122 (pseudonym)

[12] Signature assignment were assignments associated with specific courses, created at the department level, designed to: apply course concepts to descriptions of practice as described by the "teaching performance expectations," align with the Performance Assessment for California Teachers (PACT) summative assessment, provide data to inform accreditation, and/or to provide instructors a tool for ensuring coursework is applied in practice (Sources: Interview with Department Chair. City State University Department of Elementary Education's proposed assessment system, 2009)

[13] Sources:
City State University Department of Elementary Education (2009). Proposed assessment system (pseudonym).
City State University Department of Elementary Education (2010). Syllabus: Language literacy in diverse classrooms (pseudonym).
City State University Department of Elementary Education (2010). Syllabus: Mathematics teaching methods (pseudonym).

California Teachers. The courses historically consisted of cohorts of intern teachers that encouraged the faculty, in the words of the department chair, to be “intern aware.” However, due to changes that occurred during the study, the intern teachers participating in this study took classes that were populated by a combination of intern teachers, pre-service teachers participating in student teaching, and teachers who, in the words of the department chair, “aren't even at student teaching yet and are [just] starting to take their courses.” Curriculum and instruction courses were taken in conjunction with the practicum course. While the curriculum and instruction courses in most cases included some assignments that had links to practice, such as examining case study students, they did not explicitly incorporate the faculty associate or the practicum experience.[14]

The department chair believed the signature assignments were a valuable tool for ensuring alignment of course expectations to practice, especially as measured by the Performance Assessment for California Teachers, stating that “the signature assignments have brought more coherence… [and] mirror expectations of PACT in that there are aspects of practice and then there are reflections on practice.” The degree, however, to which coursework was expressly designed to be relevant to practice was unclear. Changes to the program that occurred over the course of the study, specifically a reduction in the number of interns participating the program, led the program to incorporate the working interns into the same classes as pre-service candidates, resulting in, as one of the novice teachers explained it, “…basically [being] put into a class that wasn’t meant for an intern, so that was very difficult.” Intern teachers and their mentors, in both cases, indicated that being together in courses with students who were not learning to teach on the job detracted from their experience. It made the coursework less relevant to the interns as the instructors, in response to the fact only a minority of students were engaged in teaching, worked to scaffold the concepts for the less experienced teachers-in-training. In so doing, they did less to ensure that concepts were applied for working teachers. I raise this issue because the interns’ perceptions of the relevance of their coursework had significant implications for the findings in this chapter.

In addition to the change in the coursework structure described above, a sudden leadership transition in the late spring may have affected other aspects of the program. There were discrepancies between the espoused and enacted program design and occasional confusion on the part of the mentors regarding the degree to which coursework was intended to connect methods courses with on-the-job training. For example, one of the mentors stated: “With the shift in leadership of the program this year, there may have been a little bit of a shift in the expectations” making it less clear to her on which subject area the coaching cycle should focus.

In sum, City State University had a process for selecting and training faculty associates, who were primarily working teachers, to work with interns in their job setting through the practicum course. The practicum course provided a structure for their interactions, defining the tasks that must be completed and the products that must be produced, while the practicum seminars provided an opportunity for interns to discuss challenges with their university supervisor and their peers. Faculty associates attended monthly meetings to receive training, to understand program coursework and required assessments, and to solve problems. The practicum course was taken in conjunction with curriculum and instruction courses; however, there were not clear links between the two. Coursework in the program was not specifically designed for the on-the-job nature of intern teaching, although the signature assignments, and other assignments included in the syllabi, did include applications in practice.

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[14] Sources:
City State University Department of Elementary Education (2010). Syllabus: Language literacy in diverse classrooms (pseudonym).
City State University Department of Elementary Education (2010). Syllabus: Mathematics teaching methods (pseudonym).

Case #1: Greg & Kim

The work of Greg (the intern) and Kim (the faculty associate) was characterized by shifting stances within and between different types of interactions. Designed elements, particularly those related to the coaching cycle, provided an opportunity for planned integration that served to focus and constrain the pair's boundary practices while still allowing some limited opportunities of emergent integration. Situated learning opportunities within the school and the program communities respectively were also present. While these latter two types of practices were not intended to serve integrative purposes, they at times seemed to serve other purposes without impacting the sense of integration, and at other times they undermined integration. How Greg and Kim chose to respond to emergent issues, which was inconsistent, was an important factor in whether interactions served as a boundary practice that linked coursework to the classroom. Below, I describe the context in which the pair was operating, including their own perceptions of how the program design impacted their work. I also analyze how their interactions unfolded within each of the categories of practice described above.

Context: Shared-site mentoring.

Greg and Kim were uniquely situated in that they taught in two different schools that shared a campus. This, combined with Kim's prior experience as a participant in the City State University program, fostered a coaching relationship that was not quite site based peers, but was also not as removed from the school context as an off-site mentor may have been.

Greg was a first year intern in the City State University Intern Credential Program. He entered the program following a semester of long-term substitute teaching in the New Pathways School, where he subsequently became an intern teacher and where he was teaching while this study took place. New Pathways School was a district operated "community day school." Community day schools were intended to "serve high-risk youth, including those referred due to expulsion, probation, or the recommendation of a School Attendance Review Board; provide a challenging academic curriculum; and develop pro-social skills and resiliency."[15] New Pathways School was a 6-8 grade middle school and was co-located on the grounds of Fillmore Middle School, a traditional district school. Greg taught a mixed age and mixed ability classroom in a self-contained classroom environment. There was a high degree of student mobility and over the course of the study several students were added to his class on short notice. The student population was too small to provide meaningful demographic statistics, however it was clear that all students were placed in the program due to some identified academic or social challenge they faced in their prior schools.

Greg viewed the goals of the City State University Intern Credential Program as developing intern capacity for instruction, instructional planning, and reflecting on practice. He summed up the goal as, “to help teachers teach, to help teachers develop strategies to teach, to help teachers develop how to do lesson plans, how to assess students, how to reflect back on what you’ve done to see if it works, and basically half of it is instruction, and the other half is more support.”

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[15] Source: California Department of Education. http://www.cde.ca.gov/sp/eo/cd/. Retrieved 9/1/2010.

Greg felt that his coursework, while sometimes differentiated for or accommodating of his needs, was not geared towards his specific teaching context, a feeling that he noted on several occasions. Greg felt that his practicum course, which was specifically tailored to his on-the-job training context, was more suited to his specific needs. This is important to point out because existing research suggests that relevant and applied coursework is a key element of effective programs (Humphrey & Wechsler, 2005; Humphrey, et al., 2008; J. W. Miller, et al., 1998; Mitchell, et al., 2007; Nakai & Turley, 2003). Furthermore, much of this research suggests that interns’ perception of the relative relevance of specific aspects of coursework has significant implications for the mentor and novices efficacy in integrating theoretical and practical aspects of the program. This was certainly the case for Greg.

The following excerpt from an interview with Greg typifies his feelings regarding the relevance of his coursework:

> For me personally, I’m in a [kindergarten] through eight multiple subject credentials [program], and I’m very specifically teaching eighth graders. I just got a sixth grader this past week, but I’m teaching at a community school where students have been expelled, and what I have found so far are the classes [at City State University] are more geared towards the primary grades. Maybe first through fourth, and I have to wait till the end of the semester to get some stuff that really reaches where I’m at.

There was a relationship between whom a course was geared towards, interns or pre-service teachers, the tasks that novices were asked to complete, and the degree to which tasks were relevant to practice. Greg expanded on this relationship stating:

> Well, the first five classes I took, I got a lot of good information, and actually being in the classroom, I wanted to make it work. I wanted to find strategies to help my students because if I find better strategies, it makes my day a lot easier…
>
> [But] towards the end of the semester, I had a lot of late work in some of those classes just because they just were – they just didn’t fit in. You have to do it if you want your credential, but maybe some of the instructors – maybe it’s hard to differentiate when you have a class with interns and non-interns.

By contrast, when Greg felt that assignments were differentiated for his on-the-job teaching context, he found them useful and applicable, particularly when he “could see fitting a kindergarten class into the assignment or an eighth grade class into the assignment because it was very open-ended. It wasn’t too specific.” For example, Greg felt that a set of assignments from his educational psychology course supported his learning precisely because, “the assignments were where you were at, and you could fit your class into the assignment, whereby the other classes or some of the other classes, the assignment was so constrained that you couldn’t. The assignment overpowered whatever you were trying to do.”

His practicum course in particular was consistently relevant to his on-the-job needs, both in terms of his work in the field and in terms of the weekly seminar during which he met with his university supervisor and his cohort of four interns:

> [The practicum course seminars were] very much understanding that we were interns, we have a class, we're teaching, and there're certain things that we already know, there are certain things that we need to know, and there are certain troubleshooting issues that we're going to have.

Kim, the faculty associate, was a full-time science teacher at Fillmore Middle School, which was adjacent to Greg's school. Kim was a graduate of the City State University Intern Credential Program herself and had acquired three years of experience as an instructional mentor through the Beginning Teacher Support and Assessment program. Kim viewed the purpose of the credential program as:

> An alternative way for potential teacher candidates to get their education and to get their on-the-job training, so to speak, in a different way than the conventional take a year off and be a student teacher in a classroom by itself. Because of that, they do a lot of mentoring and a lot of close contact with supervisors from the university as well as the faculty [associate].

Kim understood the purpose of the faculty associate role as:

> It's to provide another lens to look through from our point of view to see what they're doing right and what they're doing wrong when they're in the middle of it, especially the first few weeks and the first few months when they're just trying to survive the first few months of teaching to let them know, 'You're doing this really well. Here's some areas where you could improve.' Or, 'Now that you've got this mastered, why don't we focus on this.'

Kim drew on her experience as a former participant in the program and on her prior experience as an instructional coach, as well as her participation in the university community of practice, to help Greg navigate the various communities of practice in which they were situated. Kim participated in the university community through monthly faculty associate meetings in which she learned coaching strategies, learned the assignments associated with the practicum course, and learned about the intern's overall coursework expectations and signature assignments. Kim viewed these meetings as valuable and described them at different points as "tell[ing] us what they're looking for and help[ing] us with coaching language… role play[ing] different ways of [working with interns] and guiding them through [the requirements]," and gaining clarity on the "curriculum courses they have to take."

Greg and Kim met weekly, sometimes working on issues arising from their ongoing interactions, using the program designed collaborative log to guide and record their work, and at other times working on specifically designed interactions as part of the practicum course's coaching cycle.

Data collection for this case included initial and final interviews with each, and a complete coaching cycle including pre- and post-interviews, video analysis of the pre- and post-conferences, and video analysis of the teaching event (a sudden schedule change made the planned in-person observation of the teaching event impossible). A second, less formal coaching cycle was scheduled for inclusion in the study, however one of the subject's personal circumstances led them to postpone and then cancel those activities, at which point it was too late to schedule an alternative.

Analysis: Shifting stances.

Greg and Kim's interactions were characterized by shifting stances between planned integration, program situated learning, school site situated learning, and emergent integration, which was less prevalent (see Figure 3.1 below). The pair's perceptions of the relevance and applicability of required activities designed by the program had a significant influence on the integrative practices in this case. Below I examine instances of each category of interaction.

Figure 3.1
Summary of Greg & Kim's Practices

Boundary Practices		**Situated Learning in a Community of Practice (COP)**	
Planned Integration	Emergent Integration	Situated Learning in the School COP	Situated Learning in the Program COP
Integrative Practices: [16] **Coaching cycle included specific goals, process, and product defining and guiding interaction and served to integrate program expectations with teaching practice**	Integrative Practices: Occurred in practices connected to the practicum course. Occurred within the planned elements of the coaching cycle and as part of the ongoing collaborative work. Occurred when class assignments were "tweaked" to be applicable to teaching demands.	**Non-Integrative Practices:** [17] **Provided instructional guidance and support for navigating logistical dimensions of working on the campus and in the district.**	**Disintegrative Practices:** [18] **Negotiated meaning around assignments and requirements assisting prioritization.** **Exacerbated sense of some assignments being irrelevant to practice.**

Note: ***Bold*** *items indicate the primary practices or the preponderance of practices observed*

Planned integration boundary practices: Greg and Kim's work included a coaching cycle that had specific goals, a defined process, and required products that defined and guided how the mentor and novice were meant to work together, all hallmarks of planned integration. In the coaching cycle, the specific activities, reflections and products were pre-determined by the university program. Greg and Kim's pre- and post-conferences followed a specific protocol with scripted questions, a detailed format for how the cycle should be conducted, and a detailed list of what should be produced. These activities were designed to integrate conceptions of teaching and effective practice taught in the university setting, particularly in the practicum seminar, with actual teaching in the classroom. The coaching cycle was not explicitly or directly intended to integrate other coursework with practice beyond the practicum course. Greg and Kim executed the designed activities faithfully, and the process resulted in a sense of applicable and relevant connection between the assignment and Greg's teaching practice.

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[16] Integrative practices are boundary practices that serve to integrate the theoretical and practical aspects of the learning to teach experience.

[17] Non-integrative practices are situated learning experiences that do not impact the sense of integration between the theoretical and practical aspects of learning the learning to teach experience (but that may plan other important roles in learning to teach).

[18] Disintegrative practices are situated learning experiences that undermine the sense of integration between the theoretical and practical aspects of the learning to teach experience.

When Kim and Greg worked on the coaching cycle, they engaged in lengthy dialogues, guided by the questions and producing specific artifacts as required by the program. The coaching cycle became a boundary practice because the mentor and novice pair responded to the designed interaction in a way that created meaning and connection between the program's intentions and applications in practice. Throughout the coaching cycle, the pair worked to clarify the goals and negotiate the meaning of each scripted question. Kim, as the veteran member of the boundary community, assisted Greg's performance in the shared enterprise by prompting his thinking and providing instruction on what to record on the protocol. The protocol became a boundary object around which Greg and Kim negotiated meaning. For example, they discussed the question "What did you learn about student understandings of the big ideas, standards, and/or objectives of your lesson? What is your evidence?" (Pg. 65)[19] In this discussion, the pair engaged in content specific pedagogical considerations of exponents, procedural fluency, and cooperative learning, all while Greg recorded key ideas from their discussion on the protocol. In this instance the boundary object was designed to focus and narrow the possible meanings that could be derived, directing the pair towards the specific kinds of learning the program desired for the interaction. Further, it was explicitly intended to make specific connections between the program's intentions and practice.

Prescribed design elements, such as this coaching cycle protocol, can risk a response that is unintended, such as a compliance orientation (Wenger, 1998). However, in this instance that did not appear to be the case. Greg and Kim faithfully followed the prescription, approached it with a learning orientation, and each expressed appreciation for this level of planned integration. Kim, in her senior role within the boundary community, supported a response to the design that led to implementation in ways intended by the program, as explained by Greg:

> When I first started it, I was like, 'this is just a colossal waste of time,' and after talking with Kim, she started to point out some things that I didn't have time to focus on, and once I was able to focus on them and once we sat down together and watched the video and went over certain strategies I was using, I was able to say, 'Oh, maybe I should have done that differently.'

Greg was also able to express how this prescribed component of the program fit into other design aspects, such as the Performance Assessment for California Teachers (PACT). Greg described the coaching cycle as a "pre-PACT assignment" using terms very similar to the program director's description of the purpose of the designed assignments.

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[19] Source: City State University Department of Elementary Education (2009). Elementary education student teaching field guide: DEE 122. Pg. 65. (pseudonym).

Kim was similarly clear about the designed aspects of the coaching cycle, stating, "The coaching cycle in that instance worked because it's designed to get them to reflect on their own teaching practices and see where they can improve." More specifically, Kim felt that the design of the specific questions and process prescribed for the coaching cycle contributed to the sense of connection between the programs expectations and the work in practice, stating:

> That's why it's there, to *make sure* that we get them thinking the way that the instructors at City State want them to focus... A lot of those questions really get to the heart of what it is we're trying to reflect on. So this seemed like a pretty good guide. [Emphasis added]

Importantly, the program's planned integration activities served to focus and constrain the range of meaning to be made from the boundary objects and the brokered practices, which greatly influenced the practices that emerged. For example, the protocols for the planning conference stuck closely to basic concepts of instructional planning, requiring the mentor to guide the novice in identifying clear outcomes, instructional strategies, possible student characteristics requiring differentiation, and assessments of student learning.[20] As Kim and Greg read and responded to each question, with Greg logging his response on the protocol, their conversation could stray only so far from the predetermined sequence if they were to successfully complete the assignment.

Successful planned integration in one context within this case did not translate to universally successful planned integration in other contexts. The level of planned integration that Kim and Greg appreciated in the practicum course was not always appreciated in other instances. Greg contrasted the coaching cycle assignment with other assignments this way:

> So it was still structured, but you could fit your class into it, whereby some of the other assignments were very specific: 'Okay, you're going to do this with a first grader or you're going to do this with a lower elementary student, and this is your situation, and go figure it out.' So I think [unlike] in a few of the classes, it was open-ended to the point where you could fit your class in, but it was structured enough to know what you were doing.

In sum, the effectiveness of the coaching cycle design was mediated by Greg and Kim's perception of its utility, which was strengthened by the assignments application to the specific context in which Greg was teaching.

Situated learning in the program community of practice: In response to program assignments that they perceived to lack relevance, Greg and Kim navigated the practices of the program community in ways that undermined the sense of connection between the program practices and teaching in the classroom. The pair engaged in situated learning activities that focused on the practices of the program including discussing requirements, prioritizing program assignments, and discussing who Greg could approach within the program to get his needs addressed. Prioritizing assignments in particular was frequently the result of aborted attempts at emergent integration. The key difference between the planned integration example of the coaching cycle discussed above, which effectively integrated program concepts with practice, and the aborted attempts at emergent integration that turned into situated learning within the program, which ultimately undermined integration, was the perceived relevance of the course assignments to the interns practice.

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[20] Source: City State University Department of Elementary Education (2009), Coaching Cycle Planning Conversation Form, in Elementary education student teaching field guide, DEE 122 (pseudonym).

Kim's experience with the program created opportunities for her to assist Greg in navigating the demands of the City State University community of practice. Kim took advantage of her experience as a graduate of the program, which more firmly anchored her as a member of the program's community of practice, and which allowed her to facilitate situated learning in the program practices without apparent boundary crossing. This typically took the form of negotiating meaning around assignments. For example, in the following exchange from one of their conferences, Kim assisted Greg in clarifying his goals and prioritizing his efforts. Notice in this exchange how Kim probed several times for opportunities to modify or adjust the assignments in question to suit Greg's circumstances, searching for an entry point into emergent integration boundary practices. Ultimately, though, Kim shifts stances, helping Greg clarify his goals within the program community, abandoning the effort to meaningfully link the assignments to practice:

> Greg: I have a bunch of stuff for [City] State, so that's not really for this class, but –
>
> Kim: But it's still one of your challenges, so it's crunch time.
>
> Greg: And it's so like – they're making us do stuff that is – because the [intern] program was supposed to be all people who are in a class. And then like in my math class, there's a couple students, this is their first credential course ever. So it's just like super dragging, and I'm just like, 'Oh my God.' So the way she sets the class up, I just feel like it's redundant.
>
> Kim: So it's kind of a waste of time.
>
> Greg: Yeah, definitely a waste of time. And I don't have any time to be wasting. So then I'm like, 'This is so lame. I don't want to do it. I have other things that I want to plan.' I end up procrastinating on it. Then we have a presentation from last week. I had a meeting at the [district office] last week. So I didn't make my group presentation. Then they're all pissed off at me. I'm like, 'It's not that big a deal, guys. Everyone has their part. Do your part. I'll do my part.'
>
> Kim: Now they let you incorporate what you really need to do in the classroom into your assignments. Right?

> Greg: Well, this one not really. Most people don't even have a classroom. Me, Joan, Peter are in a class, and two other people in special education. And there's like 35 people in a class. So certain people don't even have a class.
>
> Kim: So does a professor take into account any of that, that you're a full time intern, or is it just he's not differentiating. He's not doing what we're being taught to do.
>
> Greg: Right. So I'm just like – I have this stuff to do.
>
> Kim: Yeah. The best thing I can say is just try to tweak it so it's valuable for you, and just kind of – it's just one of those hoops to jump through, and you are so close to the end of the year.

In this example, Kim's efforts to help Greg clarify goals provides an illustration of the role a veteran of a community of practice can play in assisting the situated learning of a novice. However, the fact that ultimately this interaction is characterized by negotiating meaning within the program practices, as opposed to being a boundary practice, illustrates the non-integrative situated learning that can occur. In fact, Kim explicitly viewed this form of negotiated meaning, and the choice between finding an opportunity for emergent integration versus situated learning as goal clarification within the practices of the program, as an important aspect of her role. Usually this took the form of navigating assignment expectations:

> So there are some assignments where it's like, 'Wait a minute. This is going to have no benefit whatsoever for my students.' So we do what we've got to do and jump through the hoops or how can we make this apply to what we're doing in the middle school students that we have… it's really a case-by-case basis for how we can make this work or just do what you've got to do to get through it and focus on this and this aspect of it that might help you apply it to what you're doing.

Furthermore, Kim advocated directly with program leaders that they should further adjust the assignments to make them more relevant for Greg. Here again, the key difference between the planned integration example of the coaching cycle, which effectively integrated program concepts with practice, and these aborted attempts at emergent integration, which ultimately undermined integration, was the perceived relevance of the course assignments to the interns practice.

Thus, Greg and Kim were not able to develop emergent integration when they found course assignments to be irrelevant to Greg's teaching context. For example, Greg at one point was required to write a math lesson for second grade standards, even though he taught the sixth through eighth grades, about which Kim said:

> I'm sorry but that was ludicrous. There's no reason he should have to spend 60 hours on this unit that he will never use. It would have been better if they would've said, 'Okay, take a unit that is appropriate to the standards that you have to teach.' And there are standard seventh and eighth grade standards where you can find one that applies to both and he could have done something that really had

> meaning for it. But the teacher said, ‘No, that's not acceptable. You have to do this anyway.’ And that's one of those where it's just like, you do what you've gotta do and it sucks and it was one of those things where I didn't want to make him or tell him to do one for his level also because it was such a huge amount of work

In the examples of negotiated meaning and clarification of concepts related to assignments and expectations that did not seem relevant, situated learning was nevertheless occurring. Kim, the more experienced member of the program community, was playing several important roles including: recognizing the novice’s frustration, helping the novice to cope with the competing demands on his time and attention, and establishing the credibility of the mentor as recognizing the reality of the program community. Greg appreciated this goal clarification and prioritization role played by Kim as the more senior member of the program community of practice, stating:

> I guess I felt better about doing certain things, whereby before, I’d be kind of sketch [sic] on maybe if I should do it this way or not? Am I going to get in trouble? What’s going to happen? And because she’s been there, done that, she was able to say, ‘Oh, you can do it that way. You’ll be fine,’ so it relieved the stress.

Kim fit this goal clarification work into a vision for the profession in which teachers are sometimes required to engage in practices that do not seem immediately relevant, a concept that Kim articulated as:

> Realizing that there are things we have to do in life in our teaching career that we may not agree with that may have no relevance whatsoever. There are often times things that they do in staff meetings where it's like, ‘Do I really have to look at this data again? Even though it has nothing to do with what I'm teaching?’ And it's just one of those things where it's required of you and you need to suck it up and you need to deal with it and you need to move on. It's just learning there are some things you need to do even if you don't want to.

That said, efforts by the mentor to help the novice meet program requirements often served to undermine a sense of integration between the coursework and fieldwork. This raises questions regarding program design, the relevance of the coursework, and the integrative role of the mentor in these situations. In some circumstances, such as the coaching cycle, the mentor was able to persuade the intern that the assignment was valuable to his practice, furthering the sense of integration. But in others, the mentor confirmed the intern’s sense that an assignment was not relevant.

Situated learning in the school community of practice: Kim also provided Greg instructional guidance and support in navigating the logistical dimensions of working on the campus and within the district. In contrast to the situated learning that occurred within the program community, the opportunities in Greg and Kim’s practices for situated learning within the school community, while not playing a specifically integrative role, did not appear to undermine integration. Kim assisted Greg’s performance as part of the school community by managing logistics at the school such as putting “copies in your box for you” and communicating “how things get done;” providing emotional support; and, in particular, connecting Greg, directly and indirectly, with key people within the school or district. The following exchange typified the pair navigating some of the more logistical school and district level issues and illustrated Kim connecting Greg with the appropriate people to address his needs. In this interaction, notice how Kim assists Greg’s performance. Initially, she provided instruction on what to do to access a required piece of curriculum, but then shifted, taking the responsibility on herself.

> Greg: So STAR test meeting. But also, the character curriculum stuff. We’ve got to get through that.
>
> Kim: Yeah, and you have to get the curriculum from the [District Office]. Probably Danielle Thompson.
>
> Greg: [Writing on the collaborative log] I would have to call her for that?
>
> Kim: Yeah. Or you know what? I’ll send her a – put it under me [gesturing toward the collaborative log]. I’ll send her a message.

This excerpt from a coaching session illustrates how Kim used her knowledge as a veteran in the district to help Greg navigate the everyday issues of practice within that community. Kim also used her position as a member of the school community of practice to assist Greg in developing pedagogical content knowledge. For example, Greg described an instance of Kim accessing colleagues to answer pedagogical content knowledge questions as follows:

> Well, my biggest challenge was because I do teach three grade levels. I teach all the classes and this is my first year as a full time teacher, that sometimes some of the content I'm not 100 percent sure why, in this case, why a zero exponent is one. I was a little confused too – I knew the rule. I could teach the rule. The kids knew the rule, but maybe not some of the reasoning behind it. And I was able to talk to Kim who has a friend who teaches math at Fillmore, and Kim was able to supply the answer for me. So that helped out.

Furthermore, their regular meetings were typified by discussions of instruction and, as Greg put it, “sitting down and discussing lesson plans” without an explicit connection to required coursework. These examples of situated learning in the context of the school community of practice are important primarily in the degree to which they can be contrasted from the program practices. In the example of the program community’s practices, the situated learning undermined integration while serving other purposes. In this case, there appeared to be no such problem. I conclude that this difference resulted from Greg and Kim’s expectations. As illustrated by the data discussed above, Greg and Kim had an expectation that their interactions around program requirements were intended to be relevant to practice, and they were frustrated when they felt unable to make it so. They did not, on the other hand, have expectations that their mutual work around navigating the demands of the school site should be relevant or useful in assisting Greg’s progress through the program. This reduced potential points of tension.

Emergent integration boundary practices: While Greg and Kim participated in emergent integration less often than the other forms of practice discussed above, emergent integration did occur within the context of the practicum course and the pair's ongoing collaboration. Additionally, emergent integration occurred in situations where the pair was able to adjust assignments to be applicable to Greg's teaching demands.

The vast majority of emergent integration interactions were connected to the practicum course. For example, Kim supported Greg in developing skills that had been identified as areas for growth by the university supervisor, such as lesson planning. Greg explained: "I was – not in trouble, but my advisor at State was on me about my lesson planning… So [Kim] taught me how to do that lesson planning for six subjects."

Emergent integration also occurred when Kim sought to support Greg in the implementation of course assignments in the classrooms. Kim explained these examples by saying, "Some of the assignments are… tweakable to grade level" or to "which students are you going to focus on?" Kim went on to say,

> So I think sometimes [I give him the] idea of, 'Oh, I can work this toward a specific student goal.' And I think things like and comments like that are what probably got him to focus on [applying his assignments to his classroom].

Greg reinforced this notion of Kim's role as helping to find classroom applications for the concepts coming from coursework, stating:

> She did help me find specific strategies and certain class work that I was able to implement in my classroom that made my life easier, and going through the program, I would go to every class, every Tuesday, Wednesday, Thursday night, and what can I bring back to my classroom tomorrow to make my life easier and help the kids learn? Once I started doing some things that I learned in class, it was like, wow, this really, really works.

Despite this, Greg indicated that he and Kim's ability to find these opportunities for integration were limited by the degree to which the task he was being asked to complete were relevant to his coursework. Greg explained it this way: "The assignments that we kind of skirted around, those were the hardest ones to do because… you're completing the assignment, but it's not relevant to what you're doing, so the motivation is low, and that would be the assignment I would turn in late."

Throughout these emergent forms of integration, Kim played a key role in linking coursework to practice. Even within the scripted and planned nature of the coaching cycle, there were examples of emergent integration. Kim noted, "We do deviate from [the script] a little bit. We go back and forth and jump around a little bit." And while there was no requirement that the coaching cycle intersect with a methods course, with Kim's encouragement, Greg merged the assignments:

> Well, the assignment for the program was my practicum class… basically it was a coaching cycle… so it was for my practicum class and that was the lesson I used it for. But I figured out I could also use it for my math class. I was taking a Math

> Methods course, so they both kind of work together, which worked out really well for me.

Beyond issues of the design of coursework and its impact on the pair's efficacy in connecting coursework to practice, the routines of the practicum course also helped to shape the pair's opportunities for emergent integration. While the coaching cycle had a clear goal, prescribed interactions, and a pre-determined product, many of the other activities had a much more minimalist design, including use of tools that were, in Kim's words, "a lot more open and it's a lot more, 'Okay, talk to me about what's going on.'"

Summary of Greg & Kim's practices.

Greg and Kim's work was characterized by shifting stances within and between different types of practice. The designed elements of the coaching cycle provided an opportunity for planned integration that served to focus and direct the pair's boundary practices, while still allowing limited opportunities of emergent integration. While moments of planned integration created connections between the program's conceptions and expectations for effective instruction, they were not explicitly linked to other coursework, but Greg and Kim made this connection emergently. Additionally, Greg and Kim occasionally found ways to adapt course assignments to Greg's classroom. In instances where Kim and Greg perceived the coursework not to be relevant, they often tried to engage in emergent integration prior to reaching that conclusion. However, they were frequently frustrated in these attempts by assignments that they perceived to be insufficiently flexible or adaptable. Greg summarized this tension by stating: "Sometimes she helped me think about how I could make those assignments work in what I'm doing now. Sometimes she… gave me the permission to do things a certain way… she was like, 'Yeah, that's fine. You can just do it that way, and ask for forgiveness later.'"

Situated learning opportunities within the program community, which often arose as a response to this frustration, sometimes undermined Greg's sense of connection between coursework and fieldwork. That is to say that in circumstances when Kim and Greg concluded, sometimes with good reason, that a given program assignment lacked relevance for Greg's teaching context, the pair would minimize its importance and treat the assignment as an obstacle to be addressed with minimal attention to Greg's learning of the concepts embedded in the assignment. While circumstances like these may have undermined integration, they nevertheless had important functions including assisting in prioritizing the demands on the novice, validating the novice's frustrations, and engaging in legitimate critiques of the program, which in itself was a practice of the program community. From a design perspective, though, Greg and Kim's experience suggests that the relevance of the coursework to the novice's teaching context was a critical component for integration. In this case, where much of the coursework was perceived to lack the requisite relevance, the mentor and novices boundary practices were insufficient to overcome the disintegrative effects of the coursework.

In contrast, opportunities for situated learning at the school site appeared to be an important resource for learning to teach on-the-job in this case, independent of the fact that there was no perceptible relationship between these practices and the integration of coursework and instruction. Kim supported Greg's ability to negotiate meaning and resolve conflicts within the school's community of practice, recognizing the novice's peripheral status and acting accordingly to scaffold their participation in the community.

Case #2: Preston & Mike

The interactions of Preston (the intern) and Mike (the faculty associate) were characterized by a heavy emphasis on situated learning in the school community of practice, with some limited examples of situated learning in the program community of practice and only fleeting examples of emergent integration. While Preston and Mike's practices supported Preston's ability to navigate the demands of being a novice teacher at the school, the absence of integrative practices together with a perceived lack of relevance of the coursework ultimately served to undermine the sense of integration between the program design for learning to teach and the on-the-job experience of teaching by depriving the novice of an important resource for integration.

Context: Site based peer mentoring.

Preston and Mike were colleagues teaching the same grade level in classrooms two doors away from one another, which significantly shaped their mentoring relationship. Preston was a first year intern in the City State University Intern Credential Program. He entered the program following a semester of long-term substitute teaching at Grove Elementary, a K-8 school and single school district, where he was teaching fifth grade during this study. Grove Elementary was ethnically diverse and had a significant population of English language learners (40%) and students who qualified for the free or reduced priced meal program (60%).[21] Preston viewed the purpose of the Intern Credential Program as "to turn you into a professional – to get you professionally trained in a field that requires a lot of information and experience and reading and research... So I really appreciate the program more than ever now." Preston viewed the purpose of his work together with his faculty associate, Mike, as "to have someone to ask questions and to have the support that every first-year teacher absolutely needs." And he framed their work together in terms of an everyday site-based resource to help him navigate the demands of teaching while being a student:

> We work every day together. I call him a lot, especially in the morning for math. He helps me out; he's really good with math. So I get a lot out of him in terms of how to teach the math. So we do that every morning. Whenever I have questions on the political climate or just regulations – like how to get from point A to point B with the paperwork and stuff, things that I don't understand – whatever it may be, I call him a lot. He's really good about helping out with whatever I need; any ideas that I have I run by him.

And in another interview he stated:

> Mostly it has to do with knowing how to teach the subjects; how you can make it fun for the kids; what turns them on, what turns them off. Just – he's been there.

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[21] Source: California Department of Education. http://www.cde.ca.gov/sp/eo/cd/. Retrieved 9/1/2010.

> He’s been teaching here five or six years. Yeah, he’s had the rough classes – he’s had the rough students. He’s got that experience.

In general, Preston felt that the content of his courses was important and that it was his professional obligation to learn the material. When it came to his assessment of the coursework’s usefulness to his on-the-job learning, however, he took a somewhat starker view. For example, Preston felt like the course concepts were difficult to meld with his school’s curricular programs, particularly in language arts, stating: “it’s hard to create a program within a program.” Preston felt that at times lessons learned on-the-job were more valuable than lessons learned in his coursework:

> Well, [some courses] are redundant. It’s stuff that you’re going to learn anyway when you’re put into the situation. It’s not like classroom management, which is something that you really do need, and you really need to understand and grasp the concept. These other classes are just, ‘Well, you should teach this book, or this or this.’ It’s like, well, I’m an intern teacher, I was actually hired… So I was thrown in with no experience, and I learn all that stuff that she’s teaching in the class by just being in the [classroom]. To me, it’s just superfluous; it makes no sense to do that twice. You will learn it. We have these [curriculum] adoptions; we get trained by the school on how to teach these adoptions, right? So why do we need to take a class on learning adoptions that don’t apply to you, because they’re teaching you K through eight; it’s like, you’re going to learn that anyway. So to me it’s a waste of time.

Preston’s view that school based priorities were of paramount importance was echoed by Mike, and was reflected in their work together. Preston did feel that tasks which were teaching strategy oriented, highlighting aspects of his math methods course in particular, and associated with his on-the-job needs, such as “how to lesson plan” aspects of some of his methods courses, “just really prepared me.”

Mike was a graduate of the City State University Intern Credential Program and he also taught fifth grade at Grove Elementary. Mike played multiple leadership roles within the school, with responsibilities as the school site union representative as well as some leadership responsibilities for the grade level team. Mike’s classroom was in the same building as Preston’s, two doors away. Similar to Preston, Mike viewed the purpose of his role as a faculty advisor as supporting intern teacher’s day-to-day work as opposed to being responsible for developing their understanding of the theoretical or conceptual aspects of teaching:

> I think the purpose of our program is to connect up a potential new teacher with a mentor that will help them and guide them through not just sort of the day-to-day stuff of teaching, but also help them look at the bigger picture and really be their person who is the everyday person that you see. Not – it’s not meant to be their instructor; it’s not meant to be the person who educates them on teaching theories or anything like that. It’s more of their person that that they can work with everyday or every couple days, whatever it is, that shows them really the ropes. It shows them how they take their stuff from their class at City State and put it into place and actually use it in the classroom.

Like Kim, Mike attended the program's monthly sessions for faculty advisors. However, he did not find these meetings universally applicable to his circumstances and stated, "Preston and I are just kind of an anomaly" because they worked together on the grade level team. As a result, Mike viewed the most important part of his training as, "just being a teacher, so I know what we're supposed to do as teachers." This is not to suggest that Mike was unable to describe the purpose of these sessions, in which, according to Mike, they talked about the intern's coursework, performance expectations, assessments, and coaching issues; but Mike indicated that in his actual work with Preston the program expectations were not a prominent feature of their coaching relationship, stating that support on assignments for courses were "not very much at all" a part of their work and that "we've talked about a couple of things…" Like Kim, Mike expressed some reservations regarding the degree to which the Preston's coursework was aligned with his on-the-job training needs, stating, "the teachers of the methods classes aren't necessarily part of the internship [program] itself, and it just wouldn't occur to them to say don't forget you have a resource… [The interns are] in a regular methods class, and so that teacher really wouldn't have any connection to an internship program."

In contrast to Kim and Greg, Preston and Mike did not follow the coaching structure set up by the program. They did not have a weekly meeting interspersed with classroom observations. Instead, they typically met daily for ten to twenty minutes before school started, and then they spent their weekly time, which was episodic due to the frequency of their ongoing contact, focused on instructional planning and school level issues. Mike did not conduct classroom observations due to his teaching schedule and his role in the coaching cycle was tangential. The program director indicated that departures from the program design such as these were not purposeful design elements intended to encourage flexibility and adaptation, but were instead deviations from the intended design. However, the program director had an ambivalent perspective towards this type of adaptation, stating that while the program leaders were aware that some mentor and novice pairs "make it work for their context," the program neither actively encouraged nor discouraged such adaptations. Intentional or not, the divergence between the very clear expectations as stated in the program materials and the lack of clarity that resulted from limited follow up communication regarding the pair's deviation from that guidance created ambiguity in the program design. The pair responded to this ambiguity by deemphasizing or ignoring aspects of the program design and instead focusing on site based concerns that they perceived as more relevant, pressing, and appropriate to their work together.

The pair's unorthodox approach required some adjustments in the data collection for this case that included initial and closing interviews and two video observations of collaborative planning sessions, one of which preceded interviews and the other of which followed interviews.

Analysis: Emphasis on school site situated learning.

Preston and Mike's work together consisted primarily of situated learning within the school community of practice, primarily focusing on issues of site logistics, classroom instruction, and implementation of the school's curriculum. As a result, there were minimal few examples of the two working together to help Preston integrate coursework with his classroom practice. Below I describe the situated learning practices focused on the school site, followed by the less prevalent examples of situated learning within the program community of practice and emergent integration. Planned integration was largely absent from the data collected and is discussed briefly.

Figure 3.2
Summary of Mike & Preston's Practices

Boundary Practices		**Situated Learning in a Community of Practice (COP)**	
Planned Integration	Emergent Integration	Situated Learning in the School COP	Situated Learning in the Program COP
None in evidence	Integrative Practices: Isolated examples of emergent integration around specific assignments. Integrated aspects of practicum course through flexible use of course tools.	**Disintegrative Practices: Supported learning related to instruction, curriculum planning, systems, and logistics at the site and classroom level with little reference to related program concepts.**	Non-Integrative Practices: Monitored and discussed progress. Assisted on specific assignments. Disintegrative Practices: Negotiated meaning around assignments and requirements assisting in prioritization, exacerbating a sense of some assignments being irrelevant to practice.

Note: ***Bold*** *items indicate preponderance of practices present in the data.*

Situated learning in the school community of practice: Both Preston and Mike agreed that Preston's main goal was to help Preston plan instruction, navigate the bureaucracy of the school, and manage his time. His main curricular area of focus in their collaborative work was mathematics. Both viewed their work together as primarily focused on school level implementation. In Mike's words: "I need to impart onto him some of the information that he's not going to get in his [classes], that as a teacher who's currently working with him, I can help him with... If it's helping him with stuff in the classroom here, I know a lot more about that." According to both Preston and Mike, a significant amount of their collaborative time was taken up with school level issues such as fund raising, scheduling, and testing. The two collaborative planning sessions that were video recorded focused on planning, the first focused on planning a math unit and the second focused on preparations for state mandated standardized testing. The first of these encounters provided an illustration of the nature of their situated learning practices, emphasizing instruction of the school adopted math curriculum. The following excerpt typified their dialogue:

> Preston: So this going to be 13-2. Monday is 13-2, right? [Referencing the textbook]
>
> Mike: Yeah, and really Monday might not be 13-1 or 13-2. Monday might be just an introductory day that's not on the books because it's a review day of long division. All of these books imply that the student just went through everything that you've already learned yesterday, and it's all fresh in their heads.
>
> Nowhere in here, as far as the lesson plan, talks about, 'Okay, these students totally forgot this,' until you get over here [references the teacher edition of the textbook] where it says, 'All right, well, these students don't understand it,' blah,

> blah, blah, 'You have got to do this and this.' So you can start right here and just start going, and then try to catch those that don't get it later.
>
> I know for my class, there's enough that that's not a small group. It's more than two or three, so it really behooves the whole group to go over it again.
>
> Preston: All right, so introduce concepts, vocab – okay, then – which one's the divisor and dividend? I don't remember.
>
> Mike: Divisor is the – like in this one [points at the textbook]– 13 is the divisor, so that's how many groups you're going to make, and divisor just sounds like the one who's doing something. It's like, 'Oh, I'm cutting you into this many groups.'
>
> So to me, it's more of an action, like, 'Argh.' See, it's kind of a big axe chopping or a meat grinder, but more of a meat slicer.

This example is a straightforward illustration of situated learning. Mike guided Preston in the development of mathematical content knowledge and associated pedagogical strategies for conveying mathematics to students[22], an identified area of need for Preston. He focused on the school textbook they both use as the curriculum guide, using it as an artifact of practice around which to construct understanding. The pair was engaged in a mutual enterprise and Preston, who has a more peripheral status, received instruction, goal clarification, and assisted performance while the pair negotiated the meaning of the text. Over the course of this forty-minute collaboration, logistical issues at the school regarding scheduling and how that may impact their planned sequence of instruction were also discussed. They did not at any point reference the math methods course in which Preston was simultaneously enrolled.

Situated learning in the program community of practice: The emphasis on school community practices did not preclude the pair from working on issues related to the credential program coursework. The pair monitored and discussed Preston's progress, with Mike assisting on specific assignments on occasion. Similar to Greg and Kim, these interactions tended to focus on understanding the requirements and prioritizing amongst assignments. These interactions were also somewhat rare, as the pair viewed their work as not being primarily focused on the program requirements. Mike indicated that he relied on his experience as a student in the program to understand the program's practices, "and how my [faculty associate] worked with me for the two years and what worked for me and what didn't work for me and trying out some of that stuff." For instance, the pair concluded many of their collaboration meetings with short discussions of upcoming assignments for the credential program coursework. This type of informal discussion about upcoming priorities and challenges of the program was the most frequent form of situated learning in the program practices observed.

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[22] This interaction also reveals limited mathematical content knowledge on the part of the novice teacher, at least as it relates to the particular topic under discussion in this passage. A review of the syllabus for the concurrent mathematics methods course indicated that the course emphasized pedagogical content knowledge as opposed to foundational mathematical content knowledge, potentially limiting the course's utility as a resource for addressing the salient problem of practice illustrated in this passage. Simultaneously, the disconnect between the pedagogical content knowledge orientation of the course and the foundational content knowledge needs of the novice teacher raises several questions regarding the alignment of that particular methods course with the developmental needs of this novice teacher working in this particular content area, as well as questions associated with the challenges for multiple subject teachers working in the upper elementary grades more generally. Nevertheless, as used here, the passage serves to illustrate the site-focused treatment of mathematical concepts in the mentor and novice pair's work separate and apart from the program coursework. Source: City State University Department of Elementary Education (2010). Syllabus: Mathematics teaching methods (pseudonym).

There were, however, other examples of the pair problem-solving coursework related issues, including instances of managing the demands of the program, epitomized by Preston's description of the expectation that he be "willing to jump through these hoops and still have a positive attitude." Mike helped Preston negotiate these demands through ongoing assistance in understanding his own performance and the program expectations. Mike reflected on one of these discussions as follows:

> I was trying to get a sense from him: Is he not doing well because he's just not doing the work? Is he not doing well because he's trying to do it, but he doesn't know the teacher's expectations? Or is he not doing well because the teacher just simply isn't teaching very well? And so kind of putting all of those three things together it was like okay where does it fall for you as far as how is it's going.

While sometimes these practices had little bearing on the sense of integration and may have played an important role in supporting Preston's progress, at other times this type of interaction undermined integration. For example, it appeared from interview data that there were instances of negotiated meaning around course assignments in which Mike actively guided Preston to minimize the application of the practices embedded in the task in his classroom. Mike stated:

> And sometimes some of the methods really don't seem like they would work very well… and then we kinda have to go over it… I'd say, 'You know, I'm not gonna place blame. I have tried that a bunch of times and functionally it just doesn't work well. It comes out okay verbal, but when you actually try it, it just doesn't work well.' But that doesn't happen very often. Usually it's just, 'Oh you know what? Go for it and here's some suggestions or how do you think it would look in your classroom?'

While the last sentence of this quote can be read as a tepid example of emergent integration, the prevailing theme was Mike guiding Preston to minimize the importance of program practices and design features as impractical in their classroom setting. Preston indicated that Mike's role in navigating assignments and tasks that did not, in their view, enhance his teaching was focused on providing emotional support. In discussing a particularly frustrating set of assignments from his language arts method course, Preston described Mike's feedback as, "Just do your best, and do the readings, and show up to class, and you'll be fine." Preston valued this type of support, which he described as "supporting me emotionally [and] helping me to see the light at the end of the tunnel because he's good at that. He's very objective, and he knows how to talk to you when you're feeling down to make you feel a little better."

Emergent Integration: Despite isolated examples of emergent integration around specific assignments, there were very few examples in the data of the pair intentionally applying coursework into practice. Mike stated explicitly that, “I really don't have any interaction with his methods classes or any subject.” Nonetheless, there were some muted examples of emergent integration around applying concepts from the coursework into practice. Mike stated: “It might have been something he kinda mentioned in passing like… ‘this is what I learned in my last class, I think it's really good, I wanna try it.’ [and] we'll talk about it and we'll just kinda figure out for him how that's gonna work in his classroom. [sic]”

Similarly, Preston indicated that he occasionally received assistance or support on assignments from his faculty associate, but Preston did not view coursework as the most important part of his work with Mike either:

> He did the same program. So I asked him a couple questions, but basically, [with] all the [City State] stuff, I was able to do the reading, do my papers. He critiqued them once in awhile, but that's not where I needed him. I needed him on the site. It was like when I got my B.A. It's kind of the same thing. It's reading and writing papers and knowing how to balance your time; he was more part of the Grove world than doing that type of stuff.

There is some evidence that Preston developed other strategies outside of the mentoring relationship to develop emergent integration practices. In many cases he operated as broker in multiple and overlapping communities of practice in his own right, independently creating opportunities for emergent integration. For example, independent of his work with Mike, Preston worked to ensure that lesson plans and units he developed as part of his coursework were usable in his classroom. Preston stated at one point: "You know what? I am not going to do work for City State, and then separate work for Grove. It's all got to come together as one thing because City State is preparing me for this. I'm in it, so it's got to meld. It's got to be one thing." Similarly, Preston utilized the collaborative logs from his coaching sessions with Matt as part of the dialogue within the practicum course. Neither Preston nor Mike, however, viewed this integrative work as the substance of their combined practice. Preston indicated that others aside from Mike, most prominently his university supervisor, played this integrative role, both through their teaching practicum seminar and through the supervisor’s coaching cycle.

Planned integration boundary practices: The pair did not engage in the planned integration as designed by the program. They did not follow the prescribed coaching cycle that was a scripted form of planned integration requiring a pre-conference, observation, and post-conference, each of which had a step by step protocol guiding the learning activities that were intended to be implemented.[23] Mike said about the coaching cycle: “Well, there’s one other coaching cycle spreadsheet that we look at and talk about, but he really fills that out with his [university supervisor] through City State. And there’s another one like that that I can fill out, but it’s optional and we don’t really fill it out together.” In discussing his loose adherence to the expectations of the practicum course, Mike recognized that “maybe our intern/mentor relationship is different than everyone else’s.”

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[23] Source: City State University Department of Elementary Education (2009). Elementary education student teaching field guide: DEE122 (pseudonym)

Summary Preston & Mike’s practices.

Preston and Mike participated primarily in situated learning within the school community of practice. Their approach to working together provided few examples of boundary practices. Unintentionally, the program design provided sufficient flexibility to allow for their more site-focused approach, as the supervision and accountability mechanisms were insufficient to compel the types of integrative activities set forth in the program documents and observed in the case of Greg and Kim. It is clear that the pair responded to many of the design elements as intended: the pair met the core requirements of meeting regularly, submitting collaborative logs, and attending the required trainings and seminars. But the structure and focus of their meetings differed from the practices described in the field guide, excluding observations for example. The result of the pair’s response to the design was that both expressed satisfaction with their work together, felt it was appropriate that their work focused on school level issues, and perceived their work as fulfilling the requirements and expectations of the program.

Nevertheless, the lack of a cyclical connection between coursework and supervised fieldwork deprived Preston of an important resource for connecting the program and on-the-job components of his learning to teach experience (Humphrey & Wechsler, 2005). The pair’s perception of the applicability of the coursework and their lack of engagement in boundary practices were interrelated, and it was difficult to distinguish what was casual given the methodologies of this study. It was also not possible to determine whether Preston’s feelings about the irrelevance of much of his coursework may have been alleviated if there were more integrative practices. Similarly, it is not possible to determine whether there would have been more boundary practices had Preston and Mike perceived the coursework to be more relevant. What is clear is that the combined effect led to a lack of integrative practices. The degree of separation between coursework and fieldwork, coupled with Preston’s particularly severe assessment of the coursework as it applied to practice, fit the conditions described in the research literature that lead to a sense of fragmentation and that undermine on-the-job learning (Bruckerhoff & Carlson, 1995; Clift & Brady, 2005; Dooley, 1998).

Summary of City State University Cases

Reponses to the program design in the two cases drawn from the City State University Intern Credential Program were similar to each other in many respects and differed in other respects. Both pairs engaged in situated learning at the site level as it related to supporting learning the logistical aspects of working at a school and to supporting issues of curriculum and instruction as practiced at the school level. It was also clear that explicit integration of coursework, aside from the practicum course, was not the focus of either pair. The pairs were aligned to the extent that they incorporated situated learning at the school site as a key feature of their practices. This tendency was clear in all participants’ understanding of the purpose of their work together and was aided by a key design feature of the program: mentors were working teachers on the same campuses as the novices. Additionally, both mentors were graduates of the City State University program and all four participants expressed the view that this enabled the mentor to help the novice navigate the demands of the program, particularly by helping the novice to prioritize assignments and manage time. Finally, there was a shared perception across both pairs that portions of the coursework were not relevant to practice.

There were also some significant differences in how the two pairs responded to the program design. The program's signature assignments and the methods courses, which were taken concurrently with the practicum course, did not have explicit roles for mentors, and the pairs had differing responses to this set of circumstances. Kim attempted to guide Greg to find relevance prior to abandoning the effort when it appeared fruitless. In contrast, Mike and Preston chose to largely place the application of coursework outside the bounds of their collaboration. In both cases, though, the perception that much of the coursework was not applicable to the novices' teaching contexts influenced the degree and nature of their emergent integration practices. Despite differing responses by the mentor-novice pairs, it was clear that the problem of the perceived applicability of coursework was a design issue that was not overcome through the mentoring boundary practices as observed in this study.

However, this aspect of the design alone cannot account for differences in opportunities for integration. In addition, the two pairs, at times, implemented prescribed elements of the practicum program in quite different ways. The coaching cycle illustrated this contrast best. Kim and Greg used the practicum requirements of a coaching cycle and their ongoing collaboration as an opportunity for thorough planned integration. Mike and Preston, on the other hand, did not implement the coaching cycle in particular, nor did they implement the structure of regular meetings and observations in general, as prescribed by the program. This variation was also a function of the program design. Preston and Mike's unorthodox approach was neither intended nor allowed by the design, but the ambiguity around monitoring fidelity of program implementation concomitant with the apparent lack of associated corrective action, both aspects of the design, resulted in a design that was flexible enough to allow the pair to tailor their work together to their needs.

The fact that Preston and Mike were colleagues at the same school while Kim and Greg were not was an important contributing factor to the differences between the two cases. Kim worked at a school co-located on the same campus, teaching a different subject area and curriculum. This allowed her to support some forms of school site level situated learning, but also required her to hold a wider frame for the purpose of her work with Greg. Preston and Mike, on the other hand, were teaching the same grade and curriculum in the same school, a school in which Mike was a leader and had formal responsibilities as part of the grade level team. This created a circumstance where Preston and Mike had clear common work as a function of their jobs. Their shared work defined the areas of focus towards which both felt Mike could add the most value to Preston's growth and success. The difference in how their work roles related to one another contributed to the differing degrees of situated learning at the school site relative to the frequency of boundary practices.

Whatever the cause of the difference in opportunities for integration, it was clear that these two cases diverged. While both pairs engaged in situated learning within the school community or practice, encompassing both systems issues and issues of instruction, Greg and Kim engaged in frequent and active boundary practices that enabled Greg to integrate course material with his classroom practice. Preston and Mike, on the other hand, focused almost exclusively on site level situated learning, with only minimal or cursory examples of engaging in boundary practices.

Chapter 4: Teacher Institute County Office Intern Program

In this chapter I analyze two cases drawn from the Teacher Institute County Office of Education District Intern Program ("Teacher Institute"). First, I provide a description of key program design elements in order to provide context. Subsequently I examine each case, providing a descriptive introduction followed by an analysis of their work based on the planned integration boundary practices, emergent integration boundary practices, situated learning in the program community, and situated learning in the school community. While the two cases differed substantially, I argue that the program design emphasized opportunities for emergent integration, which was reflected in the opportunistic ways that each pair organized their work.

Teacher Institute: Mentors Steeped in Program Practices

The Teacher Institute is an alternative district intern teacher credential program. District intern programs are sponsored by local education agencies (school districts, county offices of education, charter schools, or other qualifying agencies) and are accredited by the California Commission on Teacher Credentials to offer credential programs (Mitchell, et al., 2007). In this instance, the accredited institution was a county office of education. Unlike the majority of programs accredited to offer teaching credentials (Walsh & Jacobs, 2007), district intern programs, including the Teacher Institute, are not sponsored by an institution of higher education. District internship programs, however, are required to meet the same standards for accreditation as internship programs sponsored by institutions of higher education (Mitchell, et al., 2007). The county served by the Teacher Institute incorporates multiple school districts including urban and rural districts.

Below I describe some of the design features of the Teacher Institute and argue that these design features provided a flexible structure within which mentors could meet the needs of their interns. I will describe how the Teacher Institute structured the supervisory relationship, including supervisor selection, supervisor training, and the designed structure of the practicum. Further, I describe how the program positioned supervisors to support the application of coursework through building their knowledge of the coursework expectations and through creating opportunities for supervisors to participate in the practices of the program. There were only a few instances in which the supervisor had a specific role in applying particular aspects of coursework in the classroom, and instead supervisors were expected to assist interns with application of coursework concepts or assignments, should the need emerge, through the regular practicum process. In such instances, the supervisors were expected to draw on their knowledge of the program and coursework or to access the needed information through the available channels.

The supervisor and intern[24] pairs in this program worked together as part of a practicum course, the purpose of which, according to the course description printed in the Teacher Institute Handbook, was to meld course content and teaching practice, participate in formative and summative assessments of the California Standards for the Teaching Profession, and to practice tasks that would lead to success on the California Teacher Performance Assessment.[25] The practicum course was facilitated by the practicum supervisor and was designed to align with the developmental needs of the candidate as guided by an individualized learning plan.

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[24] In the Teacher Institute program, mentors are referred to as "supervisors" and the two terms will be used interchangeably in this chapter. The supervisor role in this context is a fusion of the traditional university supervisor and a site based mentor role. The novice teacher is referred to as an "intern" and those terms will be used interchangeably.

Supervisors were selected based on prior experience supervising new teachers. The lead practicum supervisor, whose job was to hire, train, and manage supervisors for effective mentoring, described supervisor selection as heavily emphasizing previous experience with instructional leadership, either as mentors or as prior Beginning Teacher Support and Assessment support providers. To ensure that there was sufficient time for mentoring, the program relied on full-time supervisors or on retired administrators and experienced teachers who had sufficient time to devote to supervision. This was contrasted by the City State University program, which relied on working teachers to provide site-based mentoring.

Following selection, supervisors were trained and supported through a “Mentoring Matters” training, a quarterly forum for supervisors, and through “cohort team” meetings that brought together the instructors and supervisors of each cohort of novice teachers each term. A review of the agendas[26] and supporting materials (Lipton & Wellman, 2003) for the mentor trainings indicated that supervisor training focused on conversation strategies; including strategies for paraphrasing, questioning, and problem solving; as well as developing a conceptual model for supervising related to the developmental stages of teacher growth from novice towards expert; and incorporating the supervisor’s role as a mediator between the novice and a third point (such as an observable phenomena in the classroom). This latter conceptualization of supervising was repeated in the follow-up training for experienced supervisors. The lead practicum supervisor, who was one of the lead facilitators of these trainings, indicated that the Mentoring Matters sequence included a three-day training for new supervisors each August, as well as refresher trainings of one to two days in each subsequent year. Supervision meetings occurred an additional four times per year.

The program had intentional structures to try and fulfill the integrative purpose of the practicum program, described in the handbook as learning “how to meld course content into… teaching practice” (Pg. 49),[27] including cohort team meetings. According to the lead practicum supervisor:

> The faculty and the supervisors come together, and… faculty gives information about study, text, syllabi, objectives, and supervisors learn ways to incorporate that into their supervision. Things to look for in their intern’s practice, and also if we have interns that are going through situations that we think the faculty can give us input or that the faculty needs to know.

At the same time, other aspects of the program’s efforts to ensure that supervisors were in a position to support their intern teachers in understanding program requirements were still in the formative stages. For example, the California Teacher Performance Assessments, a set of state mandated summative assessment of teachers' skills that are a requirement for earning a credential, were an area that appeared to be still developing. The lead practicum supervisor indicated that the mentors had been given basic knowledge of the assessments and that they had a minimal level of understanding of them. However, she indicated that plans were in the works to deepen the mentors' understanding of how they could support novices as they completed the tasks associated with the Teacher Performance Assessments.

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[25] Source: Teach Institute (2008). Teach Institute Handbook. Teacher Institute County Office of Education District Intern Program (pseudonym), Pg. 49.

[26] Source: Teacher Institute. (2009). Mentoring Matters Training Agenda. Teacher Institute County Office of Education District Intern Program (pseudonym), Pg. 1-5

[27] Source: Teach Institute (2008). Teach Institute Handbook. Teacher Institute County Office of Education District Intern Program (pseudonym), Pg. 49.

The actual structure of the practicum experience had a clear design. The Teacher Institute handbook provided detailed guidance to participating teachers for preparing for the regular observations and conferences that were incorporated into the practicum, including that the visits should occur twice monthly in the first year, that the California Standards for the Teaching Profession were to be the basis for progress monitoring, and that interns were to prepare detailed daily and weekly lesson plans, seating charts, and samples of student materials for each visit.[28]

The lead practicum supervisor described the supervisor's ongoing work with the intern teacher as being substantially based on the six California Standards for the Teaching Profession, which formed the "supervisor's road map." Ultimately, according to the lead practicum supervisor, the supervisors were "expected to do work with their interns that builds confidence, builds decision-making skills, helps those interns feel successful, but at the same time is very realistic about what that teacher needs to do in order to grow." In addition to the twice-monthly observations and conferences, the program design included twice annual reflective conferences set aside for assessment and goal setting.

The majority of the course descriptions stated: "Practicum supervisors observe course content in practice to ensure that a fluid connection exists between coursework and practice" (Pg. 50)[29] and go on to list specific Teacher Performance Expectations[30] associated with each course. The program's method for ensuring this alignment was less about creating direct structures connecting specific aspects of courses to specific work taking place in the practicum, and instead was based on a more general alignment with the California Standards for the Teaching Profession, and an expectation that practicum supervisors align their coaching and feedback to the California Standards for the Teaching Professions, as described above, while the courses align to the similar Teacher Performance Expectations, creating a loose coupling between course expectations and practicum expectations.

In contrast to the City State University program, Teacher Institute courses were populated with exclusively intern teachers who were all learning to teach on-the-job. According to the lead practicum supervisor, coursework was designed specifically to the needs of these teachers:

> One of our things that is the most distinct from others is that we do not front load with theory. Our theory coursework comes at the end. So the first things they're getting are practice.

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[28] Source: Teach Institute (2008). Teach Institute Handbook. Teacher Institute County Office of Education District Intern Program (pseudonym), Pg. 6

[29] Source: Teach Institute (2008). Teach Institute Handbook. Teacher Institute County Office of Education District Intern Program (pseudonym), Pg. 50

[30] The Teacher Performance Expectations (TPE) are standards for teacher performance set by the California Commission on Teacher Credentials that apply to all candidates in programs leading to preliminary multiple or single subject credentials. The TPE are aligned with the California Standards for the Teaching Profession and are assessed by the Teacher Performance Assessments.

Instructors also focused on forms of assessing participating teachers' skills that emphasized application and relevance, especially lesson planning. The formal connection between these applied assignments and the work of the supervisor and their intern was varied. In most instances the program attempted to create circumstances under which the supervisor could support implementation of applied assignments should the need arise. This was accomplished through efforts to ensure that the supervisors had knowledge of and an informal connection to the planned coursework. The lead practicum supervisor offered the following example:

> Or it can simply be at a cohort team meeting, an instructor will say, 'You know what we're working on in art right now is incorporating music into the classroom. So when you go, would you just kind of ask them what they're doing. See if there's music in there. Ask them if they need help picking some music to play in the background' or whatever it is. It can be that informal or it can be a huge part of their grade. It's up to the instructor.

There were exceptions, however, and in some cases the connection was more explicit and designed. For example, the English Language Learners course required a Specifically Designed Academic Instruction In English (SDAIE) lesson that, according to the lead practicum supervisor and confirmed by the mentors, was observed by mentors using a specially designed observation protocol. The written lesson plan, the mentor's observation notes, and the pair's conference notes were then incorporated into the teacher's course assessment of the teacher's performance in that course.

In sum, the Teacher Institute paid careful attention to the structure of the supervisory relationship with and responsibility to the intern teachers. Supervisor selection, supervisor training, and the designed structure of the practicum course, in terms of frequency, evidence produced, and type of interaction, were aligned with the program's expectations for the practicum experience. The coursework was intended to be applied in practice, emphasizing instructional strategies over theory, particularly in the early stages of the program. This focus on applied skills included the use of course assessments that were intended to be relevant to practice. For the most part, the program positioned the supervisor to support the application of coursework through building their knowledge of the coursework expectations and through creating opportunities for supervisors to participate in the practices of the program. There were only a few instances in which the supervisor had a specific role in applying particular aspects of coursework in the classroom. However, the supervisors were expected to assist interns with application of coursework concepts or assignments should the need emerge through the regular practicum process, in which case the supervisor then drew on their knowledge of the program and coursework or accessed the needed information through the available channels.

Case #3: Maria and Patricia

The work of Maria (the intern) and Patricia (the supervisor) included practices in all four categories, but was characterized by recurring and consistent examples of emergent integration. Here, I describe the context for Maria and Patricia's work. I then discuss the nature of their emergent integration boundary practices, and their planned integration boundary practices. Situated learning in the program and school communities, which were less prevalent, are discussed together. Throughout, I argue that Patricia's position within the program, knowledge of the program practices and coursework, extensive training in the program's framework for mentoring, and knowledge of and commitment to the program's conceptual framework for teaching, all contributed to her ability to capitalize on opportunities for emergent integration, allowing her to consistently respond to the program design with effective emergent integration boundary practices.

Context: Program embedded supervision.

Maria and Patricia's supervisory relationship was significantly shaped by Patricia's position as a faculty member within the Teacher Institute. Maria was a first year intern in the Teacher Institute program. She entered the program with prior experience as a long-term substitute teacher. Valley Elementary School, where she worked as a second grade teacher during this study, was located in an urban school district that served primarily students of color (88%) who qualified for the free or reduced lunch program (91%).[31] Maria viewed the goals of the Teacher Institute credential program as developing professionalism and non-traditional instructional strategies. She viewed the coursework as relevant to practice, stating, "I definitely walk out of every single classroom learning a new strategy – not just one. I have a list of strategies. So, I see classes at Teacher Institute as being strategy-based." Maria provided several specific examples of such strategies, including student engagement activities with names like "give-one-get-one," vocabulary charting techniques, and methods for supporting students with attention deficit disorder, to name only a few.

Maria understood the purpose of her work with her supervisor as connecting concepts from her coursework with her teaching practice as well as engaging in continuous improvement of her teaching. She stated:

> The purpose of my work with [my supervisor] is to take what I'm learning from my classroom or from my classes here at Teacher Institute, practice them, and implement what I'm learning in the classroom, and then get feedback from her. So my relationship with her is all about showing, getting feedback, and then with that feedback improving what I worked on.

Maria's supervisor was Patricia. In addition to serving as a supervisor, Patricia served as the Teacher Institute program's course instructor for the curriculum and instruction course in reading, which "focuses on theoretical and practical aspects of teaching reading, writing, speaking and listening to all students, including those whose primary language is other than English" (Pg 28).[32] Patricia's knowledge of reading generally, and her knowledge of this course specifically, significantly impacted how she functioned as a supervisor. Patricia was also a co-facilitator of the supervisor trainings and had a thorough understanding of the content of those trainings. Patricia's view of the purpose of Teacher Institute and her view of the purpose of the supervisory role in the practicum experience aligned with Maria's and were aligned with the program's stated purposes. Patricia described the purpose of the program as: "to prepare teachers to be effective with all students and to meet the needs of the district; to be supportive in teacher development for the benefit of all of our students."

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[31] Source: Ed-Data. http://www.ed-data.k12.ca.us. Retrieved: August 29, 2010. Data is from 2008-2009, the year preceding this study

[32] Source: Teacher Institute (2008). Teacher Institute Handbook. Teacher Institute County Office of Education District Intern Program (pseudonym). Pg. 28

In describing the role of the supervisor, Patricia provided detailed descriptions across multiple interviews that significantly aligned with both Maria's perceptions and the stated program objectives, and significantly expanded on each. For example, Patricia highlighted as key aspects of the supervisory role vis-à-vis the intern: "building a relationship in which they're receptive to becoming an effective teacher;" a developmental approach similar to that defined in "Mentoring Matters" (Lipton & Wellman, 2003). Expanding on her explanation of her developmental approach to supervising, Patricia went on to describe her work as: "taking where they are, developmentally, and enhancing that step-by-step for them to become an effective teacher;" assisting them to implement the school curriculum by "helping them decode the curriculum and putting all those tangible and intangible pieces together for an effective classroom; " improving their instructional decision making by "helping them recognize and label effective behaviors so they're aware of them" and "helping them make professional judgments by expanding on thoughts that they have or bringing things to their attention;" clarifying goals and next steps by "knowing in our notes or in our head some things we would like the particular intern to address;" mediating the understanding of evidence from practice, termed in the program as a "third point," by "being another set of eyes [and] posing questions;" and providing instruction by sometimes being "directive when [I'm] not seeing [what I] need or [they are not] practicing [what they need to be]."

Because Maria was a first year intern, Maria and Patricia were scheduled to meet every other week and their routine, consistent with the program design, was for Maria to leave a lesson plan waiting for Patricia; Patricia observed a segment of instruction; and then following the observation (either immediately or soon after) they discussed the observation, examined the observation evidence collected, noted commendations and recommendations, noted which California Standards for the Teaching Profession had been addressed, and set goals and expectations for the next observation.

I was able to observe two of these cycles, taking field notes during the observations of instruction and video recording the conferences that followed these observations. Each cycle was preceded and followed by separate interviews with Maria and Patricia respectively. The entire case study was bracketed by an initial and final interview with each participant.

Analysis: Sustained emergent integration.

Maria and Patricia's interactions were characterized by a preponderance of emergent integration as a primary boundary practice. That is to say that Patricia used the flexible structure of the tools and procedures of the program, combined with her in-depth knowledge of the program practices, to make connections between theory and practice as the opportunities arose organically from the observations and discussions. This emergent integration was a response to a program design that relied less on prescribed types of interactions and instead created a flexible structure that relied on routines of practice, a knowledgeable and well trained supervisor fluent in the program's practices, boundary objects that were sufficiently supple to allow negotiation of meaning, and a strong conceptual framework for teaching around which to understand and apply instructional concepts across communities. As mentioned before, an overly prescriptive design can yield a compliance oriented response (Wenger, 1998). The nature of the program design in this case, however, avoided this pitfall and, instead, the pair responded by engaging extensively in emergent integration boundary practices. At the same time, there was evidence of very limited but still integrative prescribed interactions as well as minimal but important examples of Patricia assisting Maria in navigating the demands of her school site and the Teacher Institute program in non-integrative ways.

Figure 4.1
Summary of Maria and Patricia's Practices

Boundary Practices		**Situated Learning in a Community of Practice (COP)**	
Planned Integration	Emergent Integration	Situated Learning in the School COP	Situated Learning in the Program COP
Integrative Practices: Implemented course assignments that had a specific goal, specific process for mentor and novice interaction, and specific products.	**Integrative Practices: Used the tools, structure, training and knowledge of the program to connect program goals with instructional practice.**	Non-Integrative Practices: Assisted novice in navigating school site demands around employment and working with challenging student/family situations.	Non-Integrative Practices: Assisted novice in understanding program demands, particular faculty, and monitored novices progress through the program

Note: ***Bold*** *items indicate preponderance of practices present in the data.*

Emergent integration boundary practices: Patricia and Maria engaged extensively in emergent integration boundary practices. Emergent integration describes boundary practices in which the mentor and novice integrated program expectations and fieldwork application in response to emergent issues or opportunities. In all, there were 67 examples of emergent integration found in the data collected for this case, relative to 21 instances or references to planned integration. By comparison, this was nearly three times the instances of emergent integration found in any of the other three cases included in this study.

In order to support emergent integration, Patricia made extensive use of her knowledge of the program goals and curriculum, her experience as a teacher, her deep familiarity with the program's practices for mentoring, and her knowledge of the school and district context. Based on this knowledge, she brokered between the program practices and the instructional practices that occurred in the classroom.

Practices that were brokered included: pedagogical practices, as described by the California Standards for the Teaching Profession (the list of which also served as an important boundary object); guided evidence collection and feedback; coursework expectations and associated classroom practices; the school's instructional program for reading and the Teacher Institute's reading course; supervisory routines to support inquiry into practice; instructional strategies taught in courses and the evidence of student engagement and student learning observed; and use of data as a "third point" to inform teacher practice. Additionally, Patricia and Maria used boundary objects, particularly forms and protocols from the program but also the school curriculum, to facilitate meaning-making between program expectations and instruction. Examples illustrating each are described and discussed below.

Importantly, Patricia was consistently engaged in brokering these practices together with Maria, making the process a shared enterprise. Within the community formed by Maria and Patricia, situated learning occurred as Patricia assisted Maria's development in the boundary practices by clarifying goals, negotiating meaning, addressing conflicting ideas between the two communities, providing direct instruction, and by gradually releasing responsibility for navigating the boundary practices to Maria.

Each interaction in which Maria and Patricia engaged encompassed a different combination of these practices, and the many permutations are more than can be described here; however, the following examples illustrate some of the ways Maria and Patricia worked together using boundary practices to create opportunities for emergent integration.

The first example demonstrates the connection between classroom experiences, coursework, and required assessments of teacher practice. The example provides an illustration of emergent integration involving the Teacher Performance Assessment. This assessment was designed to require novice teachers to demonstrate state required knowledge and skills in the context of the intern teacher's actual clinical work and classroom. The mentor's role in guiding the novice through the Teacher Performance Assessment process, as Patricia understood it, was "support only." While instructing novices in completing the Teacher Performance Assessment was a different faculty member's responsibility, the supervisors received information about the requirements in staff meetings, positioning them to support novice teachers if the need arose and "if they ask questions," as Patricia put it.

This aspect of the program design bolstered the informal role of the mentor as related to this particular program strategy for developing teachers' practice, and positioned supervisors to be responsive to emergent needs. The following excerpt from a post-observation debrief between Patricia and Maria illustrates how the mentor applied this loose responsibility for supporting the novice with the Teacher Performance Assessment in practice:

> Patricia: So how's your TPA going? [Patricia arranges protocols on the table, but does not reference or write on them]
>
> Maria: It's going well – pretty confident about it just because I think it was, in a way, good to have that one that you had to apply everything to those students that they were given to you. It was harder. And this time around, I can take my own students and plug them right in, so it's real easy.
>
> Patricia: Yes, you found it to be easier when it's all your own –
>
> Maria: Yeah, um-hum.
>
> Patricia: – than when you were trying to do some theoretical –
>
> Maria: Exactly, and it also helps out in the classroom too because I can apply what I'm doing with TPA to the class.
>
> Patricia: And in terms of your English language [learner] stuff – because you haven't really had a lot of EL stuff – you won't have your EL class until spring, so how's it going? Are you able to – where are you getting information to do your… EL stuff?
>
> Maria: I don't get to do much collaboration with the ELD teachers, but when I do, I'll just ask them in the hallway, 'How is so-and-so doing?' I can tell which ones struggle in their classes because they struggle in here to read, and so – like those two that were here.

> Patricia: Lester?
>
> Maria: They didn't want to read because both of them are EL students, so I had them read together. So I have them doing things sort of in a different way than the rest of the class does. I give them different reading assignments, which are these books here. The rest of the class uses these leveled readers. The EL students use these, which are more vocabulary rich, so a lot of things are differentiated for them. But it's working well. I can still pull examples from the class for the TPA, so – and I'd have no problem with that.
>
> Patricia: And that is one of the good things that we've talked about in the reading class and some other things too – about having them work with a partner is a good strategy to build their confidence exactly the way you applied it and to give them more experiences with talking and –
>
> Patricia: And did you notice how much more Manuel is starting to raise his hand compared to the beginning of the year? He's so much more confident in his ability to speak even if it's wrong. Because in the beginning of the year, he didn't want to speak because he knew he sounded funny, but now he's like, 'Oh, well, if I sound funny, at least I'm learning.' So he's talking.
>
> Patricia: And part of that is the environment, the safe environment that you've created, and we've talked about that before about having your kids who are not afraid to ask questions when they don't understand – it's something that I had heard you reinforce that again today.

This extended dialogue demonstrates how Patricia connected issues of the Teacher Performance Assessment to the classroom, drawing on knowledge of the novice's past and future coursework as well as knowledge of the novice's classroom context. She also used the discussion of the Teacher Performance Assessment to reinforce ongoing work the pair had been doing, as well as connecting to examples from that day's observation. In this case, Patricia was also the instructor for a reading course in which Maria was enrolled, a circumstance that created multiple opportunities for emergent integration, including here when the mentor drew on the reading class to support the novice teacher's ability to respond to the English learner requirements of the Teacher Performance Assessment. In the interview following this observation, Patricia explained her purpose for this exchange as follows:

> To make that connection between fieldwork or supervision and what you're doing in your coursework. This isn't, 'I teach at school and I go to school.' This is, 'I go to school to be a better teacher.' So it's interconnected, these are not separate. And you'll notice that many times during the debriefing: 'that's something that we did in the reading class.' [sic]
>
> So as I look at the syllabi or talk with the instructors or just know the courses from experience, so what are some of the EL strategies that you've been doing in

> your EL class? And then later on I can say, 'Oh, that's when – where'd you get that strategy, oh yeah, you got it in your EL class,' so there's just that constant connection for them between the theory and the practice.

This sequence suggests that, despite the lack of a formal or designed structure for the mentor supporting the Teacher Performance Assessment (there was no script, conversation guide, checklist, tool, or specific training, for example, indicating specifically how the mentor should support the Teacher Performance Assessment), the supervisor and the intern were mutually engaged in negotiating the meaning of the Teacher Performance Assessment requirements in the context of the program and the classroom. The mentor played a brokering role, connecting the practices of the program (in this case, the content knowledge associated with the "reading class" as well as the future content of the "English learners" course) with the instructional practices of the classroom.

Further, in this example of emergent integration, the Teacher Performance Assessment served as a boundary object around which Maria and Patricia negotiated meaning. They used the Teacher Performance Assessment as a way to connect concepts from the assessment to other coursework from the program and to students and practices in the classroom. Patricia used her knowledge of the program and of the classroom to assist in brokering the connection between the two sets of practices. Within the boundary practice, situated learning occurred as the supervisor assisted the novice in negotiating meaning, using the Teacher Performance Assessment as a focal point, but bridging to literacy practices, classroom community, and strategies to support English learners.

A second example of emergent integration was drawn from a post observation debrief of a segment of instruction. This example demonstrated the supervisor's use of the program's conceptual framework for teaching, the use of supervisory routines, and the use of program designed protocols as design features that created a container within which the pair opportunistically sought integration. Putting these components together, the supervisor brokered between the program expectations for practice and Maria's work in the classroom. The pair used boundary objects as a resource supporting this link. This excerpt followed a discussion of how the teacher monitored student progress during the lesson, with a focus on students' ability to make inferences. Of particular significance is the degree to which Patricia framed the issue drawn from an observation of instruction in the context of a teaching standard (in this instance, assessing student learning, which is not referenced explicitly in this quote, but is named elsewhere in the same discussion), Maria identified a problem or challenge of instruction, and then they mutually addressed that challenge with Patricia in a more instructive stance:

> Patricia: So given what you saw and knowing that we need to use assessment to guide instruction, what'll be your next steps in terms of inference?
>
> Maria: …I don't want them writing anything down because then that – I think what's happening is they're taking too much focus off of what's going on up here just to finish writing down and hoping to finish before the lesson's actually done. So if I have them just kind of sitting there and observing me and taking it in critically, that they'll get it – get the idea of it.

> A lot more inference with everything that we read – even with these leveled readers, I have them do – every day, I'll have them create an inference chart, so a lot more practice.
>
> Patricia: So since they need lots more practice and for some of them, they're getting hung up on copying verbatim what's talked about, and knowing that they have lots of experience with word sorts and sound sorts and all that sort of thing, I'm wondering if you were to design – come up with your 'What I read's' – and give them strips in their groups, and then see if, as a group, they could come up with an inference.
>
> Maria: Oh, that's a good idea… So maybe have a poster at each table with nothing there, but then have the strips, and they'd have to figure out where they go. Okay, that's a good idea – and just have them rotate. I like that idea.
>
> Patricia: Because then you would have more instructional time spent on your learning objective than the copying-
>
> Maria: Copying down – okay.

In this interaction, the supervisor used the California Standard for the Teaching Profession on "Assessing Student Learning" to provide a common point around which to negotiate meaning, and the supervisor followed a set routine for connecting these concepts to practice consistent with the supervision and practicum framework on which the mentor had been trained. Specifically, the supervisor scripted the observation, and then the supervisor and the intern reviewed the lesson sequentially, using the scripted observation notes as a "third point," with the supervisor asking questions and the making suggestions. The novice raised a challenge of instruction focused on "time on task," which served to clarify the goals for the boundary interaction. The question of use of instructional time itself was drawn from past interactions with the mentor and had become a recurring area of focus. Patricia then provided guidance in the form of specific suggestions for practice, and simultaneously provided opportunities for negotiated meaning and instruction, all hallmarks of situated learning.

Despite the fact that this is precisely the type of interaction the Teacher Institute intended as a response to its design, the interaction clearly does not fall into the category of planned integration practices. Planned integration describes designed program elements or routines intended to bridge program expectations and application in the field in which the goals for an interaction are explicitly and specifically dictated by the program, where the routines are prescribed, typically following a script, and where the work products for a particular interaction or event are specifically determined by the program. This interaction was not prescribed by the program in the sense that the program did not develop a set of scripts, specific protocols, or specific work products that were pre-determined for this interaction. Instead of designing the integrative practices, the program created some general practices, such as the routines described above, and some open-ended protocols, such as: blank pages on which mentors were supposed to script their observation notes for use as a "third point" and to record commendations and growth areas, lesson plan templates, contact logs to record the frequency of meetings, a list of California Standards for the Teaching Profession on which to note areas discussed or observed in a particular session, and a variety of additional tools to be used at the supervisors discretion, around which the pair could negotiate meaning.

Furthermore, this was a straightforward example of situated learning within the boundary practice. Maria and Patricia were mutually engaged, were working from a shared repertoire, and their boundary work was a joint enterprise. This mutuality was partially revealed by the level of analysis and understanding that Maria placed on the object of the interaction. In the post observation interview she stated:

> I would say maybe the most significant part was the inference chart that I used... That served as a cue to remind them what we learned last week without having to draw it and waste time. Again, time management was another thing she was looking for. Being able to say, 'hey there's our chart from last week' was a lot quicker than having to draw it all over again and re-explain it. They were able to look at it and then automatically remember the lesson we learned last week. It really blended in nicely.

Again, situated learning in this context relates to the boundary practices. In this particular interaction the surface conditions that signal the possibility for situated learning were present. Led by the supervisor but still within the context of a shared repertoire for their discourse, the pair clarified goals for future instruction, aiding in the novices ability to translate the program's expectations in the form of the teaching standards to more effective instruction in the classroom. Additionally, the supervisor provided direct instruction to guide the intern's development.

Finally, the integrative elements in this scenario were important. In this particular example, the supervisor was brokering and the pair was utilizing boundary objects in order to bridge between the two communities' practices. Patricia and Maria were utilizing two forms created by the program. The first was intended to gather evidence from the teaching event that immediately preceded the conference, which was used to guide the conference discussion. The second was a checklist of the standards for the teaching profession that served as a guide for summarizing and distilling the substance of the observation notes.

Taking these examples together, I argue that it was the extent to which Patricia was central in the program community of practice that significantly shaped how she and Maria responded to the program design, frequently capitalizing on emergent opportunities for integration.

Planned Integration: While the majority of the interactions in this case were characterized by boundary practices using emergent integrative strategies, these were by no means the only type of interactions that occurred. Maria and Patricia implemented course assignments that had specific goals, processes for mentor and novice interactions, and delineated expectations for products. For example, an assignment referenced by the lead practicum supervisor and referenced on multiple occasions by Patricia (but never observed) from the course on instruction for English language learners, required the supervisor to conduct an observation of a lesson plan that addressed specific aspects of teaching students who were English learners, and to provide feedback using a specific observation protocol. The protocol and meeting notes were required assessment products for the course. This was an example of planned integration, in which the goals of the interaction, process to be followed, and the product to be generated were specifically designed by the program to utilize the supervisor. Specifically, the supervisor's observation and feedback was used to connect the course concepts to practice and to provide evidence of practice as part of the course evaluation. Similarly, the goal setting and review of growth processes, based on a description of practice, were designed elements of the program that also constituted planned integration. These few examples notwithstanding, the number of interactions that were planned in this way was a small fraction of the integrative practices observed in this case.

Situated learning in the program & school communities: In the program and school communities there were also several examples of situated learning that did not, in a discernable way, serve to integrate the program and school practice. Rather, these interactions supported the movement of novice from peripheral status to more central status in that particular community through assisted performance, goal clarification, negotiating meaning, addressing conflicts, or providing instruction or supervision. For example, when the intern teacher raised the issue of a frequently truant student, the supervisor guided her in whom to contact at the school, what questions to ask, and how to limit the scope of the intern's direct involvement. This situated learning, coming in the form of assisted performance and instruction from a more veteran teacher (the supervisor) with knowledge of the school community, did not appear to be connected to any credential program practice, but instead seemed intended solely to help the novice teacher navigate the school community's practices.

Similarly, there were instances of supporting the novice teacher's navigation of the program's practices without apparent connection to the on-the-job aspect of the novice's work. For example, in one conference the mentor inquired about upcoming courses and provided insights into the course's instructor.

These examples of situated learning were not boundary practices, in the sense that they were not practices designed to cross between the program practices and the school site practices. They were therefore not intended to serve an integrative purpose. This did not necessarily diminish their importance for other purposes, such as assisting the novice's performance within that respective context, they simply did not provide opportunities for integration. Nor did they interfere with opportunities for integration, as did similar forms of learning in the cases drawn from the City State University program. The chief difference being that in this case situated learning related to the school or program was not a response to a perceived lack of relevance or applicability of program practices, but instead reflected the few important stand-alone incidents in which the novice required assisted performance. In the case of Greg and Kim, Kim would sometimes probe for opportunities for emergent integration before retreating to situated learning that assisted in the navigation of the program requirements. For Maria and Patricia, the application-oriented content of the program meant that the opportunities for emergent integration were usually there and program concepts could inform the problem of practice they were attending to. It was precisely because they perceived the coursework and program practices to be relevant to teaching practice that more of their practice fell under the rubric of emergent integration.

Summary of Maria & Kim's practices.

In conclusion, Patricia capitalized on her knowledge of the program and the school context to opportunistically create connections between Maria's coursework and her instruction in the classroom. Maria and Patricia's work facilitated integration through mutual engagement in emergent integration boundary practices, brokering between the practices of the program and the classroom. Within these boundary practices, the mentor assisted the performance of the novice by clarifying goals and negotiating meaning around concepts and skills. The program design relied less on prescribed types of interactions to foster this integration and instead created a flexible structure that relied on routines of practice, a knowledgeable and well trained supervisor fluent in the program's practices, boundary objects that were sufficiently supple to allow negotiation of meaning, and a strong conceptual framework for teaching around which to understand and apply instructional concepts across communities. In response to this design, the pair engaged extensively in emergent integration boundary practices and avoided the danger that their mutual practice would be a response to the program design rather than a boundary practice connecting concepts, knowledge, and skills between the program and the classroom.

Case #4: Pedro and Leslie

Pedro (the intern) and Leslie (the supervisor) responded to the demands and expectations of the practices at Pedro's site, resulting in a concentration of practices constituting situated learning in the school community of practice. Pedro's site administrator had significant concerns about his progress early in his internship, which contributed to this focus. At the same time, the program design allowed sufficient flexibility for Leslie and Pedro to participate in boundary practices that served to emergently integrate their site based work and priorities to the practicum requirements. Following a brief overview of the pair's context, I discuss the nature of their school site focused practices, followed by a discussion of their emergent integration practices and their more limited examples of planned integration activities. Situated learning in the program community of practice is largely absent from the data; a brief discussion of why this might be finishes this section. I conclude that Leslie and Pedro's responsiveness to the demands of his work context, while sensible given the pressures Pedro faced at work, may also have contributed to his sense that the program coursework was not sufficiently relevant to his teaching experience.

Context: Connecting site demands to program expectations.

Due to Pedro's early struggles as a teacher, Leslie approached mentoring and her relationship to the program somewhat differently than she otherwise would have. Specifically, Leslie worked more to support Pedro's ability to meet his administrator's expectations and she endeavored to fit this work into the program's requirements and structures.

Pedro was a first year intern in the Teacher Institute program. He entered the program as a "career changer" and had previously worked in retail management. Pedro had considered entering teaching seven or more years prior and had completed the initial pre-service coursework with Teacher Institute at that time. Pedro re-enrolled in the program and secured a teaching assignment at Country Lane Elementary, a kindergarten through eighth grade school in a one-school district located in a rural area. The students of Country Lane Elementary were primarily

Latino (87%), English language learners (63%), and those qualified for the free or reduced priced meals program (90%).[33] Pedro taught an upper elementary grade. Pedro viewed his work with his supervisor primarily as a tool to help him meet the expectations of his site administrator, a perspective that proved to have significance for the analysis of this case. In our initial interview he said:

> [Leslie] is working also as a liaison between my administrator, who is ultimately my supervisor and will grade me, if you will, on whether I'm doing a good job or not. As much as my administrator was helping me, she felt it was definitely important that Leslie take over that role more interactively and more profoundly, which she did.

Later in the same interview, Pedro returned to this theme and provided more specific examples of how his supervisor assisted him in meeting his site principal's expectations:

> [My Teacher Institute supervisor] observes; she gives me directions, something she wants to see. Maybe my administrator has communicated to her that 'I would like Pedro to work on this or that; could you see if you can help him out with that?'

The study took place during the second half of Pedro's first year of teaching. At that point in his credentialing program experience, Pedro viewed his work with his supervisor as distinct from his coursework, stating:

> At this point, they've been completely unrelated. We have not been assigned to work with our practicum supervisor in any way… The coursework is kind of its own entity. We have the job and then we have our relationship as she comes in. She observes; she gives me directions, something she wants to see.

This is not to suggest that Pedro did not see the relevance of some of his coursework. Pedro felt ambivalent about the coursework in Teacher Institute. On the one hand, he said about his coursework:

> I think that they're fair. There have been some courses that I have taken that have seemed to be a complete waste of time, and there have been some that have been very challenging… I took a course in classroom management where I failed to see any classroom management concepts, ideas, theories or exercises of any kind.

He had reservations about the sequence of courses:

> …we've yet to really discuss how to write lesson plans. I've been a year into this thing now—or almost a year—

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[33] Source: Ed-Data. http://www.ed-data.k12.ca.us. Retrieved: August 29, 2010. Data is from 2008-2009, the year preceding this study.

On the other hand, he also recognized some of the opportunities to apply learning from his courses to his teaching:

> I see myself using many of the techniques—more so the techniques and the strategies that our instructors use in the classroom than the information that they are providing for us.

Leslie, a former school principal, was Pedro's supervisor and worked with three other Teacher Institute interns in addition to Pedro. Leslie viewed the purpose of Teacher Institute as "prepar[ing] beginning teachers for independence in the classroom" consistent with the California Standards for the Teaching Profession.

Leslie viewed her role as supervisor consistent with the program's stated purpose for the practicum. In Leslie's words: "To provide support for the intern teacher; to help them apply their coursework in practice, and to – in some senses – be their mirror for what they're doing in the classroom – help them ask the questions of themselves about where they want to go and what they're doing in their practice." Additionally, Leslie recognized her responsibility for "monitoring… what they learn in their coursework in their classroom."

Leslie and Pedro followed the routines prescribed by the program, working together twice monthly, including: reviewing a lesson plan, observing instruction of that lesson plan, scripting notes, using the observation notes as a "third point," giving commendations and recommendations, noting which California Standards for the Teacher Profession were addressed in the session, and agreeing on next steps for the following observation. Leslie drew on both her mentor training provided by the program and other opportunities to get familiar with the program requirements in her work with Pedro. Regarding her mentor training, Leslie stated, "I definitely draw on the Mentoring Matters training each year… It's really good practice for us." Additionally, Leslie valued the informal support that was available, as well as the learning that occurred in the community of supervisors, including professional conversations with fellow supervisors and the program leaders on whom she availed herself frequently.

Leslie felt that she and her colleagues at the Teacher Institute were "making a good attempt at being solid between their practicum experience and their coursework experience." She described the way in which supervisors were connected to coursework including cohort team meetings twice annually in which the supervisors and course instructors discuss the coursework requirements and had informal discussions regarding the performance of the same intern teachers. Similar to Patricia, Leslie also noted on several occasions that, beyond the cohort team meetings, the expected connection between coursework and fieldwork was somewhat informal, designed to provide supervisors with the knowledge and context they need to support interns as opposed to being designed specifically to guide supervisor practice. There were, however, a relatively few planned assignments, such as an assignment from the course on teaching English language learners. Leslie was also clear that she viewed part of her role as working with the site administrator to support the intern to meet the principal's expectations

Data collection on Pedro and Leslie was conducted between January and June of Pedro's first year in the program. Data collection included initial interviews, and two cycles of observations (during which I took field notes), and conferencing (that was video recorded). Each cycle was preceded and followed by separate interviews with Pedro and Leslie respectively. There was also a final interview with Leslie.

Analysis: Adapting program design to site needs.

Pedro and Leslie's interactions were characterized primarily by situated learning within the school site's community of practice, with emergent integration practices confined to applying site based practices to the practicum course requirements and planned integration practices confined to a small number of assignments. Their focus was primarily on meeting the expectations of the site administrator, and the pair worked to align those site expectations with the Teacher Institute practicum requirements. This emphasis arose partially in response to Pedro's particularly acute need to improve his instructional planning, a need which was mutually perceived by Leslie, the site administrator, and Pedro himself. In this section, I argue that the flexible and adaptable nature of the program design allowed Pedro and Leslie to focus with understandable urgency on the demands of situated learning at the school site, which simultaneously fostered Pedro's movement within that community. At the same time, the lack of explicit connections between course concepts and practices with classroom implementation, which contrasted with Maria and Patricia's experience, deprived Pedro of an important resource for integration, possibly exacerbating a sense of disconnection between coursework and fieldwork.

Figure 4.2
Summary of Pedro & Leslie's Practices

Boundary Practices		**Situated Learning in a Community of Practice (COP)**	
Planned Integration	Emergent Integration	Situated Learning in the School COP	Situated Learning in the Program COP
Integrative Practices: Implemented course assignments that had a specific goal, specific process for mentor and novice interaction, and specific products.	Integrative Practices: Worked backwards from school site demands to meet the program requirements for the practicum course.	**Non-Integrative Practices: Pair made a conscious choice to respond to school site demands. Meeting principal's expectations became the consistent focus of the pair's practice.**	Insufficient Evidence

*Note: **Bold** items indicate preponderance of practices present in the data.*

Situated learning in the school site community of practice: Situated learning within a community of practice did not serve a clear integrative purpose. In contrast to boundary practices, the practices in question were those of a particular community and learning encounters were intended to assist the novice in moving from peripheral status within that community towards more central participation. In this case the intern/probationary teacher was assisted in moving towards more central participation in the school community, perhaps as a permanent teacher after his two years in the Teacher Institute. To accomplish this, the pair made a conscious choice to respond to the site demands of the principal, which became the consistent focus of their practice. Leslie, as a veteran member of the community, supported the intern, as the novice member of the community, by clarifying goals, negotiating meaning, addressing conflicts, providing instruction, gradually releasing responsibility, and assisting performance.[34] In this case, the community of educators at Pedro's school site, incorporating the school administrator and a host of other faculty, became the focal point of the situated learning.

Over the course of the semester during which this study took place, Pedro and Leslie were focused, almost exclusively, on improving instructional planning and alignment. Instructional planning was not part of the coursework over this period and this focus stemmed partly from the fact that Pedro had not received coursework on this topic in the months preceding his internship, and partly as a result of goals set by the school site principal. The reasons for Pedro not receiving instruction on lesson planning were somewhat unclear, but appeared to be the result of a long hiatus between his initial coursework and commencing the program, an atypical circumstance and one not anticipated by the program design. As a result both Pedro and Leslie were very clear that instructional planning and alignment was a priority for Pedro, set by the principal.

Leslie and Pedro's relationship with the site principal was a significant aspect of this case and it merits a thorough explanation. Initially, the principal had considerable concerns about Pedro's fitness as a teacher that were gradually alleviated over the course of the study. Both Pedro and Leslie referenced the principal's priorities in every interview. The frequency of Leslie's contact with the site administrator, and the degree to which the site administrator's priorities for Pedro's instruction drove the pair's practice, was unique among the cases included in this study and was, according to Leslie, unique among the interns she supervised. Leslie described her process with the site administrator as follows:

> I am in contact with the site administrator at minimum two times a semester. In this particular case [of Pedro and Country Lane]… I check in with [Pedro's administrator] when I come if I have the opportunity before or after. So, I generally try to check in with her at least once a month here.
>
> When I talk with [Pedro's administrator], I am looking to find out if she's seeing anything that she would like for me to work on in particular. She's generally pretty good at sharing what that is – if she's seeing any growth in the practice that he is demonstrating to her. I communicate with her what we're working on…

Leslie, a former principal, drew on her experience in that role to understand and empathize with the site administrator's concerns.

> It's kind of an interesting relationship – I find – because in my background in administration, this is not an evaluative job that I do. It's really a support model. I like that and I think it's allowed me to grow in a lot of ways that I couldn't as a

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[34] I judged that, for the purposes of this study and consistent with the conceptual framework for this study, Leslie was sufficiently participating in the Country Lane School community of practice to be considered a full and central member of that community. However, Leslie's role could be described in ways that fall outside the conceptual framework for this study. For example, Pedro's work with Leslie could be described as a periphery (Wenger, 1998). Peripheries are a type of practice-based connection in which a community of practice can connect with the wider world associated with that practice through peripheral experiences with people who are not on a trajectory to become full members. This issue is discussed in more detail in the concluding chapter.

> site administrator because of that. But I also appreciate where the site administrator is coming from.

Leslie was clear that the pressure from the principal led her to respond to the site's priorities more than she might have otherwise:

> ...it's not normally how [I do it], it's been a little bit different because in most of my relationships with administrators, I listen a lot to what they say and it may or may not be what I'm working on with them, but in this particular case, I felt it really needed to be because I wanted to give him the best chance to remain employed.

Another part of the reason that Leslie focused on the principal's desire to see improved instructional planning on the part of Pedro was because Leslie agreed that this was a need for Pedro:

> That was both my own observation and it was certainly the suggestion of his site administrator who was really demanding fairly intricate lesson plans from her entire staff, and because he was really struggling to do just a, you know, a day-to-day or a week-long plan for me, it was an area we really chose to focus on.

So, within this framework, Pedro and Leslie focused on the priorities set by the principal and, using the tools and routines of the practicum, worked backwards to chart the standards required by the program. Working within the school site community of practice, Laura assisted Pedro's performance in a variety of ways. Typically either the principal would speak with Pedro, who would then rely on Leslie to assist him or the site supervisor would speak directly to Leslie. As Pedro describes it:

> It wasn't until two or three months into my first year when Ms. Meany, the site supervisor, spoke with Leslie and said, 'I need you to work with him on lesson planning,' because at that time she had me come in and was assisting me on – we would meet on Fridays, and she would assist me in my lesson planning. But she said, 'As your evaluator, this really isn't a fair thing to do. You need to really be working with your Teacher Institute supervisor on this.'
>
> At that point, I brought up with Leslie, I think [Ms. Meany] probably did as well, and I said, "Well, Leslie, my [principal] really wants me to work on lesson planning because she feels it's really not effective at this point.

Pedro perceived the coordination between Leslie and his site administrator as a part of the learning process, stating:

> I think – to me, it's just part of the process. I don't see it as something sneaky, or underhanded, or backhanded, or behind my back kind of thing. I think, to me, having come from the business world, it's kind of the expectation I had was that if the site supervisor have made a commitment to Teacher Institute to have me there

> for a year or two, that she wants to make sure that she's getting her money's worth… I think that obviously, they both have a vested interest in me.

As a result of these pressures, Leslie and Pedro paid less attention to the application of coursework beyond the practicum course itself. Instead, Leslie and Pedro followed a more conventional instructional coaching model, incorporating the goals of the principal and following a "plan, observe, reflect, and set goals" cycle. Leslie assisted Pedro's performance by clarifying goals, negotiating meaning, and providing instruction. Leslie explained:

> With this particular intern that we've been working with, I really can't say that there was a lot in his coursework that I had picked up on to work with him about other than the lesson planning which we've already discussed was not really part of his coursework… His site administrator kind of expected him to be doing kind of a wide variety of different things. She kind of was looking for him to have instructional strategies that were beyond what perhaps he had experienced during the coursework... I think it's more unique to this particular case.

While their practices, for the most part, did not appear to be integrative, that is not to suggest that the program design of the practicum experience was a hindrance. On the contrary, the flexibility of the boundary objects and the routines allowed Leslie to apply them to Pedro's unique circumstances. Similar to Maria and Patricia's routine, Leslie and Pedro met every other week wherein Pedro prepared a lesson plan, Leslie observed the lesson and recorded observations on an open ended protocol, they discussed the observation in a post-conference noting commendations and recommendations, they examined which standards for the teaching profession they had addressed, and they set next steps. The key difference was that, in Pedro and Leslie's case, the principal rather than the program's concepts drove the goals and focus of the observations. This response to the program design was aided by Leslie's use of the program's strategies and routines for mentoring. Leslie learned these strategies and routines through her annual mentor training program and they were prominent throughout. Examples included Leslie using conversation strategies (paraphrasing, questioning, problem solving), consistently using her observation notes as a third point to mediate understanding, providing a professional vision for Pedro, and consistently taking a developmental view of Pedro and his progress.

The following, lengthy excerpt is a typical exchange illustrating the school based situated learning that occurred. Notice over the course of this exchange the frequency of references to the site administrator's point of view, the way their language clearly situates Pedro's experience in the school community of practice, and the degree to which their dialogue signals Pedro's progress in the school site's practices:

> Pedro: So one aspect that I discussed with Ms. Meany [the site principal] I'm working towards now in my evolution here is to have that end goal in mind as I'm creating this. Although I'm now doing a good job of not just stating the day's objective and following up with some sort of temporary understanding, but it is that somewhere on the plan that we design I want to put that week's objective. And the skill that will lead to understanding that objective, which is the overall…for example, for science this week, it would have been to understand: 'He will explain fossils.'

Leslie: So you're saying in your lesson plan, you want to add another –

Pedro: So here in this column here, I will be adding the week's objective. So these goals will lead to that end product, which is what [Ms. Meany] now asking is – asking all of our teachers to do. So not just me. And saying that's going to make it even easier for me so that I am sure that Monday we start with the first step or the first skill necessary to be able to know how to do this. It's a lot more work, but it's – I think it's worthwhile in becoming a better teacher.

Leslie: Well, and I think where you've come from where you were basically struggling to get through one day, and to map out what one day would look like. Now you're starting to be able to map out full weeks. And not just full weeks of, 'Okay, I'm going to start with the teacher book, and I'm going to do this page, and then I'm going to do this page, and then I'm doing this page,' but being able to add in activities that help make meaning for the kids, but also having in mind before you get there what the end product wants to be.

Pedro: That piece right now is I'm so busy with everything else that I'm still looking at that daily piece. Now I think I'm ready to make that jump to okay, so let's just – how does all this fit together as a puzzle so that they get on the test day Friday or assessment day Friday, they know what I've asked them to do.

Leslie: The trick is keeping all the balls in the air. So you can't take your eye off this ball, which is the daily plan in order to put this picture plan over here. It's still – and you've gotten so much more proficient at doing your lesson plans. And then just every time I see that every week when you send them, I look for the things that we're particularly working on, like making sure there is going to be an objective for everyone, and the activities vary, but also that because we've been working on checking for understanding, the fact that I'm seeing a lot of different ones versus at first, being on white boards or [Explicit Direct Instruction] questions. And now I'm seeing lots of different ones.

Pedro: Yeah, because now I'm – oh, that is – because if I don't realize that that is what I'm doing, then it's hard for me to say that that's what I'm going to be doing. After the last meeting we had where you said you did it this way, this way, I go, 'Oh, yeah. That is checking for understanding.' So I just need to write it down as – I would call them table conferences. So go and get with a table and say, 'Okay, so what did you guys think? No, it wasn't quite right. It was this or this.' I'm doing that.

I'm trying to vary it as well, doing quick writes, doing the tickets, doing different things, anything that communicates to me that they understood what they were supposed to do on that day. Not just, "Oh, yeah, on that day, we were going to do this." What do we do to get to that point?

> Leslie: And I think kids begin to understand it as: 'he's always checking to see if I learned what I'm supposed to learn, so I can't get away with just living through the period and not learning it because he's going to come back and he's going to make sure I understood it. Or if my group was really lost, we're going to have another chance tomorrow versus just assessing that as not important.'

This example demonstrates their work as a joint enterprise (shared not just by the two of them, but also by Ms. Meany and other members of the school community), with Pedro as a novice learning the practices required by the community. This exchange occurred in March and one can get a sense of the process of gradual release, with Pedro owning more of the conversation and with Leslie noting how far he had progressed in his thinking. One can also see how Leslie and Pedro negotiated meaning with Leslie paraphrasing and prompting to expand Pedro's thinking. She also provided instruction, telling him directly the importance of planning at multiple levels. Finally, their exchange includes a reference to "all of our teachers" and "not just me" indicating that the expectations of the site administrator was an important factor for the entire community of practice, not just for Leslie and Pedro.

Emergent integration boundary practices: Despite the focus on situated learning driven by site-based practices, Leslie and Pedro still engaged in some forms of emergent integration. The scope of their emergent integration was narrow, and primarily took the form of fitting the site expectations for practice into the structure and requirements of the practicum course. Specifically, the pair used the California Standards for the Teaching Profession as a boundary object and then connected practices they had worked on in the classroom to the program's conceptual framework for teaching. In discussing how she used the practicum framework to simultaneously meet site demands and develop the teacher consistent with the program's conceptual framework for high quality teaching, Leslie said:

> He's working very hard to do all of the things to improve pretty much in all of the areas of the CSTPs that we would ask him to, and he has made some of those improvements… He's made drastic improvements throughout this year to [reach], I would say, a baseline of competence.

Leslie did not view the focus on requirements of the site administrator as a conflict with the purpose of the practicum:

> I don't think they're contradictory to one another because what he's supposed to do and I'm supposed to see… developing teaching as I come in… I [measure him] primarily against the Standards for the Teaching Profession, where we would use that document every time we come and note those standards that we see.

As discussed in the section above relative to situated learning in the school community, aside from the practicum course, emergent integration of course concepts into practice was largely absent from the data collected in this case.

Planned integration boundary practices: Examples of planned integration, in which the interactions, products, and process for integration were defined by the program in such a way as to provide explicit direction to the mentor and novice, were not directly observed with Leslie and Pedro. However, consistent with the program design, Leslie reported following the prescribed evaluation, goal setting, and end of year review process—all program designs intended to facilitate integration. Additionally, Leslie reported following the small number of prescribed assignments that designated a specific role for the mentor, stating:

> In the program they're also required to demonstrate implementation of reading strategies taught in the course curriculum and also we have documents they have to prove and demonstrate their ability to teach [Specifically Designed Academic Instruction in English] and sheltered instruction lessons.

The minimal number of prescribed planned integration activities (or prescribed activities of any kind), along with the flexible nature of the practicum course expectations, constituted enabling factors that allowed Leslie and Pedro to focus on the site demands while still meeting the requirements of the practicum course.

Situated learning in the program community of practice: There were no examples of situated learning in the program community of practice in the data collected on Leslie and Pedro. Pedro's saw the practicum and supervision work as disconnected from the other program work. Similarly, Leslie viewed Pedro as a unique case in which the demands of the site merited more focus and attention than would normally be the case, limiting their ability to focus on the program's requirements as Leslie otherwise would have. This is not to suggest that Leslie herself was not immersed in the program community of practice. In fact, Leslie indicated that the mentor trainings and her connection to the community of teacher educators in the Teacher Institute through her cohort meetings, which were meetings of the course instructors and supervisors for a given cohort of interns that met each term, served to inform and guide her work with her interns. Leslie also indicated that she discussed Pedro's progress and challenges with other Teacher Institute faculty on several occasion, further indicating her participation in the community's practices. Despite Leslie's participation in the Teacher Institute's practices, though, there was no evidence that she engaged with Pedro around his participation in the same community. Even so, this lack of situated learning in the program community of practice had limited or no implications for integration within the community. The purpose of such situated learning would be to assist Pedro's performance in navigating the program's practices, but there was very little evidence that there was a need for this form of learning. That said, Leslie did indicate that she was aware of the demands of the program and identified circumstances in which practices from the program were appearing in Pedro's classroom, such as his "using a timer" which was a module in his "class [on] management." Furthermore, Leslie indicated that she was aware that Pedro benefitted when such concepts were explicitly reinforced. Despite this, Leslie remained clear throughout that these considerations were of less concern for her than the expectations of the site administrator.

Summary of Pedro & Leslie's practices.

In sum, the primary focus of Pedro and Leslie's work was not boundary practices. Instead, they used the tools of the credential program to meet the demands of the schools site community. They chose this approach as a response to the site administrator's high expectations for instructional planning and to Pedro's initial difficulty in meeting those expectations. To the extent that there were boundary practices, they were focused on a relatively narrow set of emergent integration practices that allowed Leslie and Pedro to apply the site based practices to the requirements of the practicum course. This focus on classroom practice paid dividends. Leslie, Pedro and the site administrator (as reported by Pedro and Leslie) were unanimous in describing Pedro's growth. In Leslie's words:

> I think that is a real measure of his progress. I think being able to get to the point in your profession where you can be reflective about how you perform in your profession is a huge step… I think the lesson planning piece was really big for him. He was very, very scattered all over the place and got a little bit more confident and routine about his lesson planning; it really gave him more time to breath and start reflecting on what he could do differently and how he could build in some different instruction strategies. So, those were big pieces for him. Certainly, has gained much knowledge about what he should be teaching, you know, what are the standards for the courses that he'd [be] teaching.
>
> And, you know, he managed to struggle through…and actually the day that I last saw him on the 14th, that was his last week of school, and his administrator had told him that morning she was going keep him for another year.

In light of Pedro's serious needs, the pair used the flexible nature of the practicum design to focus on school and classroom based issues, rather than to develop boundary practices that enabled better linkages between the coursework and issues in the school. This focus on school site needs contributed to Pedro's movement from more peripheral to more central participation at the school site, at least in the form of having his progress validated and his being asked to remain a member of the community of practice for another year. Further, it seemed this choice of focus may have been necessary and appropriate given Pedro's stage of development and the expectations for practice at his site.

The implications of this for the program design are difficult to pinpoint. It is possible that if Pedro had followed the program design as intended, taking the introductory methods courses immediately prior to commencing his teaching assignment, the program practices would have been valuable resources for addressing Pedro's on-the-job learning needs, leading to a greater degree of emergent integration. As it was, the program coursework appeared to exceed Pedro's developmental readiness, making their chosen approach a reasonable response to the circumstances. Their particular response to the program design deprived Pedro of a resource for integration and may have contributed to his sense that the coursework was not relevant to his needs as a teacher learning to teach on-the-job. While it is tempting to speculate regarding whether or not Pedro could have made similar progress regarding his status within the school community of practice if he and Leslie had been focused on boundary practices rather than almost exclusively on the expectations of the school site and his site administrator, it is difficult to make the counter-factual argument with the data available. It is clear, however, that Pedro's view of the lack of connection between his coursework and the demands of on-the-job learning was in sharp contrast to Maria's perspective, suggesting that the difference in how the two pairs responded to the program design and their circumstances was a contributing factor to their differing views.

Summary of the Teacher Institute Cases

The two cases drawn from Teacher Institute County Office of Education District Intern Program demonstrated areas of internal consistency as well as areas of difference. In both cases, the concepts from the "Mentoring Matters" training were in evidence in the supervisors' practices. Both cases implemented the supervisory cycles as described in the program materials and by the lead practicum supervisor, meeting twice per month and following the "lesson plan, observation, conference" cycle. Both pairs followed similar routines: scripting observation notes, using the notes as a third point around which to mediate understanding, providing commendations and recommendations, providing feedback based on the California Standards for the Teaching Profession, and setting next steps for the following meeting. Both supervisors used the practicum experience to respond to the particular needs of their respective intern as they perceived them and in neither case was their supervisory role constrained by specific course requirements (although both supervisors indicated that the English language learners course and the English Language Arts course did include specific roles for the supervisor). Both supervisors referenced the California Standards for the Teaching Profession routinely, using them as a boundary object and a set of practices to be brokered, enabling them to use a common language to negotiate meaning. Both supervisors expressed that the trainings, cohort meetings, and practicum supervisor meetings were useful for acquiring knowledge of the interns' coursework. In both cases, the supervisors used their knowledge of the teacher's skills and areas for growth to focus their interactions and inform the intern's learning.

The program's approach to training, the creation of multiple opportunities for supervisors to interact with one another and with program instructors and leaders, and the use of flexible and adaptive routines and tools for gathering evidence shaped these aspects of supervisors' work with interns; they were contributing factors to their responsiveness to their respective intern's needs. The flexible and minimalist nature of the program design for the practicum and mentor role was significant. By limiting prescribed forms of planned integration, the program relied on the supervisors' judgment and knowledge of the program expectations to ensure that interns received the support necessary. At the same time, they took extra care with selection and training to try to ensure that the mentors they selected had the high level of content knowledge and a strong understanding of the program in order to inform that judgment.

This flexibility allowed for divergent but probably appropriate responses to the design in these two cases, with one case moving toward boundary practices that served integration and the other moving towards situated learning that did not serve integration. More prescribed design elements may have mitigated these differences, but may also have simultaneously undermined the mentors' ability to meet the unique needs of their intern teachers. The differing positions of the two supervisors within the program, together with the differing needs of the interns, also contributed to the differences in the two experiences. In Maria and Patricia's case, the fact that Patricia was a program leader, a mentor training facilitator, and a course instructor, situated her in such a way that she could make unique connections to the program practices and expectations spontaneously, thus enhancing her ability to capitalize on opportunities for emergent integration. Maria happened to have both some prior experience and a reflective nature, which led Patricia to simultaneously make sure to acknowledge Maria's progress (something Maria tended to dismiss) and to foster Maria's skills, challenging Maria to apply the strategies from the courses consistent with her particular students' needs and her classroom context.

In the case of Leslie and Pedro, Leslie's experience as a principal, coupled with Pedro's early challenges with some of the instructional technologies that were intended to be learned prior to that point in the internship, led to a different response to the program design. Here a focus on the site based demands and improving instruction to meet the standards of the site principal took priority over focusing on one of the stated goals of the practicum experience, applying coursework. The pair was successful in this endeavor, with Pedro demonstrating significant improvement based on the program's description of practice and Pedro being re-elected to his position by his site principal.

These differences led to one pair participating quite extensively in boundary practices that connected the practices and concepts of coursework and fieldwork, and to the second pair focusing on situated learning within the school community's practices. It also resulted in differences in how the two interns perceived coursework. Maria saw the coursework as relevant and immediately applicable, while Pedro viewed coursework as containing some useful strategies, usually in the form of modeled pedagogies, but lacking in relevance to his immediate needs. I contend that the variation in their perceptions of the relevance of their coursework was partially related to the extent to which each pair participated in boundary practices.

Chapter 5: Cross-Case Analysis

Looking across the four cases examined in this study, I found four distinct kinds of mentor-novice practices relevant to integration: planned integration boundary practices, emergent integration boundary practices, situated learning in the school community of practice, and situated learning in the program community of practice. The practices in each category had different implications for the mentor's ability to support the novice in bridging the theoretical and practical aspects of learning to teach in the context of the program design. The first two categories constituted boundary practices, in which the mentor and novice formed a community of practice intended to bridge coursework and fieldwork. The latter two were forms of situated learning within communities of practices that were not specifically intended to serve an integrative purpose but sometimes impacted integration (Figure 5 below summarizes each case and describes the broad types of practices that were observed in each). In this chapter, I examine how each of these categories of practice occurred across the cases, providing examples and identifying commonalities and differences. In describing mentor practices, I make four overarching arguments. First, in all categories of practice mentors guided novices situated learning by assisting performance, clarifying goals, negotiating meaning, addressing conflicts, and providing instruction. Second, mentors facilitated integration within planned integration activities by communicating the value and legitimacy of the activities. Third, while several mentor practices fostered emergent integration, all depended on the mentor's understanding of the purpose of program tasks, program practices, and instructional practices. Finally, mentors engaged in different practices based on their perception of the novice's needs.

Simultaneously, I argue that program design significantly shaped how mentors worked with novices across these categories of practice. Specifically, programs fostered boundary practices when their design intentionally immersed the mentor in the program's practices; emphasized emergent integration, with planned integration activities being carefully limited; and when the coursework and tasks were designed to be specifically relevant to practice.

Planned Integration Boundary Practices

The extent to which planned integration boundary practices served to integrate theory and practice was dependent on the mentor and novice's mutual sense that the activity's purpose was relevant to practice. Planned integration refers to mentor and novice activities and program tools explicitly designed by the program to facilitate the connection between the program's practices for developing the knowledge of teaching (i.e. coursework, seminars, orientations, readings, etcetera) and the program's practices for developing the practice of teaching (i.e. classroom teaching, working at a school site, working with a site administrator, etcetera). Examples in this study included assignments with applied components and a stated role for the mentor, conversations based on prescribed conversation protocols, observations and evaluations based on specific protocols, and specific processes with each step dictated by the program. While there was some evidence of planned integration in three of the four cases (see Figure 5 below), planned integration was only a prominent feature of Greg and Kim's work (Case #1).

Figure 5

Cross Case Summary of Practices

	Boundary Practices		Situated Learning in a Community of Practice (COP)	
	Planned Integration	**Emergent Integration**	**Situated Learning in the School COP**	**Situated Learning in the Program COP**
Greg & Kim (Case #1)	**Integrative Practices:[35] Coaching cycle included specific goals, process, and product defining and guiding interaction and served to integrate program expectations with teaching practice**	Integrative Practices: Occurred in practices connected to the practicum course. Occurred within the planned elements of the coaching cycle and as part of the ongoing collaborative work. Occurred when class assignments were "tweaked" to be applicable to teaching demands.	**Non-Integrative Practices:[36] Provided instructional guidance and support for navigating logistical dimensions of working on the campus and in the district.**	**Disintegrative Practices:[37] Negotiated meaning around assignments and requirements assisting prioritization. Exacerbated sense of some assignments being irrelevant to practice.**
Preston & Mike (Case #2)	Insufficient Evidence	Integrative Practices: Isolated examples of emergent integration around specific assignments. Integrated aspects of practicum course through flexible use of course tools.	**Disintegrative Practices: Supported learning related to instruction, curriculum planning, systems, and logistics at the site and classroom level with little reference to related program concepts.**	Non-Integrative Practices: Monitored and discussed progress. Assisted on specific assignments. Disintegrative Practices: Negotiated meaning around assignments and requirements assisting in prioritization, exacerbating a sense of some assignments being irrelevant to practice.
Maria & Patricia (Case #3)	Integrative Practices: Implemented course assignments that had a specific goal, specific process for mentor and novice interaction, and specific products.	**Integrative Practices: Used the tools, structure, training and knowledge of the program to connect program goals with instructional practice.**	Non-Integrative Practices: Assisted novice in navigating school site demands around employment and working with challenging student/family situations.	Non-Integrative Practices: Assisted novice in understanding program demands, particular faculty, and monitored novices progress through the program
Pedro & Leslie (Case #4)	Integrative Practices: Implemented course assignments that had a specific goal, specific process for mentor and novice interaction, and specific products.	Integrative Practices: Worked backwards from school site demands to meet the program requirements for the practicum course.	**Non-Integrative Practices: Pair made a conscious choice to respond to school site demands. Meeting principal's expectations became the consistent focus of the pair's practice.**	Insufficient Evidence

*Note: **Bold** items indicate preponderance of practices present in the data.*

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[35] Integrative practices are boundary practices that serve to integrate the theoretical and practical aspects of the learning to teach experience.

[36] Non-integrative practices are situated learning experiences that do not impact the sense of integration between the theoretical and practical aspects the learning to teach experience (but that may play other important roles in learning to teach).

[37] Disintegrative practices are situated learning experiences that undermine the sense of integration between the theoretical and practical aspects of the learning to teach experience.

In Greg and Kim's case the focal point of the planned integration was a coaching cycle with clear outcomes, prescribed processes to guide the interaction, and pre-determined products to be generated. Both Greg and Kim valued the interactions, including valuing the degree to which it was clearly defined and prescribed, and they were observed implementing the designed process as intended. Planned integration also occurred in both cases drawn from the Teacher Institute (Maria and Patricia, Case #3; Pedro and Leslie, Case #4), in which a goal setting and reviewing process as well as specific course assignments were planned integration activities.

Planned integration was an effective tool for integration in all three of these cases. Among the commonalities in the mentors' practices were an understanding of and commitment to the intended purpose of the planned integration activities along with the mentors' communication of the value of the activities for teaching through their participation in the novices' situated learning. Thus, when Greg and Kim participated in the coaching cycle, their orientation was not to "just get this done," but was instead to learn something about instructional planning and reflection. Similarly, the goal setting and review process in the Teacher Institute program was viewed by the participants as a resource for understanding their practice and reflecting on growth as opposed to the more simplistic view that it was just an assignment that needed to be completed. In each case, the mentor and novice negotiated meaning around the planned integration artifacts, a hallmark of situated learning, and came to similar meanings as those intended by the program. Greg and Kim illustrated this as they used the protocols for the coaching cycle to talk about pedagogical content knowledge as it applied to Greg's classroom. Each of the three mentors (in Cases #1, 3&4) expressed or demonstrated a positive investment in the prescribed activities, treating the planned integration actives with seriousness of purpose.

By contrast, in the one case that did not engage in planned integration (Mike and Preston, Case #2) the mentor was not committed to the purposes of the planned integration activity, instead viewing it as an assignment that was peripheral to his core work with Preston. Mike believed that the planned integration activities were outside the scope of the work he should be doing with Preston and therefore his support in completing those tasks was superficial. As a result, the mentor did not engage the novice in situated learning as a boundary practice around the planned integration activities.

From a program design point of view, in the three cases where the mentors' practices effectively fostered planned integration, the prescribed elements did not appear to succumb to the risk that a prescription could yield a response to the prescription rather than leading to the intended practice (Wenger, 1998). Two design features common to all three cases seemed to account for this. First, planned integration was deployed sparingly in both programs, allowing for opportunities for emergent integration. For example, Kim (Case #1) pointed out that it was precisely the contrast between the prescribed coaching cycle with the more flexible regular interactions that made the former valuable. Second, in the three cases where planned integration was successful, the mentors were sufficiently immersed in the program community of practice to understand the purpose and value of the planned integration activities. This was clear from each mentor's ability to describe in detail the planned integration activities purposes, which courses they were associated with, and what they were expected to produce. Mike (Case #2), by contrast, was not able to similarly communicate clarity of purpose around planned integration activities. While Mike participated in the same program as Kim, the key difference from a design point of view was that Mike was the only one of the three mentors to be working in the same school as his novice teacher, which led him to view his role differently. While both Mike and Kim participated in regular monthly sessions at the university designed to immerse them in the program practices, they had differing views on the utility of these meetings. Kim, on the one hand, viewed the meetings as a tool for learning the practices of being a coach, learning how she was supposed to support Greg in meeting the program assignments, and learning about the overall demands on Greg. While Mike similarly named these aspects of his participation in the program, he was clear throughout that his primary role was supporting Preston as a colleague at the same grade and school and he described the program structures for mentor engagement in program practices in more superficial terms. As a result, Kim participated in the program practices in a demonstrably different way than did Mike, evident in the contrast between how she and Mike approached the coaching cycle.

In sum, mentors created situated learning opportunities for novices in planned integration activities by guiding the negotiation of meaning and by highlighting the value and practical relevance of the activities. The respective programs enhanced this integration by deploying planned integration activities sparingly. Further aiding the utility of these interactions were the program design features that immersed the mentors in the program practices to ensure that they understood the intention and structure of the planned integration activities.

Emergent Integration Boundary Practices

Emergent integration boundary practices were the most important and complex set of practices for integrating theory and practice found in this study. Emergent integration boundary practices were practices that were not explicitly designed by the program, but that instead arose opportunistically. Mentors fostered emergent integration by brokering between the practices of the program and the classroom. Mentor practices for fostering emergent integration, each of which are discussed in more detail below, included: referencing course or program concepts to inform problems of practice (or vice versa), finding relevance for instructional practice in course assignments for which the connections may not have been obvious, being responsive to the novice teachers' needs rather than following a pre-set sequence, relying on the routines and practices of mentoring developed by the program, and using a strong conceptual framework for teaching as a constant point of reference. While emergent integration practices were found in all four cases, Maria and Patricia's case (Case #3) was the only case that featured emergent integration as the primary characteristic of their interactions. Partially as a result, this case was the only one that provided extensive evidence of a cohesive and integrated learning to teach experience with no evidence of a sense of fragmentation by either the mentor or the novice teacher. By contrast, all three of the other cases, while still having emergent integration practices as part of their repertoire, featured them less consistently. Consequently, these cases each included evidence, to varying degrees and with varying frequency, that mentors and novices felt a sense of fragmentation between their coursework and fieldwork. When emergent integration practices were employed, there were some common design features that fostered these practices, including: mentor immersion in the program practices, flexible tools and procedures, a strong conceptual framework for teaching, relevant and applied coursework, and training in mentoring practices. Below I discuss each of these mentor practices and the design elements that supported them in detail, drawing on the commonalities and contrast between the cases to support my conclusions.

Cross referencing practices: Emergent integration was most effective when mentors drew upon course or program concepts to inform problems of practice or, conversely, used examples from the teacher's classroom experience to illustrate concepts from the program.

Patricia and Maria (Case #3) provided the best examples of this phenomenon. In their case, which was characterized by extensive emergent integration, every observed interaction featured references to and connections between course concepts, classroom instruction, and example students. The other three cases, on the other hand, were inconsistent in the degree to which they seized on opportunities to deepen meaning by connecting practices between the program and the classroom. In each of these latter three cases there were challenges of practice that arose out of the on-the-job experience that otherwise might have provided opportunities for the mentor and novice pair to draw on concepts from the coursework. In the circumstances where this opportunity for emergent integration did not occur, reasons included: a perceived lack of relevance of coursework concepts and tasks (Greg and Kim, Case #1; and Preston and Mike, Case #2), a conception of the mentor role as largely excluding that kind of integration (Preston and Mike, Case #2), and the belief that the coursework was out of synchronicity with the developmental needs of the novice (Pedro and Leslie, Case #4). Preston and Mike (Case #2) provided the starkest contrast. They viewed their work as primarily focused on school level concerns, and therefore repeatedly missed opportunities to reference course or program concepts when discussing instruction or instructional planning. In their case, both Preston and Mike viewed aspects of the learning to teach experience in the program as separate and apart from on-the-job teaching, resulting in a sense of fragmentation.

A key design feature that was present in the case of Maria and Patricia (Case #3), one that distinguished them from all of the other cases, was the depth of Patricia's participation in the program practices as a full time employee of the program, a program leader, trainer of mentors, course instructor, and as an experienced mentor. This depth of participation in the program practices allowed Patricia to draw on program concepts fluidly, particularly those concepts included in the course she taught. Similarly, emergent integration was related to the mentors' immersion in the program practices in two of the three other cases (Kim and Greg, Case #1; and Leslie and Pedro, Case #4). In these cases, immersion was facilitated through the mentors' respective histories with the program and through their participation in the formal training and collaboration requirements of the program.

Finding relevance in course requirements: Mentor and novice pairs also engaged in emergent integration practices when the mentor guided the novice into finding relevance for instructional practice in course assignments when the connections were not readily apparent. Again, Patricia (Case #3) was able to do this seemingly effortlessly. Maria felt that nearly all of her course assignments were relevant to her practices, focusing on "teaching strategies" that were immediately applicable. Kim (Case #1) also provided an illustration of applying course assignments to practice, often attempting to "tweak" assignments, as she put it, to make them more relevant to practice (an effort in which she did not always succeed). When this occurred, clear connections were made between coursework and fieldwork. When Kim and Greg were unsuccessful in finding relevance for assignments, on the other hand, it led to a different form of situated learning in which Kim helped Greg prioritize his focus and clarify his goals for navigating the program practices, simultaneously signaling that the assignments were, indeed, irrelevant to practice. Similarly, both Mike (Case #2) and Leslie (Case #4), for differing reasons, did not focus on applying course assignments in practice, and in both cases the mentors and novices felt that their course assignments were less relevant to their respective practices.

It was clear that the degree to which mentors and novices perceived coursework to be relevant to instructional practice was an important factor in fostering emergent as well as planned integration. Prior research has indicated that alternative certification participants who perceive their coursework as being valuable to instructional practice are more likely to have stronger feelings of efficacy than teachers who believe their coursework is not valuable (Humphrey, et al., 2008). Perceptions of relevance, however, were not in and of themselves design features; they were instead a response to design features. One key design feature was particularly associated with a perceived lack of relevance, those assignments that were not geared towards the intern's teaching context. This feature arose in three different ways: 1) tasks and learning activities that were focused on pedagogical strategies and could be used immediately were valued (across all of the cases); 2) tasks that were geared towards out-of–grade-level teaching assignments and perceived as not being relevant; and 3) tasks that were geared towards pre-service student teachers and perceived as not being relevant. In both cases drawn from the City State University program (Greg and Kim, Case #1; and Preston and Mike, Case #2) the novices, echoed by their mentors, repeatedly raised the issue of course assignments being geared towards younger grades or focusing on standards and pedagogies that were not appropriate to their on-the-job teaching contexts. Additionally, Greg, Kim, Preston and Mike all raised the fact that the majority of the intern's classmates were not intern teachers and had not, in Greg's words, "even [started] student teaching yet," and that course instructors were sometimes unable to sufficiently differentiate for their on-the-job teaching contexts. Both cases explicitly associated this design feature with the lack of relevance in their courses. The Teacher Institute, by contrast, served cohorts of students who were all intern teachers learning to teach on-the-job and had structures to ensure that assignments were relevant to practice. While Pedro and Leslie (Case #4) also felt that much of the coursework was similarly not relevant, this response to the program design seemed to be more associated with their perception of Pedro's readiness and needs than with features of the coursework itself. With Maria (Case #3), however, the relevance of the coursework and its focus on teaching strategies that she could immediately apply and receive mentor feedback was a distinguishing feature of the Teacher Institute program and a key facilitator of emergent integration.

Additionally, as demonstrated by Patricia (Case #3) and to a lesser extent Kim (Case #1), mentors' immersion and investment in the program practices was a related design feature that enabled them to know the various course assignments and program tasks and to identify how they might be relevant to practice. Patricia's knowledge of the Teacher Performance Assessment and its connection to course concepts and classroom practices, for example, was a strong example of this phenomena. Again, particular design features were associated with this knowledge on the part of the mentor. Each program had regular forums ("cohort meetings" in the Teacher Institute and "faculty associate forums" in the City State University program) to ensure that mentors had access to this knowledge. All four mentors indicated that they gained insight into the tasks interns were expected to complete through these forums, although they did not all capitalize on their insights consistently.

Responsiveness to novice teachers' needs: In all examples of emergent integration across the four cases, mentors responded to the novice teachers' needs rather than following a pre-set sequence. This occurred, for example, when mentors responded to particular problems of practice, using the program concepts as a resource for addressing these issues (particularly Patricia and Maria, Case #3; and to a lesser extent, Kim and Greg, Case #1). It also occurred when mentors adjusted the focus of mentoring based on the on-the-job training needs of the novice by connecting skills back to the programs' concepts (all cases). Sometimes the latter occurred as the mentor filtered demands and selected areas of focus, making decisions about what would be prioritized in the pair's boundary practice, based on an assessment of the novice's most pressing needs. This process is consistent with a veteran practitioner's role in situated learning contexts (Lave & Wenger, 1991). For example, Leslie (Case #4) assessed Pedro's needs and prioritized basic lesson planning as a primary focus. She was able to connect this work to the goals of the practicum experience through a conceptual framework for teaching that was intended to guide the practicum experience, even though in doing so she largely excluded other opportunities for emergent integration, such as connecting course concepts to practice. Mike and Preston (Case #2) also prioritized site-based concerns as a primary focus, which resulted in emergent integration only occurring narrowly. Again, the pair was still able to fit this process into the requirements of the practicum course. In all examples, situated learning occurred within the boundary practice as the mentor guided the novice in clarifying and focusing the goals for their mutual work, providing focused instruction. The chief difference between the former examples of responding to developmental needs (Maria and Patricia, Case #3; and Greg and Kim, Case #1) and the latter examples (Preston and Mike, Case #2; and Pedro and Leslie, Case #4) were the circumstances in which the mentor used program concepts, particularly coursework, as a resource to address problems of practice. When they did so in the former cases, the overall sense of cohesion between the program, practicum, and classroom was strengthened. This was evident in Maria's sense of inter-connectedness between the purpose of her work with her mentor and her fieldwork. In the latter cases, on the other hand, mentors filtered the program demands in order to focus on the highest priority needs of the novice, serving to create integration around those concepts deemed high priorities, but simultaneously tending to create a greater sense of fragmentation around the course or program concepts that were intentionally left out. In the example of Leslie and Pedro described above, they did not use the program concepts as a resource so much as they used the program's conceptual framework for teaching as a way to ground their site oriented focus. As a result, Pedro was appreciative of the practicum work and the degree to which Leslie was a resource of improvement, but he simultaneously was, for the most part, unable to see the relevance of his coursework.

Routines & procedures: When combined with immersion in the program practices and strong mentor training, emergent integration was aided by the mentors' use of program developed routines and practices for coaching. In all four cases, mentors participated in trainings on effective mentoring and evidence of application of these trainings was found in the data. However, in comparison to the cases drawn from City State University, the cases drawn from the Teacher Institute illustrated a particularly strong link between mentor training, observed practices, and emergent integration. Mentors in the Teacher Institute program were trained and supported through formal training, quarterly forums for supervisors, and "cohort team" meetings that brought together the instructors and supervisors of each cohort of novice teachers each term. The training focused on conversation strategies such as strategies for paraphrasing, questioning, and problem solving; developed a conceptual model for supervising related to the developmental stages of teacher growth from novice towards expert; and the use of mentors as a mediator between the novice and a third point (such as an observable phenomena in the classroom). Additionally, the training incorporated routines and tools that guided mentors' coaching interactions including: methods for scripting observations, linking observations to the California Standards for the Teaching Profession, identifying areas of strength and growth, and identifying next steps. These routines were evident in every observed mentoring session in the cases drawn from the Teacher Institute.

From a design perspective, these routines provided a ready tool for emergent integration. The routines were not planned integration, in the sense that while they provided guidance on the process for interactions, they did not prescribe the outcomes or script the interactions. The products that were created also allowed for significant judgment on the part of the mentor. In terms of emergent integration, what was salient about these routines and protocols was that they both allowed for flexibility and directed the mentor's focus towards the observed needs of the participant, emphasizing the importance of moving the participant's instructional practice forward rather than complying with design elements. Patricia's experience (Case #3) showed repeated use of observation data as the focal point for discussing program practices. Here the California Standards for the Teaching Profession and the ongoing goals for improving Maria's instruction illustrated one use of the program's routines to foster emergent integration. Similarly, Leslie (Case #4) used the conversational routine of ending each coaching session by linking the observation data and post-conference topics to the specific California Standards for the Teaching Profession. The program had developed a simple tool, a list of the California Standards for the Teaching Profession on a triplicate form on which the mentor noted the standards and elements addressed in a given day, to reinforce this routine. This routine was one of the chief ways that Leslie and Pedro made connections between their fieldwork and the expectations of the program.

Routines and procedures, however, were not sufficient for fostering emergent integration in the absence of mentor immersion in the program practices. The City State University program, for example, had some similar structures and tools to support routines, however they were less explicit, the training was less formal, and the routines were less apparent in the observed coaching sessions. Both Kim and Greg (Case #1) and Mike and Preston (Case #2) did periodically participate in program designed routines, especially a conversation routine and associated "four square" protocol that focused the pair on identifying strengths, areas for concern, next steps by the novice, and next steps by the mentor. This process was so open-ended, however, that it did not necessarily lead to emergent integration, and was frequently used by both pairs for purely site based concerns. When combined with less robust mentor training and immersion in program practices, this routine only periodically resulted in emergent integration. Thus, both cases drawn from the City State University program met the surface requirements, for the most part, of the program's practicum experience; however, the routines and procedures, while sufficiently flexible to allow for emergent integration, were not sufficiently coupled with mentor immersion in the program practices to foster emergent integration.

Conceptual framework for teaching: Lastly, emergent integration was aided by a strong conceptual framework for teaching expectations that could be utilized as a common reference point for course instructors, mentors, and teachers. Both programs used the California Standards for the Teaching Profession and the closely associated Teacher Performance Expectations as the conceptual framework for teaching. Both programs included the standards as an explicit part of the practicum requirements. Both programs usually listed specific teaching standards associated with given courses amongst the course materials. And both programs had planned integration activities associated with assessment and goal setting related to the teaching standards. Nevertheless, I only observed the purposeful use of this conceptual framework as a tool for emergent integration in the cases drawn from the Teacher Institute. In the Teacher Institute cases the coaching routines, procedures, and tools associated with the standards were key to the use of the standards as a tool for emergent integration. Examples of Patricia's use of the standards included in the study (Case #3) demonstrated a sophisticated employment of the standards as a reference point for emergent integration. Leslie's use of the standards (Case #4) served as the primary method she employed to link her work with Pedro, that focused on his immediate developmental needs, back to the program's conception of effective teaching. Importantly, discussion of the standards in each session came specifically at the end of the post-observation conference, serving as a tool for reflecting on and naming the instructional issues addressed in the session. This ensured that the standard's incorporation into the routines did not constrain emergent integration by dictating in advance what the focal point would be, and instead became a tool for connecting the topics that arose emergently, either in one session or as a theme across sessions, to the program's conceptual framework for teaching.

The cases drawn from the City State University program, on the other hand, yielded less evidence of the use of the standards as a tool for integration, despite the fact that the standards were similarly represented in the program's materials. The key design difference between the programs that led to this difference was that the Teacher Institute integrated the standards into every coaching conversation, aided by the coaching routines and associated tools, in a way that directed mentors to this reference point. No such routine was observed in the regular interactions of the cases drawn from the City State University program, and there was no similar component in the program tools and protocols to guide the routine interactions of mentors and novices.

Situated Learning in the School Site Community of Practice

Some of the interactions between the mentor and novice did not actually meet the definition, as set forth in the conceptual framework for this study, of a boundary practice at all. Instead, some forms of practice were closer to situated learning within a community of practice (Lave & Wenger, 1991). Situated learning within the school community of practice comprised learning that happened in the context of the school site and classroom practices, such as: reviewing curriculum, planning instruction, navigating site based issues such as preparing for science camp or participating in a fundraiser, and problem solving specific issues related to challenging schedules. These instances of situated learning were an important resource for learning to teach on-the-job; they called on the mentor to provide assistance, goal clarification, and support. While these practices served no clear integrative purpose, all four of the cases included examples of this type of situated learning and it was a prominent feature of three of the four cases including Greg and Kim (Case #1), Preston and Mike (Case #2), and Pedro and Leslie (Case #4) (see Figure 5 above).

While it seems intuitively to be the case that mentors or novices could connect any one of these interactions to courses, program concepts, or teaching standards in the program, mentors frequently did not make those connections explicitly. The lack of an explicit connection was most evident in situations when subject area instructional coaching was the focus of learning. Mentor and novice pairs sometimes viewed instructional planning as largely a separate event from a methods course, even when that course was being taught at the same time. For example, Preston and Mike (Case #2) collaboratively planned a math unit without regard to the math methods course Preston was taking concurrently. This example, discussed in the case study, was a straightforward illustration of situated learning in which Mike guided Preston in the development of pedagogical content knowledge for teaching math, but did not at any point reference the math methods course in which Preston was simultaneously enrolled. The reasons for this separation between instructional planning and content courses varied and included:

mentors and novices not viewing as part of the purpose of their work the connecting of specific coursework elements to practice (Preston and Mike, Case #2), novices viewing aspects of methods coursework as irrelevant to practice (Kim and George, Case #1; Preston and Mike, Case #2;), the lack of an explicit applied component to the methods courses (Kim and George, Case #1; Preston and Mike, Case #2), and the view that coursework was not aligned to a given novice's specific developmental needs (Kim and George, Case #1; Leslie and Pedro, Case #3).

In both the cases of Pedro and Leslie (Case #4) and Preston and Mike (Case #2), a preponderance of situated learning in the school community of practice was coupled with a sense of fragmentation and a lack of relevance of coursework to practice. Yet there were some key differentiators between the two cases. First was the strength of the programs' conceptual framework for teaching. Pedro and Leslie used the California Standards for the Teaching Profession as a tool to focus on site based demands while still creating links to the program. Preston and Mike, for the most part, did not view making these connections as an important part of their work and therefore focused on situated learning in the school community. Second was the intentionality associated with their choosing not to focus on integration of coursework into practice. Leslie was keenly aware of the program requirements and used her knowledge to intentionally adapt the program requirements to meet Pedro's needs, even as this de-emphasized integration. This required her to have more knowledge of the program practices rather than less. Mike, on the other hand, did not focus on the program practices, largely disregarding them as part of his purview, and focused on site issues and collegial mentoring instead. This approach required less knowledge of the program and relied instead on his intimate knowledge of the site community.

These distinctions were important in evaluating implications for program design. The Teacher Institute program allowed sufficient flexibility for a mentor to appropriately focus on urgent developmental needs (Leslie and Pedro, Case #4), even at the expense of integration. The program's strong conceptual framework for teaching coupled with the mentors' immersion in the program community of practice mitigated the possibility that these decisions would be made without regard to the program's overall purpose. The City State University program, on the other hand, featured less immersion in the program and a less frequently referenced framework for teaching, which contributed in one case (Mike and Preston, Case #2) to a lack of attention to the program's purposes and less frequent emergent integration.

Situated Learning in the Program Community of Practice

To a greater extent than in situated learning in the school community of practice, situated learning in the program community of practice tended to undermine integration. Program course assignments that were intended to provide opportunities for application of knowledge were sometimes deemed to lack relevance to practice and were therefore approached as a burden rather than a resource for learning.

In both programs, mentors were intentionally immersed in the program's community of practice through participation in trainings, forums, and other interactions with program colleagues, and their titles and job descriptions reflected this intention. Each program created opportunities to immerse the mentor in the program's practices and created a shared enterprise through ongoing mutual engagement. Mentors used their knowledge of the program's practices, at times, for the purposes of bringing increased meaning to planned integration activities and for capitalizing on emergent integration opportunities. They also used them, to varying degrees, to support the novices' ability to navigate the program requirements, prioritize program demands, negotiate meaning around different aspects of the program, and to mediate conflicting concepts. However, they often did these things without making explicit connections to instructional practices. Over the course of the study, mentor and novice pairs engaged in situated learning in the program community of practice around issues of program requirements, coursework, assignments, performance assessments, and other program tasks. These interactions were often characterized by sympathy, suggestions, and feedback. They included the mentor providing performance assistance and goal clarification. However, these interactions did not serve to cross the boundaries between the program's coursework and site-based fieldwork. Interview data suggested that neither mentors nor novices viewed these interactions as part of the program, and instead view them as separate but general and valued support for the novice. While these practices may well have served an important purpose, it was clear that those purposes were not integrative.

In fact, at times situated learning within the program community of practice increased a sense of fragmentation. This was primarily the case with the City State University program. For example, in the case of Greg and Kim (Case #1) there was an occasion when Greg complained to Kim regarding several assignments and how they were not applicable to his classroom context. The mentor provided sympathy and suggestions for how to minimize effort on the assignments and encouraged Greg to "just get through it." Greg expressed appreciation for this kind of support and it served to strengthen the degree to which the novice valued the mentor relationship. This form of support also provided a resource that helped the novice cope with and navigate the aspects of the program that seemed to lack relevance. Preston and Mike (Case #2) had very similar interactions.

At times, this type of situated learning served to undermine the sense of integration between the theoretical and applied aspects of the program. In both the cases of Greg and Kim (Case #1) and Preston and Mike (Case #2), the mentors' first effort was to, in Mike's words, "give it a real world look," attempting to reframe or modify the assignment to serve an emergent integration purpose. However, in circumstances where this seemed impractical, both mentors assisted the novice to "just get through it," even if it "might seem silly," (Kim's words) effectively participating with the novice in undermining integration while negotiating the meaning of the assignments and assisting them in clarifying their priorities for practice within the program.

The cases drawn from Teacher Institute, by contrast, did not show evidence of dis-integrative situated learning in the program community of practice. Pedro and Leslie were consumed with meeting the demands of the site and had no observed practices that would be classified as program community situated learning. While Pedro did feel that his coursework frequently did not meet his needs, and I have argued that greater attention to opportunities for integration may well have alleviated these feelings to some extent, there was scant evidence that situated learning, focused on program practices directly, undermined Pedro's sense of the relevance of his coursework. Maria and Patricia's transactions, on the other hand, did evidence a few, benign examples of situated learning in the program community of practice, but these had little effect on integration. Instead these practices appeared to function as a relationship building opportunity and a general support for Maria in navigating the program demands. This is not to suggest that Maria and Patricia did not attend to the demands of the program practices. On the contrary, their extensive use of emergent integration activities was an excellent illustration of how the pair used nearly all of the program practices that arose as an opportunity to reflect on school and classroom practices.

Again, as with situated learning in the school community of practice, the key differentiator between practices that were the exclusive domain of the program community and those that became boundary practices was the perceived relevance of the activity. This perceived relevance was associated with program design elements including: the degree to which program tasks were intended to be accomplished in the context of the intern's teaching assignment, the degree to which the design incorporated the mentor into the tasks, and the degree to which there was a design for building the mentor's knowledge of the tasks. While in three of the cases aspects of program practices were not seen as relevant to on-the-job teaching, Maria and Patricia nearly always found a way to make program practices relevant to Maria's instruction in the classroom.

Summary of Mentor Practices and Design Features that Fostered Integration

To summarize, in this chapter I have analyzed the data across the four cases in the context of planned integration boundary practices, emergent integration boundary practices, school community practices, and program community practices. I have argued that mentors' engagement in boundary practices facilitated integration between the program practices and instructional practice. At the same time, I argued that some forms of engagement in school and program practices amplified a sense of fragmentation. I also highlighted specific program design features that enabled or inhibited integration. Below I briefly summarize each, directly answering the research questions that guided this study.

Mentors facilitated novices' integration of program and classroom practices through planned integration boundary practices. Mentors made planned integration activities useful by communicating the value and purpose of the activities to the novice. In so doing, the mentor assisted the novice in creating meaning around the activities and connecting the purpose of the activity to the novices' instructional practice. The mentors' efficacy in facilitating this form of integration was enhanced by two aspects of program design. First, planned integration was enhanced by mentor immersion in the program practices in such a way that it fostered mentor understanding of the purpose of the planned integration activities. This immersion supported the mentor's ability to apply the activities as opposed to simply responding to them. Second, the programs deployed planned integration activities sparingly, ensuring that they did not overshadow opportunities for emergent integration.

Additionally, mentors facilitated novices' integration of program and classroom practices through engaging with them in emergent integration boundary practices. While several mentor practices, recapped below, fostered emergent integration, all depended on the mentor's understanding of the purpose of program tasks, program practices, and instructional practices. Specifically, mentors fostered this type of boundary practice through the following: making connections between coursework and instruction as the opportunities arose in the novices' practices; seeking to adjust the meaning or application of program tasks to make them more relevant to practice; responding to the novices' needs and adjusting program requirements to suit; utilizing the programs' routines and practices for coaching as a tool for structuring emergent integration; and through referencing a clear conceptual framework for teaching. In deploying these strategies mentors engaged novices in situated learning in the boundary practices, assisting interns in their ability to connect the program practices with instructional practices, and assisting novices in negotiating meaning around tasks and protocols required by the program. Each of these strategies allowed mentors to be guided by their perception of novices' needs as opposed to responding to rigid program design elements with a compliance mindset.

Despite its opportunistic nature, emergent integration did not occur just by happenstance. Emergent integration was itself a response to the program's design, and at least five aspects of the programs' designs fostered emergent integration. First, emergent integration was aided by program features that were structured for mentor immersion in the program practices, including mentor training, engagement and co-creation with faculty, collegial interactions with other mentors, and forums that ensured mentors had adequate knowledge of the structure and purpose of program concepts and tasks. Second, emergent integration was enhanced by program structures for training of coaching strategies in order to ensure that mentors had sufficient skills to capitalize on integrative opportunities while focusing on the novice's developmental learning. Third, the use of flexible tools and protocols that allowed for mentor discretion in their application allowed for emergent integration. Fourth, a strong conceptual framework for teaching created a common reference point for program community members to describe the desired instructional practices and connect those practices to program concepts. And fifth, relevant and applied coursework that emphasized usable pedagogical strategies and tasks that were applicable to the novice's teaching contexts was significantly for emergent integration.

Chapter 6: Discussion

This study was developed in response to an important leadership challenge. Alternative certification teacher credential programs must develop highly qualified and high quality teachers while simultaneously adapting to the unique on-the-job training needs of each intern. This study is based on the premise that effective integration of coursework and fieldwork is a promising approach to improving alternative teacher development (P. Boyd, et al., 1998), and that mentors are potentially an important resource for fostering this integration (Adcock & Mahlios, 2005; Esch, et al., 2005; Humphrey, et al., 2008; Jorissen, 2002; Maloy, et al., 2006; J. W. Miller, et al., 1998; Mitchell, et al., 2007; Nakai & Turley, 2003; Rochkind, et al., 2007) .

With this challenge in mind, I set out to describe how mentors in high quality programs help novice teachers integrate the theoretical and practical aspects of teaching and to describe the ways that a program's design shapes that work. Drawing on concepts from communities of practice theory (Lave & Wenger, 1991; Wenger, 1998), I have argued that a mentor's ability to foster certain boundary practices is central to how they assist novices in the integration of theory with practice. Further, I have detailed how aspects of program design can enhance or constrain the ability of mentors and novices to engage in fruitful boundary practices. Below I summarize the findings from this research, followed by a discussion of the limitations, contributions, and implications of this study.

Summary of Findings

Below I briefly summarize chapters three and four, reviewing they key characteristics of each case included in this study in the context of the certification program from which the case was drawn. I conclude this section with a synthesis of the cross case analysis that made up chapter five.

The cases drawn form the City State University program were marked by important contrasts and similarities. Greg and Kim's practices were characterized by shifting stances within and between different types of practice. In their case, the designed elements of a prescribed coaching cycle provided an opportunity for negotiated meaning and making connections between program concepts and applied learning. The pair both followed the prescription, resulting in the type of work anticipated by the program for the activity, while simultaneously making enhancements to the prescription, furthering the activities utility for connecting program concepts with teaching practice. Additionally program tasks (primarily in the form of assignments given in the novice's classes), at times, provided emergent opportunities to inform teaching practice. Kim's position as a teacher in a co-located but separate school allowed her to simultaneously be a practicing member of Greg's school community while still maintaining a broad view on Greg's teaching. Preston and Mike, on the other hand, primarily focused on situated learning within the school community, providing few examples of boundary work. While both Preston and Mike viewed their work as a valuable resource for Preston in navigating the demands of working at the school, the lack of a cyclical connection between coursework and supervised fieldwork through mentoring deprived Preston of an important resource for connecting the program and the on-the-job components of his learning to teach experience. The fact that Preston and Mike were colleagues at the same school appeared to enhance Mike's usefulness to Preston as a guide for navigating the demands of the school, while at the same time narrowing Mike's focus to these school issues, sometimes to the exclusion of the program's concepts of teaching. In both cases the applicability and relevance of the coursework to teaching practice was an obstacle to integration. Both pairs made attempts to find practical relevance in some of the tasks associated with coursework. When these attempts were frustrated, it led to practices that undermined the sense of integration between the course tasks and teaching.

The cases drawn from the Teacher Institute provided a different lens. On the surface the program's approach to training mentors, structuring mentor interactions with one another and program leaders, and the use of flexible and adaptive routines for gathering evidence were similar to City State University. Yet, in the Teacher Institute cases, these tended to contribute to the mentor's responsiveness to their respective intern's needs in a more profound way. Maria and Patricia provided an example of extensive emergent integration aided by Patricia's deep knowledge of the program's practices and coursework. Patricia's knowledge combined with Maria's readiness contributed to a fluid and nearly seamless integration between course concepts, the programs conceptualization of effective teaching, and Maria's teaching practice. Pedro and Leslie, on the other hand, responded to Pedro's pressing school-based demands by adapting the program requirements and aligning them to Pedro's urgent developmental needs. The Teacher Institute program design, as expressed through the protocols, routines, training, and coursework that shaped the mentor and novice interactions, was simultaneously clear and flexible, allowing for divergent but appropriate responses to the needs of the two novices. The depth of the mentors' involvement in the program community of practice and the degree to which coursework was designed to be immediately useful contributed to the differences between the cases drawn from the respective programs.

In comparing and contrasting the four cases, I argued that mentors' engagement in boundary practices facilitated integration between the program practices and instructional practice. At the same time, I argued that some forms of engagement in school and program practices amplified a sense of fragmentation. I also highlighted specific program design features that enabled or inhibited integration including the frequency of prescribed activities, the degree of mentors' immersion in the program practices, the flexibility and adaptability of the program protocols, and the relevance of course tasks for on-the-job teaching. Emergent integration stood out as a particularly promising tool for integration.

Limitations

A critical reader needs to consider several issues in evaluating this study. First, this study was exploratory in nature and sought to better understand the phenomena of mentor roles in intern teacher learning. As such, it purposively sampled four cases from two programs. While the small number of cases enabled an in-depth focus on the processes of integration based on a conceptual framework, it did not seek to nor was it able to establish causality or to be predictive (Yin, 2003). This study provided insights into the strengths, limitations, and possibilities of mentoring in these programs and provided some possible directions for future research, discussed below. I attempted to enhance the transferability of the findings from this study by providing a rich and thorough description of the research context and the assumptions central to the study so that readers could assess the relevance to other contexts (Creswell, 2009; Stake, 2006). While potentially informative, however, the findings of this study are insufficient to draw generalizable conclusions or concrete directions for practitioners to implement in alternative certification programs in different contexts.

Additionally, the data collected within the four cases was limited to certain interactions between mentors and novices. Specifically, I focused data collection on cycles of observing and conferencing. This choice was intentional, as I judged mentoring connected to instructional practice as a useful focus for understanding issues of integration. Nevertheless, the conclusions in this study would be strengthened by more extensive data collection within the cases, particularly those focused on coursework outside of the practicum courses, as well as by capturing a wider variety of mentor and novice interactions, such as goal setting sessions, work on specific course assignments, and mentoring sessions not concerned with specific observations.

Throughout this study there was the potential for an advocacy bias. An advocacy bias occurs when the values of the researcher potentially affect the conduct of the study or the findings (Stake, 2006). Among the factors that can contribute to an advocacy bias are the researcher's hope of finding a program, practice, or intervention that is working well, the desire to reach conclusions that are useful to others, and the desire to generate findings that will stimulate action (Stake, 2006). I have spent my career as an education activist and I am currently the director of an alternative certification program that endeavors to embody many of the characteristics of effective programs described in the review of literature above, all of which increased my risk of harboring an advocacy bias. In order to mitigate the potential that my experience and professional perspective might unduly influence the study, throughout the research process I continuously reflectively examined and discussed with others how my background may shape my findings (Creswell, 2009) and I worked consciously to ensure that my conclusions were limited and supported by the data.

The City State University program underwent changes over the course of the study that may have reduced the program's strength relative to the effectiveness criteria used for program selection, potentially reducing the relevance and applied nature of the coursework in particular. These changes included a reduction in the number of intern teachers in the program in response to a diminished demand for teachers, resulting from local budget reductions and teacher layoffs. This led in turn to a reconfiguring of the intern program, combining much of the coursework with a pre-service (non-alternative) program. The novices from the two cases drawn from this program indicated that the efficacy and relevance of their coursework diminished as a result of this change; and that as the non on-the-job teacher candidates became the majority of their classmates, the emphasis of the courses shifted away from a more applied approach suited to on-the-job learning. In response, the mentors and novices began to treat the coursework as less relevant. While this change diminished somewhat the degree to which City State University was an effective program as defined by the selection criteria, the change also unexpectedly provided a contrast between the two programs that allowed for some important findings to come to the fore.

Finally, the conceptual framework for this study intentionally simplified aspects of situated learning theory in communities of practice in order to focus the data collection on aspects of mentor practices of particular relevance to the research questions. While such simplification is necessary for constructing a conceptual framework that provides a feasible model for examining the phenomena of interest (Yin, 2003), it can also leave out nuances that could potentially impact the researcher's understanding of the phenomena. For simplicity, I have contended that the mentor was a participating member in the program community, the boundary community, and the school community. However, the interactions and practices that I place in those categories could merit subtler distinctions and be further divided into at least three sub-categories. The first category, closest to what is presented in this study, assumes that both the mentor and the novice are full participants in the given community of practice, with situated learning partly resulting from the mentor guiding the novice from peripheral status to more central participation. Second, in some instances of non-boundary school or community situated learning included in this study, the phenomena could be described as overlapping communities of practice, with the mentor and novice forming one community of practice that overlaps with but is distinct from the community of practice of the school site or the program. This is different from a boundary practice because the practices of the community formed by the mentor and novice in this conception are not intended primarily to bridge practices but are intended for other purposes. Third, the mentor could be described as a "periphery," a figure who is outside of the novice's community of practice, but who can connect the novice to the world of practice beyond that community (Wenger, 1998). This may be a particularly apt description of Case #4 in which Leslie could have been viewed as working outside the novice's school based community of practice, using that vantage point to assist Pedro in navigating the internal demands of the school community. Describing mentor and novice practices based on these subtitles may have yielded a more nuanced understanding of the nature of the various and overlapping communities of practice in which novices were participating, complexifying the issues of community, identity, and learning underlying these phenomena. However, because this study was focused on boundary practices as a means of integrating theory and practice rather than situated learning and communities of practice theory more broadly, it was sufficient for my purposes to bundle these aspects of situated learning under the broader rubric proposed in the conceptual framework as described. For the purpose of this study, I contend that these finer distinctions and a more thorough exploration of the nature of the communities in which the novice was participating would have served to confuse rather than clarify the more pertinent phenomena of boundary work.

The strength of case study research is that it allows for the investigation of complex social phenomena through holistic and meaningful descriptions, as they occur in real life (Yin, 2003). Despite the limitations discussed above, this cross-case study research answered the research questions through a detailed description and comparison of the cases in their settings (Creswell, 2007). This research was enhanced by a conceptual framework that clarified what was being studied (Yin, 2003), included a cross-case analysis allowing for contrasting contexts (Yin, 2003), and provided a thorough description of the research context and assumptions, based on the conceptual framework, that were central to the study (Trochim & Donnelly, 2008). As a result, I argue the study has important implications for research, programs, and theory.

Implications for Research

This study contributes to research on mentoring in alternative certification programs. A prior study on alternative certification found that while robust mentor roles, combined with careful selection and training, had a positive correlation with novices' perceptions of their program, the frequency of mentoring did not correlate to other desirable outcomes of teacher quality (Humphrey, et al., 2008). The authors of this study contend that this may have been a result of low quality mentoring. However, despite the emphasis on mentoring as an important feature in the broader literature on teacher certification programs, what constitutes quality mentoring has not been well understood. Neither a thorough understanding of mentor practices that contribute to more effective learning–to-teach experiences in alternative certification programs, nor how alternative certification programs might be designed to foster these practices is well articulated in the research literature. This study described mentor practices related to one important component of program efficacy, the connection between theoretical and instructional practice components of the learning to teach experience (Humphrey, et al., 2008), and it provides evidence that program design features can foster and support program efficacy through forms of planned and emergent integration boundary practices. This study described mentor practices that fostered integration as well as practices that undermined the sense of integration, addressing a gap in the research literature and enhancing our understanding of the actual work of mentors in alternative certification settings. Prior to this study, the research relied primarily on proxies for mentor practices, such as the amount of training or the amount of time dedicated to mentoring, rather than descriptions of the practices themselves.

I recommend three types of studies that could further our understanding of mentor practices and program design, which would build on this work. First, it would be useful to have a study that expands on the basic contours of this research, including in the research design more programs, more cases within programs, and data collection on a greater variety of mentor and novice interactions within cases. Such a study could contribute to a more in-depth understanding of the relationship between the structure of program coursework, strategies for immersing the mentor in the program's practices, and boundary practices. Second, future research could include a broader array of evidence, seeking to correlate specific types of emergent integration practices with desired outcomes. This study sought to describe mentor practices in relation to program design features, but was not designed to specifically find correlations between program features and mentor practices. A study that, for example, sought to describe the relationship between specific types of course tasks and corresponding mentor integrative practices would deepen some of the findings of this study. Finally, a collaborative action research study in which teams of program leaders, instructors, mentors, and novices used the findings from this study as a starting point for actively developing boundary practices that serve to integrate theory and practice, coursework and fieldwork would be useful. Boundary practices, as described in this study, were arrived at inductively based on the conceptual framework proposed at the outset. Neither the programs nor the mentor roles were conceived of, specifically, as a means of fostering boundary practices. The results of research that set out to intentionally foster boundary practices would strengthen, challenge or complicate the findings from this study in informative ways.

Implications for Programs

This study was not intended to derive a list of recommendations for programs or to define a set of "best practices" for mentors or programs. The implications of this study for practice, therefore, only serve to generate a set of issues that programs may wish to consider if they seek to use mentor and novice interactions as a strategy for reducing fragmentation and increasing the sense of integration between coursework and fieldwork. Ultimately, determining the relevance of this research to other contexts is up to the judgment of program leaders applying the findings (Trochim & Donnelly, 2008). Mindful of this limitation, I offer five issues, based on the findings of this study, that program leaders may wish to consider when designing program structures meant to foster a connection between coursework and fieldwork.

First, planned integration practices utilizing the mentor as a link to field based practice may be most useful when appropriately designed and when the mentor has a thorough understanding and commitment to the purpose and process of the activity. Conscious work with the mentors around the purpose and process mitigates the possibility, always present with prescribed aspects of any program design, that the response to the design will be at odds with the intent (Wenger, 1998). This risk is particularly acute when tied to forms of accountability (such as mentor being graded, mentor as grader or mentor incentives), which can foster a compliance mindset as opposed to a learning mindset. Additionally, programs should consider the amount of planned integration activities, perhaps limiting them to a relatively few high leverage activities in order to ensure that the opportunities for emergent integration are not crowded out.

Second, in order to foster and maximize opportunities for emergent integration practices, programs should consider how they incorporate the emergent into their design as opposed to trying to limit or control emergent integration opportunities. In this study aspects of the program design that influenced emergent integration included: 1) immersion of the mentor in the program practices through mentor training, engagement and co-creation with faculty, collegial interactions with other mentors, and the development of an understanding of the program design; 2) opportunities to develop the mentors' skills in the practices of developmental coaching through training; 3) the use of flexible protocols and tasks so as not to overly constrain mentor and novice interactions; 4) the use of a strong conceptual framework for teaching that is used as a reference point by program faculty; and, 5) relevant and applied coursework and program tasks, coupled with mentors knowledge of the purposes of these tasks. Programs should consider the degree to which their design incorporates these five elements for the purpose of fostering opportunistic learning.

Third, programs that conceive of the mentor role as a site based resource intended to help the novice navigate the on-the-job demands of curriculum, instruction, logistics, and school culture should appreciate that while this may have positive benefits and be valued by the novice, it may also have the unintended effect of increasing the sense of fragmentation. In this study, Preston and Mike illustrated this pitfall. Mike was undoubtedly an important resource for Preston in navigating the demands of being a teacher at the school, including managing logistical concerns and implementing the school curriculum effectively. However, their practices did not appear to foster greater integration between the program tasks and fieldwork, and at times undermined the connection.

Fourth, programs should consider the strength of their conceptual framework for effective teaching, and the degree to which that framework becomes a mutual conception shared by program leaders, course instructors, mentors, novices (and perhaps even school site administrators). A common conception may have a multitude of integrative effects; indeed, in one of the programs in this study it was clearly a key tool for mentors to link the program's conception of effective teaching with the ongoing feedback and evaluation that they provided novices in the field. In the case of Pedro and Leslie, the common conceptual framework for instruction became the main, if sometimes tenuous, link between their site-based focus and the program's practices.

Finally, aspects of the program design not directly related to the mentor role still impact how the mentor supports the program tasks in the field; and enhancing the mentor role may not be effective as an isolated strategy. In this study, issues of the relevance and sequencing of coursework arose in three of the four cases. In some of these instances, mentors were able to play a role in increasing the novices' sense of the importance or applicability of given aspects of coursework, and in other instances the mentors affirmed the novices' perception that those aspects were, indeed, not relevant or applicable. In the latter case, the sense of fragmentation was not diminished, but it is not at all clear that the problem in these cases was with the mentors' responses to the design as opposed to actual shortcomings of the required tasks.

Implications for Theory

This study used situated learning in communities of practice theory (Lave & Wenger, 1991; Wenger, 1998), and especially Wenger's (1998) formulations of boundary practices and design, as a conceptual framework for understanding how mentors support novice teachers' ability to integrate theory and practice in alternative certification programs. In so doing, this study extends these theoretical constructs in three important ways.

First, this study describes situated learning within boundary practices in new ways. While Lave and Wenger (1991) described how situated learning occurred within communities of practice and Wenger (1998) described boundary practices as a form of collective brokering that becomes its own community of practice, neither description had combined these two concepts. In this study, I conceptualized the mentor and novice teacher as a boundary community whose mutual enterprise was the connection of program practices and school site practices. Within this boundary community, the "new comer" (in Lave and Wenger's parlance) was granted legitimate peripheral access to the community through the guidance of the "old timer." Thus, the mentor supported the novice's development of integrative practices through assisted performance in collective brokering between two communities of practice. The mentor did so utilizing strategies such as goal clarification, negotiating meaning, addressing conflicts, and providing instruction, all hallmarks of situated learning. This type of situated learning, as distinct from situated learning in the program community and or the site community, was critical to understanding how the mentor supported the novice's integration of theory and practice. Thus, conceptualizing situated learning as occurring within a boundary community extended the theoretical construct in a new way. I contend that expanding this conceptualization of situated learning was particularly relevant for understanding the longstanding challenge of theory and practice integration for learning to teach programs.

Second, this study applied Wenger's conception of design (1998), furthering understanding of its efficacy for describing phenomena in education programs. In the context of communities of practice, the relation of design to practice is always indirect and takes place through a community's ongoing engagement in a shared enterprise. A robust design must allow sufficient space for emergent, opportunistic, and spontaneous learning. This study applied this concept of design to alternative certification programs and in the process provided a useful description of how such programs balanced prescriptive elements with the need to leave room for emergent learning opportunities. In so doing, this study further illuminated the role of design in situated learning.

Finally, this study added some complexities to the conceptualization of situated learning in communities of practice as originally asserted by Wenger (1998). Specifically, I have proposed three communities of practice (program practices, school site practices, and boundary practices) that mentors and novices shifted between. While the notion that individuals may be members of multiple and overlapping communities of practice is established (Coburn & Stein, 2006; Lave, 1996), in this study the mentor and the novice remained the central participants in each set of practices even as their relationship to one another and to the community of practice they occupied at a given moment shifted, both between interactions and within the same interaction. This notion that, without changing the people involved, the number of communities of practice occupied by a mentor and novice pair and the type of connection between them can shift depending on the substance of a given interaction extends this theoretical framework in new directions.

Conclusion

Mentors in this study played many roles, some of which served to integrate the theoretical and practical aspects of their on-the-job learning to teach experience, and others of which did not. Specifically, mentors in this study engaged in boundary practices that served to assist the novices' ability to connect coursework and fieldwork. Mentors, to varying degrees and with varying consistency, approached the prescribed elements of their program intended to bridge theory and practice with seriousness and purpose, leading at times to a sense on the part of both the mentor and the novice that these planned integration activities focused their work and furthered the novices' learning. Mentors also utilized their knowledge of their program's practices, classroom instruction generally, and their novice's instruction and teaching context specifically, to capitalize on opportunities for emergent integration, although some mentors did this more than others. They made both spontaneous and structured connections between instruction and school site demands on the one hand, and coursework, assignments, and program conceptions of effective teaching on the other hand.

The design of these programs shaped these interactions in several ways. First, the programs utilized prescribed elements sparingly, avoiding the pitfall that mentors and novices may respond to the design with a compliance mindset, rather than committing to the intent of the design and mining the experience for learning. This conservative use of planned integration elements also ensured that sufficient time and focus could be devoted to responsive mentoring and, potentially, emergent integration opportunities. The programs design elements that shaped emergent integration were multifaceted. Programs intentionally included mentors in the practices of the community, through training, meetings, reviewing course syllabi, and creating collaborative learning environments for mentors. The trainings offered in both programs emphasized strategies for effective mentoring rather than compliance with design elements. Also, the tools the programs deployed to guide the ongoing work between the mentor and the novice were flexible and adaptable, providing some minimal guidance, but allowing mentors to utilize their training and knowledge to respond to the learning needs of the novice as the pair saw them. The combination of the mentors immersion in the program's practice, their training in effective mentoring, and the program's flexible and adaptive protocols fostered the mentors' abilities to utilize the tools for connecting issues of teaching and learning generated from coursework with teaching practice, while avoiding responding to the protocols in a rote fashion (Little & Curry, 2008). The Teacher Institute program buttressed these design elements with a strong and shared conceptual framework for teaching that became a link between coursework, practicum work, classroom instruction, and boundary practices. Finally, emergent integration was most present within the context of courses that were designed to be relevant and applied to practice, the practicum courses. These also were the courses that featured the most robust roles for the mentors.

Mentors can be a significant resource for helping novice teachers connect the program and fieldwork aspects of learning to teach, and thus helping novices to integrate theory and practice. As such, programs that develop robust designs that can capitalize on opportunities for fostering this connection are worthy of careful examination. Seeking opportunities to improve alternative certification programs is both a critical equity issue and a pressing concern for educational leaders working in these settings for several reasons: such programs place more novice teachers in hard-to-serve, high poverty, urban districts than do their traditional counterparts (Darling-Hammond, 2004; Mitchell, et al., 2007); there is evidence suggesting that teachers prepared through alternative routes are not always as effective initially as their traditionally prepared counterparts (Darling-Hammond, Holtzman, Gatlin, & Heilig, 2005); and a sense of fragmentation between coursework and fieldwork can have detrimental effects on learning to teach (Bruckerhoff & Carlson, 1995; Clift & Brady, 2005; Dooley, 1998). This study described mentor practices and program design features that may help guide improvements in alternative certification programs to partially address these challenges.

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Appendix A
Reputational survey protocol

Note: This protocol was administered via email, via phone, or in person

I am conducting a study on high quality and effective alternative certification programs. You were recommended to me to share your insights because you are in a position to know the reputations of alternative certification programs in California related to specific criteria.

Please recommend to me 3-5 programs for possible inclusion in the study that you believe meet the following criteria:

- The program has a reputation for paying particular attention to the relevance of coursework to the classroom
- The program has a reputation for integrating coursework and supervised fieldwork
- The program has a reputation for providing high quality mentoring.

Your recommendations will not be the sole consideration in selection, but they will help me narrow the list of programs for further examination. Thank you for your help!

Appendix B
Document review protocol: Program documents

Note: Document reviews included selective analysis of the program narrative (which describes the program in the official documents submitted to the California Commission on Teacher Credentials as part of the program accreditation process), formative assessment system, course syllabi, participant handbook, training materials, and course catalog, as appropriate to each program.

Program Characteristics:

Mentoring
MS=Mentor Selection
MT= Time for Mentoring
MPD= Mentor PD
MLC=Mentor Link to Coursework
MLA=Mentor Link to Assessment

Coursework
CC=Tailored to school context
CR=Designed to be relevant to practice
CA=Applied in practice
CI=Integrated with supervised fieldwork
FA= Formative Assessment

Other Factors
SS=School site factors
PTS=Teacher selection

Code	Text	Page #	Reflective Notes

Appendix C
Interview protocol: Program Director (or equivalent)

Program:
Time of Interview:
Date:
Place:
Interviewer:
Interviewee:
Position of Interviewee:
Transcript file name:

Questions:

- Describe the basic design of the program?
- What are your admissions criteria?
- How do you place interns?
- How do you evaluate your schools as potential or current placements for interns?
- Describe the coursework that intern teachers take.
    - What is the process for designing courses?
    - How, if at all, is the coursework linked to the interns' classroom practice?
- Describe how mentoring works in your program?
    - How do you select your mentors?
    - How much time do your mentors spend with intern teachers?
    - What do mentors and their participating teachers do together?
    - How do you monitor their work?
    - Describe the professional development in which your mentors participate
    - Describe other ways, if any, that mentors are involved in the program.
- How, if at all, is coursework related to mentoring?
- How does the teacher performance assessment fit into your program design?
- How is the intern's fieldwork supervised?
- What opportunities do interns have to observe, practice, get feedback, and examine student work?

Appendix D
Item analysis protocol: Statewide survey

The following items from the Statewide Intern and Support Provider Surveys were analyzed for each program. Statewide survey data is publicly available.

Participant survey items:	**Program Score**	**State Mean**
○ About how often did you communicate with your site support person(s) and intern teacher preparation program supervisor (e.g., in person, by phone, e-mail) about issues related to your teaching practice (e.g., curriculum and instruction, classroom management/behavior, students, assessment, materials)?		
○ On the average, what is the total amount of communication (in person, by phone, via email) with your site support person(s) and university program supervisor per week?		
○ In the context of all of the demands on your time, was the amount of meeting time with your site support person(s) and university/program supervisor adequate to meet your needs for support?		
○ Overall, how often were the following types of formal and informal support offered **timely in meeting your needs**?		
○ Please indicate if you received any of the following support during your intern teacher preparation program - Onsite observation, consultation, demonstration		
○ Did the **instruction/coursework** you completed while you were teaching as an intern (after pre-service) include the following? If yes, please rate the effectiveness of the coursework. If no, please mark "Did not receive." Below is a list of intern teacher preparation program outcomes that each program is expected to achieve. Please indicate the extent the intern teacher preparation program helped you achieve these outcomes.		
Support provider survey items:	**Program Score**	**State Mean**
○ In terms of carrying out your support person responsibilities, how useful was the training you received from the program in the areas of:		
✓ Orientation to your support role		
✓ Assisting participating teachers in understanding the local context for teaching		
✓ Identifying and responding to the diverse needs of beginning teachers		
✓ Linking program instruction to classroom practice		
✓ Providing advice and assistance to interns about beginning teacher practice		
✓ Engaging in reflective conversations about teaching practice		
✓ Using assessment with participating teachers		
○ Did you receive formative feedback from your program leadership about your work as a support person? If yes to 5a, how useful was the formative feedback you received about your work as an Intern Support Person?		
○ During this school year, how often did you have an opportunity to meet other support persons for professional development and/or problem solving?		
○ On average, how often did your Intern teacher(s) (in person, by phone or email) receive communication about issues related to their teaching		

practice (e.g. curriculum and instruction, classroom management/behavior, students, assessment, materials)?		
o On average, how long is the typical amount of communication per week?		
o Was the time allotted for your support person role adequate to meet the needs of each of your Intern teacher(s) for support and/or assessment?		
o How often did you feel that the support offered to the Intern was timely in meeting your Intern teacher(s) needs?		
o For the interns you assist how well are you acquainted with the coursework interns receive? My understanding is based on the following experiences:		
✓ Program orientation and training		
✓ I participated in field experience seminars		
✓ I teach or co-teach courses with the program		
✓ Correspondence with program		
✓ Other ____		
o How familiar are you with the performance assessment or other methods of intern assessment used in the program?		

Appendix E:
Program selection evaluations based on selected criteria

Program Name: **City State University Elementary Intern Credential Program**

Primary Criteria: Mentoring	Rating 1 - 4	Comments
Selection: Site support providers are selected based on motivation, expertise and subject/pedagogical knowledge.	2	Based on recommendations
Time: Significant time is allocated to the site support providers' assignment.	2	Mentors receive some release time
Professional Development: Site support providers receive specialized professional development (training & formative feedback).	1	Mentors receive New Teacher Center mentor training in Formative Assessment.
Link to coursework: Site support providers are well acquainted with the participating teachers coursework.	2	Mentors meet regularly with program director for alignment
Link to assessment: Site support providers are familiar with the performance assessment and other methods of assessment used by the program.	2	Mentors are trained in the PACT

Primary Criteria: Coursework	Rating 1 - 4	Comments
Context: Intentionally tailored to school context	2	Program director states that implementation is uneven. Perform above average on statewide survey.
Relevance: Participating teachers value their coursework	2	Program director states that implementation is uneven. Perform above average on statewide survey.
Application: Coursework is intended to provide framework for understanding concepts and applying those concepts in the classroom.	2	Program director states that implementation is uneven. Perform above average on statewide survey.
Integration: Coursework is linked to intensively supervised fieldwork.	2	Program director states that implementation is uneven. Perform above average on statewide survey.
Formative assessment: Coursework includes classroom applications such as: ☐ observing experienced teachers ☐ observation/feedback of teaching ☐ examining student work	2	Uses New Teacher Center formative assessment system, with some modifications. Direct link to coursework inconsistent

Program Name: **Teacher Institute County Office of Education Intern Teacher Credential Program**

Primary Criteria: Mentoring	Rating 1 - 4	Comments
Selection: Site support providers are selected based on motivation, expertise and subject/pedagogical knowledge.	1	Carful selection based on recommendations
Time: Significant time is allocated to the site support providers' assignment.	1	Working primarily with full release mentors
Professional Development: Site support providers receive specialized professional development (training & formative feedback).	1	Extensive professional development – linked to formative assessment system
Link to coursework: Site support providers are well acquainted with the participating teachers coursework.	2	Support providers meet with faculty before each term to align
Link to assessment: Site support providers are familiar with the performance assessment and other methods of assessment used by the program.	2	Support providers support completion of TPA and receive PD for this purpose

Primary Criteria: Coursework	Rating 1 - 4	Comments
Context: Intentionally tailored to school context	2	Coursework is designed with some collab with school based people.
Relevance: Participating teachers value their coursework	2	Assignments are designed to be applied
Application: Coursework is intended to provide framework for understanding concepts and applying those concepts in the classroom.	2	
Integration: Coursework is linked to intensively supervised fieldwork.	3	Some attempts to link. Fieldwork is not expressly connected to classes
Formative assessment: Coursework includes classroom applications such as: ☐ observing experienced teachers ☐ observation/feedback of teaching ☐ examining student work	1	Uses a local formative assessment system to ensure opportunities to practice.

Secondary Criteria	Rating 1-4	Comments
School site in which the participating teacher works ☐ Reasonable Assignment (reasonable class size; number of classes requiring preparation, number of students with special needs are proportional to other teachers in the school) ☐ Collegial environments (teachers analyze student work samples together; seek each other's advice about instructional issues and problems; observer each other's classrooms and offer feedback and/or exchange ideas; and discuss student assessment data to make decisions about instruction) ☐ Supportive school leadership (works to ensure that teachers have the support they need to be successful; relational trust; available and helpful) ☐ Access to materials (textbooks and print resources to teach; access to instructional materials such as lab supplies, math manipulatives, classroom library books; and classroom supplies such as paper, pencils, staples, etc.)	3	Program maintains extensive communication with principals and attempts to educate principals regarding conditions supporting novice teachers. Program places interns in any school where they are needed.
Selection: Participating teacher selectiveness ☐ Academic background (competiveness of BA program, GPA) ☐ Subject matter knowledge (academic major in subject) ☐ Prior knowledge (relevant work experience, previous classroom experience)	3	Program attempts to recruit career changers with prior employment experience. Academic requirements are similar to the state minimum.

Rating Scale:

1. Dimension appears to be consistently present, a defining factor of the program; is structurally integrated into program design.
2. Dimension appears to be consistently present, yet is not consistently structurally integrated into the program design.
3. Dimension appears to be inconsistently present or is a secondary bi-product of other program factors and/or dimensions.
4. Dimension lacks presence, undefined or unclear in relation to program goals

Evaluation methods:

- Review of program narrative (program description submitted to CTC and basis for accreditation)
- Review selected of support provider & intern teacher state survey item results for the program:
- Informal Interview with Program Director

Appendix F
Interview protocol: Initial interview, mentor

Case #:
Time of Interview:
Date:
Place:
Interviewer:
Interviewee:
Position of Interviewee:
Transcript file name:

Questions:

1. Tell me about your work as a mentor – what do you see as the purpose of your work with the Novice teacher you support?
2. Describe how you work with your Novice teacher (frequency, types of interactions, activities)? Can you give me an example?
3. What are you and your novice teacher required to produce?
4. Have you received training? What types of training? How, if at all, have you drawn on that training in your work?
5. Describe for me the teacher's credential program?
6. What is your role in the credential program, if any?
7. What do you know about the PT's coursework? How did you gather that information?
8. How, if at all, does your mentoring work interact with PT's coursework?
9. Other than your work with the PT, how do you interact with the PTs school, if at all?
10. What would you think of a success after you complete your work with your novice teacher?

Appendix G
Interview protocol: Initial interview, novice

Case #:
Time of Interview:
Date:
Place:
Interviewer:
Interviewee:
Position of Interviewee:
Transcript file name:

Questions:

1. Tell me about your work with your mentor – what do you see as the purpose of your work together?
2. Describe how you work with your mentor (frequency, types of interactions, activities)?
3. What skills or experience do you feel like your mentor has?
4. What are some things that you've learned from your work with the mentor? Please give me an example.
5. What are the expectations of your teacher credentialing program?
6. What kinds of things are you learning about teaching in your credential program?
7. What courses are you taking right now? How, if at all, are the classes influencing your teaching? Please give me an example to illustrate. Are there things you've learned in class that you've decided not to take into the classroom? Tell me about those things.
8. What would you think of a success after you complete your work with your mentor teacher?

Appendix H:
Interview protocol: Pre-coaching cycle interview, mentor

Case #:
Time of Interview:
Date:
Place:
Interviewer:
Interviewee:
Position of Interviewee:
Transcript file name:

Questions:

- What are you focusing on during this [observation cycle]?
- How/why did you decide to focus on those particular issues?
- What tools/resources/materials do you plan to use (from course, from school, formative assessment tools, etc.)?
- What challenges, if any, are you expecting?
- What do you hope to accomplish during this observation cycle?
- What, if anything, should I pay attention to if I want to learn about how mentoring works?

Appendix I:
Interview protocol: Pre-coaching cycle interview, novice

Case #:
Time of Interview:
Date:
Place:
Interviewer:
Interviewee:
Position of Interviewee:
Transcript file name:

Questions:

- What do you see as the purpose of this observation cycle?
- What do you hope to get out of it?
- What tools/resources/materials do you think are relevant (from course, from school, formative assessment tools, etc.)?
- What challenges, if any, are you expecting?
- What, if anything, should I pay attention to if I want to learn about how mentoring works?

Appendices J

Video observation protocol: Mentor/novice pre & post conferencing (as applicable)

Case #:
Time of Video:
Date:
Place:
Video Analyzer:
Participants:
Position(s) of Participants:
Video File Name:
Transcript File Name:

Video analysis process:

1. *Preliminary review of the video was conducted within one to five days after collection and prior to subsequent data collection, taking the equivalent of field notes (in some cases, when the video was taken in person, this initial review was conducted simultaneously while recording). General classifications and questions for the follow up interview were generated from this initial review.*
2. *More substantive review was conducted. The video was viewed while simultaneously following a transcript of the video. Specific materials or tools used by the mentor and or novice were noted, adding use of tools into the transcript in brackets.*
3. *Analytical review was conducted focusing on coding the transcript, with repeated views of the video as necessary for clarification. The aim was to produce well-grounded assertions regarding the pair's boundary practices and situated learning. Video recorded interaction offered the virtue of manageability while the opportunity for multiple viewings and repeated analysis increased internal validity.*

Preliminary Review:

Length of Video			
Time Index	*Topic of Discussion*	*Reflective Notes*	*Code*

Substantive & Analytical Reviews conducted using audio transcript of interaction.

Appendix K
Teaching event field notes protocol: Mentor observing novice classroom instruction (as applicable)

Case #:
Time of observation:
Date:
Place:
Observer:
Participants:
Position(s) of Participants:
Field notes File Name:

Note: Observations of instruction were intended to examine mentor and novice practices and excluded distinguishing information about students. No audio or video of instruction were collected.

Observation Length:		
Time Stamp	*Descriptive Notes*	*Reflective Notes*

Appendix L
Interview protocol: Post-coaching cycle interview, mentor

Case #:
Time of Interview:
Date:
Place:
Interviewer:
Interviewee:
Position of Interviewee:
Transcript file name:

General Questions:

- What did you notice during the observation?
- What did you want to emphasize in the debrief?
- Were there particular things you were working on during that observation cycle?
- What challenges, if any, did you face?
- He mentioned in the intro that he was working on concepts he learned in his program, were you aware of which concepts?
- How will you evaluate the effectiveness of the meeting?

Context Specific Questions (examples):

- [What were you trying to get at when you asked “X”?]
- [Why did you choose to focus on “Y”?]
- [You referenced form “Z”, what were you trying to do?]

Appendix M
Interview protocol: Post-coaching cycle interview, novice

Case #:
Time of Interview:
Date:
Place:
Interviewer:
Interviewee:
Position of Interviewee:
Transcript file name:

General Questions:
- What were you trying to achieve in that lesson?
- What was your reaction to it?
- Were there particular things you were working on?
- Were there particular things you were working on during that observation cycle? (ME, NM, SR, AP, I, CG, AC, S)
- Did you use any tools or resources that were particularly helpful? (BO)
- What challenges, if any, did you face? (BR)

Context Specific Questions (examples):
- [What was your reaction to "X"?]
- [When "Y", How did that feel?]
- [How did you react when the mentor said, "Z"?]

Appendix N
Interview protocol: Closing interview, mentor

Case #:
Time of Interview:
Date:
Place:
Interviewer:
Interviewee:
Position of Interviewee:
Transcript file name:

General Questions:
1. Describe the intern program's purpose.
2. Describe the role of the mentor within the program. Looking back on the year, can you give me some examples of when you played that role?
3. How would you describe your intern's progress this year?
4. What contributed to his/her progress?
5. How would you describe your mentoring this year?
6. What are some of the factors that contributed to your approach to mentoring this year?
7. What did you and your mentor produce as part of completing the program requirements?
8. In what ways did you and the intern interact with the intern's program coursework, if any?
9. What tools/protocols did you use? Were those designed by you or by the program?
10. What were the programs expectations for the interns teaching ability?

Context Specific Questions:
- [Specific follow up questions based on the questions emerging from the data].

Appendix O
Interview protocol: Closing interview, novice

Case #:
Time of Interview:
Date:
Place:
Interviewer:
Interviewee:
Position of Interviewee:
Transcript file name:

General Questions:

1. What grade/subject did you teach?
2. How would you describe the purpose of your credential program? Did you feel like the program achieved that purpose?
3. Can you give me some examples of the kind of work you did with your mentor? What did you see as the purpose of your work with your mentor?
4. Describe an assignment you had to complete that was particularly useful. How, if at all, did your mentor work with you on that assignment?
5. Describe an assignment you had to complete that was particularly not useful. How, if at all, did your mentor work with you on that assignment?
6. Describe a course you took that was particularly useful. How, if at all, did your mentor work with you in relation to that course?
7. Describe a course you took that was particularly not useful. How, if at all, did your mentor work with you in relation to that course?
8. Describe your progress as a teacher this year. What contributed to this growth?

Context Specific Questions:

- [Specific follow up questions based on the questions emerging from the data].