

Finding the Questions: A Longitudinal Mixed Methods Study of Pre-Service Practitioner Inquiry

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BOSTON COLLEGE
Lynch School of Education
Department of Teacher Education, Special Education, and Curriculum and Instruction

**FINDING THE QUESTIONS: A LONGITUDINAL MIXED METHODS STUDY OF
PRE-SERVICE PRACTITIONER INQUIRY**

Dissertation
by
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Abstract

Teacher quality is a central concern of the profession. College-based teacher education, the core of teacher preparation in the United States, has increasingly included some form of practitioner inquiry in the pre-service program to encourage teacher candidates to be reflective, adaptive teachers who systematically and intentionally examine practice to improve pupil outcomes and continue their own professional development. While it is assumed that pre-service practitioner inquiry has a positive influence on pupils' learning, there is still little empirical evidence to support this assertion. Most empirical data on pre-service practitioner inquiry is confined to a short time period and does not examine what happens to pre-service candidates when they enter their own classrooms. Additionally, this research is generally conducted using interpretive qualitative methods. Thus, this dissertation uses a longitudinal mixed methods approach to examine what happens when teacher candidates engage in practitioner research in a pre-service program focused on inquiry with the goal of improving pupil learning.

A modified sequential explanatory mixed methods design was employed as the best means of addressing this complex question. The study included data from three sources in a teacher preparation program focused on practitioner inquiry. The first analysis took a broad view of the quality and range of teacher candidates' research papers through the analysis of rubric scores for 92 teacher candidate inquiry papers in two cohorts (spring, 2006 and spring, 2007). Looking at the quality and nature of these projects, content analysis on a sample of twelve papers taken from the range of these scores was conducted. Finally, in-depth case studies of two participants were developed using data accumulated during the one-year pre-service program and through the first two years in the classroom.

Findings in the quantitative analysis indicated that the rubric was reliable in differentiating among papers, but that there were fewer outstanding inquiries than expected,

which were not explained by analysis of the scores. Content analysis of a sample of these papers indicated that differences were in how questions were formed; candidates' ability to interpret and use data recursively; whether and how candidates connected their learning to pupil learning; and if candidates connected their inquiry to issues of social justice in meaningful ways. The case studies showed that several factors influenced whether and how candidates moved toward the development of inquiry as stance. These factors included candidates' view of inquiry; teacher capacity; demands of curriculum planning and development; understandings of learning to teach for social justice; as well as school support and context. Overall, the three analyses in this dissertation indicated that requiring teacher candidates to engage in pre-service practitioner inquiry did not guarantee that they would understand inquiry as intended, develop an inquiry stance, or continue to inquire into practice in their own classrooms. These findings suggest implications for research, practice, and policy, which are discussed.

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CHAPTER 1: ADDRESSING TEACHER QUALITY THROUGH INQUIRY

During the past decade teacher quality has been a central concern of the education community, target of policymakers, and a focus of public debate. The reason is clear: teachers matter. A growing body of research indicates that in an era where academic success is often measured by high-stakes tests, teachers are the single most influential factor in student gains on such tests (Darling-Hammond, 1997; Darling-Hammond & Young, 2002; Rice, 2003, Sanders & Horn, 1994; Sanders & Rivers, 1996). Whether or not these narrow measures of success are adequate for assessing the complex tasks of teaching and learning, the implications of these findings about teachers unify policy makers, politicians, educators, and parents in calling for well-prepared, high quality, and highly qualified teachers for every child. It is not surprising then that the current wave of educational reform, spearheaded by the No Child Left Behind Act (NCLB) (U.S. Department of Education, 2002), focuses specifically on improving pupil learning by ensuring that there are “highly qualified” teachers in every classroom. Simply put, the expectation is that better teachers will produce better pupil outcomes. As Rice (2003) noted in her review of the research on teacher quality, the stakes are high: “Teacher quality is important. Given the high costs coupled with the high impact, this educational element has profound implications for the efficiency, equity, and adequacy of public education” (p. 47).

Demanding highly qualified teachers for every classroom does not automatically reveal the key characteristics of highly qualified teachers or how to ensure that these qualities exist in

prospective teachers, however. As Chester Finn (In Kanstoroom & Finn, 1999) of the Fordham Foundation noted, “While there is near unanimity that raising the quality of the teaching force is a top priority and a necessary precondition for boosting student achievement, there is less certainty about how to accomplish this” (p. v). As a result, the spotlight on teacher quality and teacher qualifications has generated a highly politicized and very public discussion of the definition of teacher quality and the best means of preparing prospective teachers for the complex task of teaching (Cochran-Smith, 2002b, 2003). Disagreements over how to improve teacher quality spill over to criticism of teacher education programs and debates about who should prepare future educators.

College- and university-based teacher education, which is the core of teacher preparation in the United States, has come under increasing pressure to reform and to address the changing standards and expectations of today’s classrooms (Berliner, 2000; Cochran-Smith, 2003; Darling-Hammond, 2006). The pitch and intensity of these demands were reflected in former Secretary of Education, Rod Paige’s, first annual report to Congress on teacher quality in 2002. At that time, he referred to teacher education as a “broken system,” saying in no uncertain terms, “Schools of education and formal teacher training programs are failing to produce the types of highly qualified teachers that the *No Child Left Behind Act* demands” (US Department of Education, 2002, p. viii). While criticisms of teacher education predate the current debate about teacher quality, the intensity of attacks has refocused efforts to regulate and bolster pre-service education through increased oversight, calls for research, program reform and innovation. Numerous reports and reviews have been published by public and private organizations to establish what we know about teacher quality and teacher preparation, identify gaps in

knowledge, and establish areas for future research that would enable teacher educators to prepare candidates more effectively for future classrooms.

A number of reports document gaps in the existing research on teacher preparation. In a report prepared for the U.S. Department of Education, Wilson, Floden, and Ferrini-Mundy (2001) synthesized the research on teacher preparation, noting the disconnect between university-based components of teacher education programs and field experiences. The university-school divide, dubbed the “two-worlds pitfall” (Feiman-Nemser & Buchmann, 1989), underscores the disjuncture between theory and practice advocated in teacher preparation programs and those encountered in K-12 classrooms, a phenomenon that must be addressed in order to strengthen teacher preparation. Wilson, Floden, and Ferrini-Mundy also noted the existence of innovative programs, including “high-quality clinical experiences on knowledge of pedagogy, insights about children and community, and teachers’ ability to reflect on and revise instruction” (p. 33), all of which could close the gap between education programs and field experiences. The authors made recommendations for future research, calling for studies that make explicit connections to the improvement of student achievement and longitudinal studies that examine the impact of teacher preparation programs over time.

Cochran-Smith & Zeichner (2005) also analyzed the empirical evidence relevant to policy and practice about the outcomes of pre-service teacher education in the report of the American Education Research Association’s (AERA) panel on research and teacher education. Calling for a new research agenda for teacher education, they also called for longitudinal studies bridging pre-service and early teaching years, as well as research connecting pre-service experience with pupil outcomes. The message of these two and other reports is consistent and clear: we need more research on the impact of pre-service as evidenced in classrooms as well as more research

related to pupil outcomes. The study carried out for this dissertation responds to these suggestions by examining the use of practitioner inquiry as a preservice program element intended to bridge the theory-practice divide during student teaching and into the teaching career and by making connections to pupil outcomes.

In addition to studies with expanded research methodologies and designs, recent reviews of research on teacher education also underscore the need to study the impact of innovations designed to meet emerging challenges in learning to teach. Specifically, changing demographics in pupil populations as well as the expanding role of teachers in classrooms and school communities indicate that new and different kinds of knowledge, dispositions, and skills should be a part of teacher preparation. This study examines the role of practitioner inquiry in the process of learning to teach during the pre-service period and into the early years of the teaching career in light of these new demands.

Educational research has made great strides in understanding the myriad components that support effective teacher education over the last five decades. Darling-Hammond (2006) outlined key elements of pre-service learning, including deep content knowledge, pedagogical content knowledge, understanding of language, culture, and community contexts for learning, skills to organize and manage a classroom, strong communication skills, comfort with current technology, and the ability to reflect on and respond to practice. She also stated that new teachers require a range of skills demanded by an increasingly diverse population, and provided these startling demographics from today's schools as proof:

In the classrooms most beginning teachers will enter, at least 25% of students live in poverty and many of them lack basic food, shelter, and health care; from 10% to 20% have identified learning differences; 15% speak a language other than

English as their primary language (many more in urban settings); and about 40% are members of racial/ethnic “minority” groups, many of them recent immigrants from countries with different educational systems and cultural traditions. (p. 301)

Given that the pool of prospective teachers is expected to remain primarily white, middle-class, and female (Zumwalt & Craig, 2008), it is clear that new teachers must be ready to understand and address the needs of students with backgrounds and experiences different from their own. In light of these demographics, it becomes increasingly important that new teachers “come to understand teaching in ways quite different from their own experience” (Darling-Hammond, 2006, p. 305). This includes the ability to overcome personal biases and expectations based on past educational experiences, in what Lortie (1975) referred to as the “apprenticeship of observation,” which has proven so resistant to change.

This requires a teaching stance that moves beyond a technical or transmission model of providing instruction (Cochran-Smith, 2003; Darling-Hammond, 2006). Cochran-Smith (2003) stated that “the highly qualified teacher knows subject matter (what to teach) and pedagogy (how to teach), but also knows how to learn and how to make decisions informed by theory and research from many bodies of knowledge and also as informed by feedback from school and classroom evidence in particular contexts” (p. 96). Similarly, Zeichner and Liston (1996) argued that multiple expectations for teacher knowledge demand that teacher education programs provide candidates with deeper content knowledge, but also the means to continually access knowledge and inquire into their own practice through reasoned analysis of pupil outcomes. Darling-Hammond (2006) addressed the quickly changing context of education and further supported this position, noting that “teachers must be able continually to learn to address the problems of practice they encounter and to meet the unpredictable learning needs of all their

students” (p. 304). It is clear that teacher education programs must help novice teachers in developing the dispositions to continue to resolve issues or dilemmas in teaching and learning— “to learn *from* practice, and to learn *for* practice” (p, 305)—as a means of adapting to changing contexts and educational demands throughout their teaching careers. Despite the necessity of preparing teachers who question, reflect upon, and analyze classroom outcomes, however, the literature also identifies a gap in teachers’ ability to evaluate and utilize pupil outcomes data (Boudett, City, & Murname, 2006; Darling-Hammond, 2005; Kennedy, 1999; Nuthall, 2004; Zientek, 2007), suggesting that, to date, teacher education has not adequately attended to this form of knowledge.

One means of addressing these challenges has been to expand the traditional components of teacher education to include practitioner research as a component of teacher preparation (Cochran-Smith & Lytle, 1993; Noffke, 1997). Practitioner research is used here as an encompassing term for the myriad forms of systematic and intentional work of practitioners studying their own practice, schools, and classrooms, including action research, teacher research, participatory action research, or simply inquiry (Cochran-Smith & Lytle, 1993). The systematic and recursive study of one’s own practice is intended to encourage reflection, improve practice, and support pupil learning, which responds to a number of contemporary challenges involved in the preparation of highly qualified teacher candidates. First inquiry can provide a bridge between theory and practice, addressing the disconnect between the university experience and school site that is often evident in teacher education programs (Wilson, Floden, & Ferrini-Mundy, 2001). Second practitioner research often problematizes issues of culture, diversity, and inequity that exist in classrooms, offering a new means of considering the challenges of increasing diversity in the school population (Anderson, Herr, & Nihlen, 2007). Through

practitioner inquiry, novice teachers are provided with the tools to study their own practice, with the goal of improving the learning of all children in their classrooms (Zeichner & Liston, 1996). Third practitioner research provides a way of mediating understandings of teaching and learning as continuous professional development. Practitioner research is not simply a means of introducing a novice teacher to practice, but a tool to examine and address one's practice throughout the educator career (Cochran-Smith & Lytle, 1999a, 2009). Practitioner research also responds to the need to gather, analyze, and use classroom data for improved practice and pupil outcomes, supporting understanding of the increasingly complex levels of data available to classroom teachers (McLaughlin & Talbert, 2006; Weinbaum et al., 2004). Finally, practitioner research recognizes the potential for the emic voice of teachers as experts possessing knowledge of teaching and learning for the improvement of their own practice and for the field (Cochran-Smith & Lytle, 1993, 1999, 2009; Noffke, 1997; Zeichner & Noffke, 2001).

Purpose of the Study

The purpose of this study was to explore the outcomes and processes in using inquiry during the pre-service period and into the first two years of classroom experience. Specifically, the study examined what happened when teacher candidates were required to conduct practitioner research in a program that emphasized inquiry and pupil learning outcomes at Heights University¹ as well as how the inquiry experience was reflected in candidates' understanding of learning to teach and of pupil learning during the first few years of teaching.

This study has implications for the local teacher education program and for teacher education in general. By conducting three different analyses of teacher candidates' inquiries, one quantitative and two qualitative, the study was designed to yield insights that would not have

¹ Pseudonyms are used in place of the names of all individuals, schools, and institutions in this dissertation to protect privacy of participants.

been possible based on any single analysis. This study is relevant to several key issues involved in improving teacher quality, innovation in teacher preparation, and developing research agendas to address gaps in our current understanding of learning to teach. The study draws on longitudinal data, which bridge pre-service teacher preparation and early teaching experiences. The study also focuses on the role of practitioner inquiry as an innovation in teacher preparation over the last two decades, which is intended to support a foundation for learning to teach throughout the professional career.

Questions

This mixed methods longitudinal study includes data from three sources in a teacher preparation program with practitioner inquiry as a central focus. The first analysis takes a broad view of teacher candidates' use of inquiry by focusing on the quality and range of 92 inquiry papers, which were completed by two cohorts of teacher candidates and evaluated using a detailed scoring rubric during the spring of 2006 and 2007. Based on the range of scores of these inquiry papers, the second analysis is a content analysis of a sample of papers selected from across the range of these rubric scores. Finally, the third analysis focuses on case studies of two teachers, using three years of interview, observational, and artifact data collected during the one-year pre-service program and then following those teachers through the first two years of teaching.

This study asks one central question about the role of inquiry in teacher learning during the preservice period and then into the first few years of teaching, along with three sub-questions that coincide with the three analyses:

What happens when teacher candidates engage in practitioner research in a pre-service program focused on inquiry with the goal of improving pupil learning?

1. *What is the range and variation in teacher candidate scores as indicated by the inquiry scoring rubric?*
 - a) *What are the relative strengths and weaknesses found among categories of the inquiry scoring rubric?*
 - b) *What differences in scores exist among subgroups?*
2. *What is the nature and quality of inquiry projects conducted by teacher candidates as revealed through qualitative content analysis, including:*
 - a) *What questions do teacher candidates ask?*
 - b) *How do candidates analyze and interpret data?*
 - c) *How do candidates make sense of pupil learning?*
 - d) *How do candidates use the information gained from inquiry to improve their practice and pupil outcomes?*
3. *How do two novice teachers understand and use practitioner inquiry during the preservice period and then during their first two years of teaching?*

Terms Defined

In this dissertation, *practitioner research* refers to the “systematic and intentional inquiry by teachers about their own school and classroom work” (Cochran-Smith & Lytle, 1993, p. 23-24) as a working definition for the efforts of participants in this study. The terms *practitioner research* and *inquiry* are used interchangeably throughout this dissertation. For example, during the student teaching period, the teacher candidates in this study were required to complete a

practitioner research project, which was referred to as their inquiry paper. The terminology of inquiry is further discussed in the review of the literature.

Several terms relating to the participants are used to designate their status in the longitudinal study. *Teacher candidates* refer to the master's level students enrolled in the HU teacher education program, who were participants in this study. *Case study participants* refer to those teacher candidates who provided interviews and classroom observations during the course of their master's program at HU and through their first two years in the classroom. *New or novice teachers* refer to case study participants once they completed their pre-service preparation and moved into classroom teaching.

Finally, *pupils and pupil learning* refers to K-12 students in the teacher candidates' or novice teachers' classrooms. The term *student* is reserved for references made about teacher candidates by teacher educators and supervising teachers. However, direct quotes from cooperating teachers, supervising teachers, mentors, and administrators may interchange the word *student* for *pupil* in speaking about children in K-12 classrooms; every effort is made to provide clarity in these situations.

Organization of the Dissertation

This dissertation is organized into seven chapters. The first chapter identifies the research problem, outlines the significance of the study, and presents the questions being investigated. This chapter suggests that learning to teach through practitioner research is a strategy now commonly used in pre-service preparation programs in response to the demands for a highly qualified, adaptable teaching force that can meet the needs of an increasingly diverse pupil population. Further, the first chapter points out that few existing longitudinal studies bridge pre-service and in-service, making this dissertation research especially valuable to the field.

Chapter 2 provides the conceptual and theoretical frames and the review of the literature on learning to teach through pre-service practitioner inquiry. This chapter begins with a discussion of sociocultural theory, which informs this study. Following the theoretical discussion, the chapter reviews the conceptual literature on teacher knowledge and practice, including the place of practitioner research within this theoretical frame, offering a more refined lens for this study. The chapter then provides an overview of the literature on learning to teach and the place of practitioner research within this and concludes with a review of the empirical research on the use of pre-service inquiry. This review highlights the need for longitudinal research that includes pre-service and teaching experiences.

Chapter 3 describes the study design, data sources, and methodology. This chapter argues that a mixed methods study with a modified sequential explanatory design was the most effective means to address the study's questions, considering the complementary strengths of quantitative and qualitative analyses in examining the complex matter of learning to teach through practitioner inquiry. This chapter also includes a description of the larger research initiative from which the data were drawn, a description of the research sites, and participants. Finally, this chapter includes a detailed depiction of the methodology for each of the three analyses.

Chapter 4 outlines the findings from both Analysis #1, the quantitative analysis of the scores of teacher candidates' inquiry papers based on application of the inquiry scoring rubric on rubric scores, and Analysis #2, content analysis of selected papers representing different rubric scores. Analysis #1 is based on scores on inquiry papers from two cohorts of teacher candidates, which includes a pilot study and an exploratory study. Building on this analysis, these findings are extended through Analysis #2, the content analysis of twelve papers taken from the range of

scores in the first analysis. These analyses provide a look at the quality and range of papers produced by master's level students in their capstone inquiry project.

Chapters 5 and 6 are case studies. Chapter 5 explores the first of two, three-year qualitative case studies of learning to teach through practitioner research bridging the pre-service experience and early years of classroom teaching. Chapter 5 begins with discussion of a framework that combines the personal, professional, and political dimensions of practitioner research (Noffke, 1997; Zeichner & Noffke, 2001) with the notion of “inquiry as stance” (Cochran-Smith & Lytle, 1999a, 2009), which is used to interpret and analyze both cases. Chapter 5 then presents the case of Mara Howard learning to teach through practitioner inquiry with what I refer to as a “developing” inquiry stance. Chapter 6 develops the case of a second candidate, Craig Woods. Craig did not develop an inquiry stance during his first few years of teaching; I refer to this as a case of “undeveloped inquiry.” As in the previous chapter, this case considers background information, the candidate's preservice inquiry project, teacher capacity, school context, and understandings of social justice in inquiry. Chapter 6 concludes with a look across case studies, comparing candidates' understandings and uses of inquiry during the preservice period and the first two years of teaching.

Finally, Chapter 7 looks across the three sequential analyses, discussing the challenges and unintended consequences of conducting pre-service practitioner research, as well as considering the factors that influence novice teachers to move towards or away from developing an inquiry stance. This chapter also offers implications for research, practice, and policy from this study.

Argument

Across the seven chapters, this dissertation suggests that focusing pre-service teacher preparation on inquiry as a way of learning to teach does not necessarily lead to the outcomes and goals for which it is intended. In fact as all three analyses of this dissertation indicate, requiring teacher candidates to conduct practitioner inquiry during the student teaching period, which is fast becoming a common part of preservice education, does not guarantee that they will understand inquiry as intended, develop an inquiry stance, or continue to inquire into practice once in their own classrooms. Rather the dissertation argues that learning to teach through practitioner inquiry is a complex, tension-filled, and long-term process that may continue to evolve through the early years of teaching and depends in part on the capacity of the individual teacher candidate and on the culture of the school in which he or she works. Learning from and about teaching through inquiry may begin during the pre-service program, but must also have the support of schools to ensure that teachers see inquiry as a valuable means of responding to the challenges of daily life in the classroom and generating professional knowledge.

As the analyses in this dissertation show, many teacher candidates conducted interesting and meaningful projects during the student teaching period, although others had difficulty finding questions, analyzing results, and making sense of the experience to inform continuing practice. These results do not diminish the value or potential of practitioner inquiry. On the contrary, they suggest that teacher education should provide more opportunities for teacher candidates to use inquiry in practice. This includes solving the small problems of daily teaching life as well as grappling with larger issues through extended inquiry with the intent of making inquiring into practice a habit of mind as they enter their classrooms.

The teacher candidates in this dissertation were required to focus their inquiry on pupil learning in the classroom. This resulted in very different sorts of inquiry projects than had been undertaken in the past where candidates focused on reflections about one child, aspects of school culture, behavior management, or the physical organization of the classroom, for example. In shifting the focus of the inquiries to pupil learning, candidates attended to evidence of whether and how pupils were learning, rather than on themselves and their teaching. The assumption was that candidates would also continue to examine their own experience in learning to teach in conducting inquiry; however, not all candidates provided rich and meaningful reflections on their own learning. Furthermore, once candidates became teachers, numerous factors influenced whether and how they used pupil learning data to assess and adjust their practice.

In order for inquiry-focused programs to be successful there must be a continuous examination of how practitioner research in the pre-service program is structured, supported, and understood by candidates to better facilitate the challenges of conducting and understanding inquiry outcomes and to disrupt misconceptions that arise. That is, teacher educators themselves must conduct ongoing inquiry on inquiry, adapting to the needs of the teacher candidates they are teaching as they themselves learn to inquire into and modify practice.

Ensuring the use of inquiry in the first years of teaching is an especially challenging problem to pre-service programs. This study indicates that collegial support and opportunities to take part in teacher learning communities in the early years are not just important for the retention of new teachers, as studies have shown (Ingersoll & Kralik, 2004; Ingersoll & Smith, 2004; Johnson & Kardos, 2008; Westheimer, 2008), but also for encouraging the development of an inquiry stance for effective practice and continuing professional growth. Schools that value inquiring into practice and hold explicit expectations for critical inquiry continue the work of

pre-service programs supporting the development of reflective, adaptive teachers. Practitioner research is intended to bridge the gap between theory and practice and between university and classroom. Ironically, however, some new teachers may experience the emphasis on inquiry during pre-service education as disconnected to the realities of school life. This study makes clear that new connections between schools and pre-service programs are needed to ensure that candidates are prepared for their expanding roles as members of learning communities and to ensure that schools understand the potential of inquiry as transformative professional development for effective teaching and improved pupil outcomes.

The title of this dissertation is *Finding the Questions: A Longitudinal Mixed Methods Study of Pre-service Practitioner Inquiry*. On one level, the reference to “finding the questions” acknowledges the need of teacher candidates to find the questions related to practice that will develop into meaningful inquiry. This term also recognizes the struggle of the case study participants during their first years of teaching as they moved toward or away from an inquiry stance, finding the meaningful questions or wrestling with the daily challenges of managing classrooms. Finally, this phrase reflects my own efforts as a researcher developing and conducting this study. Over time, I came to understand that even at the end of the study, there would be some answers but few certainties and many more questions to pursue.

CHAPTER 2: THEORETICAL FRAME AND REVIEW OF LITERATURE

In providing a theoretical frame, I begin by briefly discussing sociocultural theory, which informs this study as well as the larger Inquiry Study and Qualitative Case Study projects, both of which are part of the evidence from the TNE portfolio, described in Chapter 3. Following the theoretical discussion, I review the conceptual literature on teacher knowledge and practice, including the place of practitioner research within this theoretical frame, offering a more refined lens for this study. I then provide a broad review of the literature on learning to teach and the place of practitioner research within this conceptual writing and conclude with a review of the empirical research on the use of pre-service inquiry.

Sociocultural Theory as Lens

Sociocultural theory offers a broad lens for understanding human behavior in a social context with culture as the anchoring concept. Vygotsky, (1978, 1987) a key theorist of the general approach of sociocultural theory, viewed human behavior as co-constructed between and among people through processes mediated by intellectual ‘tools,’ in either written or spoken language, which concurrently shaped and transformed individuals as they interpreted meaning from experience. This study was informed by this general understanding of human behavior as it plays out in teaching, learning, and practitioner research.

To understand the sociocultural perspective, the complexity of culture must be addressed. The concept of culture has been defined in a number of ways. Geertz (1973) defined culture in saying:

The concept of culture I espouse...is essentially a semiotic one. Believing, with Max Weber, that man is an animal suspended in webs of significance he himself has spun, I take culture to be those webs, and the analysis of it to be therefore not an experimental science in search of law, but an interpretive one in search of meaning. (p. 5)

Culture, from this anthropological view, includes socially established “structures of meaning” (p. 12) that guide how people interpret and react to interactions or events. Like Vygotsky, Geertz proposed that the understanding of events and interactions was mediated through the use of “tools” or “symbols” constructed by a culture, in the form of written or spoken language, number systems, gestures, or even the use of clothing as a representation of group affiliation, for example. Elements of culture are passed from generation to generation within a culture, but are continually subject to reinterpretation and adjustment in meaning. Understanding of human interactions from outside the culture necessarily requires determining the shared meaning that gives order within a culture, as well as diving specific negotiated understandings between people as they occur.

A number of other theorists from anthropology, sociology, and psychology have struggled with the complexity of the concept of culture, particularly as it applies to teaching, learning, and schools. Sarason (1971), a sociologist, defined culture in school as patterns governing interactions within relationships, procedures, and protocols that exist as a “distinct structure” (p. 71) among administrators, teachers, and students. Eisenhart (2001a) described this as “patterns in a way of life characteristic of a bounded social group” (p. 210), but acknowledged that, particularly in the new millennium, the understanding of culture in ethnographic traditions is being stretched by the multiple personal and societal affiliations within cultural spheres, as

well as rapid changes in the symbolic structures and meanings that are formed and transformed.

She stated:

What's different now is that everyday life, including life in schools, seems to be faster paced, more diverse, more complicated, more entangled than before. The kinds of personal and social relationships, exchanges, and networks we participate in seem to be taking new forms, tying together otherwise disparate people, and demanding some new ways of thinking about what to research and how to do it.

(Eisenhart, 2001 b, p. 9)

Increasingly complex relationships within school communities, shifting roles of teachers, blurred boundaries in personal and academic experiences, as well as changes within the structure of communities, schools, and family, challenge previous understandings of culture, relationships, and roles in school communities. The literature does provide some structure for examining increasingly complex views of culture through common features of schools, as well as ways to consider individual institutional qualities.

Addressing multiple and broadening spheres of cultural influence, learning theorists Jean Lave and Etienne Wenger (Lave & Wenger, 1991; Wenger, 1998) use the idea of "communities of practice" as the foundation for a social theory of learning. Wenger (1998) claimed that communities of practice exist as an integral part of our daily lives in ways that are so informal and pervasive that only in naming and systematically studying their existence do we realize their influence, structure, and the numerous affiliations that each individual has in communities of practice. Membership in these circles may include family, school, work, hobbies, community and neighborhood groups, listserves, internet groups, and so on. Wenger noted that communities

of practice “develop their own practices, routines, rituals, artifacts, symbols, conventions, stories, and histories” (p. 6) that overlap and change over time.

In descriptions of culture and society, culture provides boundaries and structure that give events, interactions, and the world at large meaning and order, rather than chaos and random occurrences (Geertz, 1973). These understandings are co-constructed through interactions with others and are influenced by norms, tradition, symbols, and artifacts recognized within the culture (Britzman, 1991; Sarason, 1971; Wenger, 1998). Additionally, viewing human behavior through the lens of sociocultural theory emphasizes the reciprocal impact of these interactions; that is, as individuals interact with one another, they construct meaning that is informed by their understanding of culture and influence their actions; over time, the elements of culture are translated and transformed by actions, constructed meanings, and adjustments to the symbolic elements of the exchange (Britzman, 1991; Eisenhart, 2001b; Geertz, 1973; Wenger, 1998).

In this study, a general sociocultural lens was used to interpret the experience of learning to teach as teacher candidates moved through the teacher preparation program and into the first years of teaching. Britzman (2003) referred to “chronologies” (p. 70), the multiple, simultaneous lived experiences, including interactions with key individuals or groups resulting in negotiated understanding and development of identity, encountered by teacher candidates. The first chronology refers to the experiences the teacher has accumulated in educational settings as a student, prior to entering a teacher preparation program. These are particularly significant in understanding the experience of teaching and learning in education because of the extraordinary resiliency of entering beliefs and dispositions (Lortie, 1975). These past experiences are powerful arbiters in setting expectations of how the various actors on the education stage should behave, including the teacher candidate.

The second chronology is experience in the university, where candidates negotiate meaning with administrators, professors, advisors, and peers. The candidate, who takes the role of a student in learning to teach, likely encounters conflicting ideas when comparing previous or current beliefs to those held by instructors at the university. The third chronology is connected to the university, but experienced in the field, where another set of interactions, replete with additional contradictions about teaching and learning, take place.

The third chronology, then, is student teaching in a school setting. Candidates negotiate meaning with the cooperating teacher, clinical supervisor, school administrators, pupils, and their families, who offer other sometimes consistent, though often competing and contradictory, sets of beliefs and expectations about the role of teacher, ideas about practice, and understanding of teaching and learning. Here, candidates begin to build their identities as teachers, undertaking the first formal co-constructed exchanges with pupils as instructors. This experience, however, is limited and generally insufficient to fully prepare candidates for the responsibilities of a classroom teacher.

The fourth chronology begins as a newly hired teacher of record. At this point, first year teachers must reevaluate and make sense of the current school and classroom environments in light of previous experience and understandings in their own classroom. Key individuals influencing this experience are often a new set of administrators, mentors, professional peers, students, and families. These relationships and the school context are not necessarily consistent with prior experiences in the practicum and must be negotiated from the role of a teacher rather than teacher candidate.

Britzman (2003) emphasized that it is not simply what happens to persons in these chronologies that is critical: “Instead, my concern is in understanding what they make happen

because of what happens to them and what it is that structures their practice” (p. 70). She highlighted the importance of the dialogic process and complexity of negotiation that is characterized by action that may, in turn, alter the culture itself. She noted “culture is not a static and received script for the enactment of behaviors, rules, values, commitments, and perspectives defined elsewhere” (p. 70). For Britzman and other critical sociocultural theorists, culture is, “contested, temporal, and emergent” (Clifford, 1986, p. 19).

For this study, the events in each chronology are key to understanding what teacher candidates know about teaching and learning, as well as how they act on these understandings and enter into the culture of teaching. Additionally, the specific cultures of schools in which candidates experience student teaching and continue to develop as classroom teacher are critical to the experience of learning to teach. Looking across school sites, these institutions can simultaneously appear very consistent in organization, yet may vary dramatically in culture, influencing understandings of educational processes, the role of teacher, and expectations in teaching and learning. These similarities and differences are briefly reviewed here.

The literature recognizes that K-12 schools have common cultural elements that are historically tied to norms, including “roles and relationships...ideas, practices, values, and expectations that are the ‘givens’” (Sarason, p. 227) in U.S. schools. The culture of individual schools and the understanding of what it means to teach in these schools are not uniform, however (Britzman, 2003; Feiman-Nemser & Floden, 1986). Gee (1996) noted that social practices in all cultures, including schools and universities, are value-laden and contested across the boundaries of communities. For the teacher candidate negotiating learning and teaching through interactions with a variety of stakeholders across the critical communities of practice, the traditions, values, and norms surrounding teaching and learning differ, offering contradictory or

inconsistent messages (Britzman, 2003). This may play out in many forms: an emphasis on bureaucratic concerns over academic issues; a mission of constructivist teaching over transmission modes; programs and actions enacted to improve high-stakes testing that influences curriculum and instruction. As mentioned previously, the research on pre-service education has repeatedly documented a disconnect between university sites and K-12 classrooms (Darling-Hammond & Bransford, 2005; Rice, 2001; Wilson, Floden, Ferrini-Mundy, 2003), which has not been satisfactorily addressed by teacher education.

For teacher candidates then, the task of learning to teach is complicated by numerous elements: recognizing and moving outside of the limitations of the values, beliefs, and experiences that teachers bring with them; determining the values and boundaries of any particular program or school culture and negotiating an understanding of their place; and negotiating the multiple and conflicting values teachers encounter across university and school experiences in constructing an understanding of teaching and learning.

For this dissertation, the elements of culture, the negotiations of participants in constructing meaning within the various sites, the import of what is valued and understood as co-constructed knowledge and the action and outcomes of these negotiated understandings are all made problematic.

Conceptualizing Knowledge-Practice Relationships

In addition to using the broad lens of sociocultural theory, this proposal was also framed by the conceptual literature on relationships of teacher knowledge and practice. Over the last fifty years, researchers have tried to conceptualize the relationship between knowledge and practice, struggling with a multitude of questions: What knowledge is necessary for effective teaching? What is known about effective teaching? How and by whom should this knowledge

be illuminated and shared? What knowledge do teachers hold about teaching and learning? What place do teachers have in research in education? These questions and the debates they inspire are critical to understanding the relationship between teacher knowledge and the process of learning to teach. To situate the place of my work in this literature, I offer a historical perspective of teacher knowledge as it evolved from the study of effective teaching. I then discuss the shift to understandings of knowledge essential for teaching through pedagogical content knowledge, as well as views of formal and practical knowledge. Finally, I situate the role of practitioner inquiry, knowledge, and practice in learning to teach.

Historical Perspectives on Knowledge and Practice

Early ideas about what teachers should know and be able to do come from the “process-product” studies in the period extending from the late 1960’s through the early 1990’s. This research, founded in behaviorist traditions, focused on particular teacher behaviors or processes that could improve pupil outcomes and was often measured through quantitative standardized test scores (Brophy & Good, 1986; Denham & Lieberman, 1980; Dunkin & Biddle, 1974). Alternately, researchers measured teachers’ knowledge through coursework, degrees, or results on skills tests (Hill, Rowan & Ball, 2005). This conception of knowledge, referred to as propositional, formal, or informational knowledge (Carter, 1990, Fenstermacher, 1994, Richardson, 1994) held a limited, technical view of the teacher (Apple, 1986), and focused on finding “workable” behaviors and practices used to train perspective teachers, rather than on issues of knowledge. Fenstermacher (1994) noted that researchers working from this perspective “did not see themselves as studying teacher knowledge so much as they perceived themselves producing knowledge about teaching” (p. 7). Tied to traditional scientific methods of research, the outcomes of process-product research were defined as observable outcomes in an

environment where variables could be accounted for and controlled—a distant reality from what occurs in classrooms. In endorsing a broader frame that included understanding of situated classroom knowledge as a core of teacher research and practice, Doyle (1990) stated that:

The search for effectiveness indicators and uniform practices lifts teaching from its particulars and strips it of context and, therefore, meaning. Extracting indicators from descriptions of classroom practices inexorably fractionates and trivializes teaching and serves to narrow rather than enrich knowledge for teacher education. (p. 350)

Process product research provided information about effective classroom processes such as direct instruction, wait time, and memory, but did not provide an understanding of the unobservable thought processes or decision-making that occurred in the situated context of classrooms. Teachers, rather, were technical practitioners best prepared for teaching through the transmission of “scientifically proven” methods during the pre-service programs in readiness for classroom experience. This view, however, assumed a uniform, static view of classroom life, and ignored the differences in experience and understanding of teaching and learning that individuals brought to the profession or developed over time in the classroom.

Essential Knowledge for Teaching

Despite the limitations posed by this approach, this body of work largely formed the basis for the evolving “knowledge base” of education until the introduction of the idea of teachers as thinkers challenged technical views of teaching. Reports such as those from the Holmes Group (1986) and the Carnegie Task Force (1986) supported a new conception of teacher knowledge and provoked vigorous discussion about the appropriate knowledge base for the profession. The report was followed by numerous publications presenting varying conceptual approaches on

teacher knowledge and practice, as well as the best research methods for studying questions concerned with teacher knowledge. This literature included questions about the knowledge necessary for effective teaching, the role of teacher beliefs and attitudes, and thinking processes in teaching. For example, Carter (1990) referred to “information-processing studies” that included examination of teacher planning and context in decision making (Borko, Lalik & Tomchin, 1987; Borko, Livingston, McCaleb & Maruo, 1988). A branch of research on expert-novice studies also flourished (Munby, Russell, & Martin, 2001; Richardson, 1994) with comparisons of the decisions and actions of successful veteran teachers to teachers with little classroom experience (e.g. Berliner, 1988; Borko, Peterson, & Comeaux, 1987). However, the notion of “essential” knowledge for teaching garnered the most interest and attention.

Shulman (1987) and his associates encouraged and influenced research on knowledge essential for teaching. He proposed seven categories of knowledge, taking into account what teachers know and how they use this knowledge. These categories included content knowledge; general pedagogical knowledge, including classroom management and organization; pedagogical content knowledge, or the connections between content and pedagogy in a content area; knowledge of curriculum; knowledge of learners; knowledge of schools, communities, and cultures; and knowledge of educational purposes as driven by philosophical and historical foundations. The limitations of the ‘teacher effectiveness’ approach (Shulman, 1983) contrasted with this wider vision of teacher knowledge seen through thinking, planning, and acting in day-to-day practice, as reflected in these categories (Ball, 1990; Shulman, 1986; Wilson, Shulman, & Richert, 1987). Over the next several years, Shulman and his students explored notions of pedagogical content knowledge, “the blending of content and pedagogy into an understanding of how particular topics, problems, or issues are organized, represented, and adapted to the diverse

interests and abilities of learners, and presented for instruction”(1987, p. 8) . A rich program of study (see Grossman, 1990; Grossman, Wilson, & Shulman, 1989; Wilson, Shulman, & Richert, 1987) that revealed much about the knowledge teachers hold in classroom practice, especially between content knowledge and pedagogical practice, grew up around these ideas (Fenstermacher, 1994).

Fenstermacher (1986) noted the corresponding changes in purposes of teacher education that must be assumed by the change in seeing the teacher as a thinker. He stated that in moving research from concerns about effects to essential knowledge, the goal of teacher education moves from an indoctrination or training program that teaches candidates to act in prescribed ways to programs that educate candidates to “reason soundly,” acquiring content knowledge and processes for thinking about what they are doing. Fenstermacher (1994) also outlined a second way to conceptualize knowledge and practice by considering differences in what he referred to as formal and practical knowledge, as outlined below.

Formal and Practical Knowledge

As ideas about the knowledge base evolved, several research programs were underway, each sharing a view of knowledge in education as tied to practice and the accumulation and transformation of knowledge that comes from experience. Some researchers conceptualized “practical knowledge” that stood apart from the formal or propositional knowledge of traditional scientific methods (Fenstermacher, 1994; Richardson, 1994). Clark and Peterson (1986) synthesized research on practical knowledge of how teachers think about their work, drawing attention to the connection between teachers’ thought processes and teachers’ actions, focusing on teacher planning, thoughts, and decisions, as well as teachers’ theories and beliefs. These researchers used a number of research methods—thinking aloud, stimulated recall, policy

capturing, journaling, and repertory grid technique—offering accounts of practical knowledge in teaching that demonstrated the variation in “content and orientations of teachers’ implicit theories” (p. 291) among seemingly homogenous groups of teachers.

Elbaz (1983), Clandinin, and Connelly (e.g., 1995, 1996, 1998, 2000; also Connelly & Clandinin 1988, 1998, 1999) were also concerned with what teachers know and are able to learn as a result of their experiences in the classroom, rather than what they need to know and how they should be trained based on codified knowledge. These researchers centered their work on teachers’ “personal practical knowledge,” which Clandinin and Connelly (1995) defined as “that body of convictions and meanings, conscious or unconscious, that have arisen from experience (intimate, social, and traditional) and that are expressed in a person’s practices,” standing in contrast to “codified knowledge found in books” (p.7). Their work with teachers was collaborative in nature, differing significantly from other approaches that held teachers as the objects of study. Additionally, the knowledge held by teachers was revealed through narrative and story, which explicitly contrasted with the “sacred story,” funneled to teachers through traditional theoretical knowledge of teaching and learning. Practitioners’ stories brought teachers, in their roles and as authors, to center stage. Further, it was through sharing these stories – sharing the knowledge held within the stories—that engagement, reflection, and transformation of knowledge was made possible (Clandinin & Connelly, 1995).

Also related to these efforts in practical knowledge is the work of Grimmett and MacKinnon (1992), who proposed a conception of craft knowledge, a kind of “occupational savvy” (p. 388). They defined craft knowledge as a “form of professional expertise...neither technical skill, the application of theory or general principles to practice, nor critical analysis; rather, it represents the construction of situated, learner-focused, procedural and content-related

pedagogical knowledge through ‘deliberate action’” (p. 393). The emphasis for all of these conceptions of practical knowledge is in knowledge gained “at the elbow” (p.437) in practice and through reflection. Again, the role of teacher is that of collaborator in research and as the knower united with the knowledge.

The conceptualization of knowledge and practice as craft knowledge also had implications for teacher education. The development of reflective practice became a primary concern so that candidates were able to analyze and describe what occurred in the course of practice and make changes based on this evidence. As Zeichner and Liston (1987) noted, it was necessary to prepare teachers “who are willing and able to reflect on the origins, purpose, and consequences of their actions, as well as on the material and ideological constraints and encouragements embedded in the classroom, school, and societal contexts in which they work” (p. 23). Pre-service programs, then, aimed to prepare candidates with the skills necessary for self-directed growth and recursive action through reflective practice, rather than assume a technician role for the teacher.

Practitioner Inquiry

Another way of conceptualizing the relationship between knowledge and practice is through the role of practitioner inquiry. In practitioner inquiry, knowledge is gained in the context of the classroom through deliberate examination of practice. The research is conducted by the teacher (rather than on the teacher) to generate local knowledge that may be valuable to other educators and the field at large. A detailed examination of conceptualizing the role of inquiry, knowledge, and practice is central to this proposal and is discussed at length in the following section. This includes defining practitioner research, looking at common elements of

practitioner research, the various genres found under this umbrella term, and criticisms leveled at the use of practitioner inquiry.

The term practitioner inquiry, as used here, is the “systematic and intentional inquiry by teachers about their own school and classroom” (Cochran-Smith & Lytle, 1993, p. 23-24) gathering and recording information and documenting experiences. Intentionality refers to the planned and deliberate, rather than spontaneous, nature of practitioner inquiry (Stenhouse, 1985). With practitioner inquiry, systematic examination and analysis of students’ learning (and/or other educational outcomes and issues) is often juxtaposed and interwoven with the systematic examination of practitioners’ own intentions, reactions, decisions, and interpretations. This makes it possible to produce more richly detailed and complex analyses of teaching and learning than those generated by outside researchers. Furthermore, practitioner inquiry opens the work of teaching and learning to the critique of a larger community.

The idea of practitioners as researchers has existed since the 1950s (Cory, 1953; Lewin, 1946), but it enjoyed a resurgence of interest in the late 1980’s as a result of several converging events, as noted by Cochran-Smith & Lytle (1999b). First, as previously noted, an altered view of teacher as “knower or thinker” (p. 15) was developed. The teacher now needed theories grounded in practice, with knowledge generated by teachers as well as outside researchers. This renewed interest in practitioner research was fostered by publications in the United Kingdom and the United States in language and literacy (e.g., National Council of Teachers of English, Heinemann and Boynton/Cook publishers, Bissex & Bullock, 1987; Goswami & Stillman, 1987) and writing programs (e.g., National Writing Project and Bread Loaf School of English). A separate but concurrent literature reflected the idea of practitioner research as a form of social action and change (e.g., Carr & Kemmis, 1986; Kemmis & McTaggart, 1988; Stenhouse, 1988).

Another loosely associated body of researchers from the progressive education tradition focused on understanding teaching and learning through observation and inquiry of classroom experience in context. These researchers emphasized the teacher as expert and interpreted their work through the lens of social responsibility and understanding tacit knowledge of teachers in practice (e.g., Carini, 1982, 1986; Duckworth, 1987; Perrone, 1989). A number of teacher educators and researchers also began to challenge the hegemony of traditional research on teaching while promoting the purposes and potential of teacher research as part of the knowledge base for teaching (Lytle & Cochran-Smith, 1987; Erickson, 1986; Florio-Ruane & Walsh, 1980). These activities and new perceptions coincided in the United States with a wave of dissatisfaction with the nation's schools and the call for professionalization of the teaching force, which inspired scrutiny of teachers, the knowledge base for teaching, and teacher education (e.g., The Carnegie Forum, 1986; The Holmes Group, 1986; The National Commission on Excellence in Education, 1983). The convergence of these programs and events resulted in the resurgence in some forms of practitioner inquiry and the generation of new forms of inquiry that held some common elements, but also diverged according to the tradition and original purpose.

Categories of Practitioner Inquiry

Currently, the terms practitioner research or practitioner inquiry are used as a conceptual umbrella to refer to a variety of educational research forms, genres, and purposes (Anderson, Herr, & Nihlen, 1994; Cochran-Smith & Lytle, 2004; Zeichner & Noffke, 2001), including action research, teacher research, self study, narrative inquiry, the scholarship of teaching and learning, and the use of teaching as a context for research. Anderson, Herr, and Nihlen (2007), Zeichner and Noffke (2001), and Cochran-Smith and Lytle (1999b) offered reviews of the major traditions associated with practitioner research, providing a sense of the varied historical

traditions and purposes that delineate the various branches of practitioner research traditions. While there are numerous terms used for this kind of research (e.g., action science, community-based action research, cooperative inquiry, emancipator praxis, autoethnography), the various genres can be generally subsumed into five major groups. These include: action research, participatory action research, the British teacher-as-researcher movement, the North American teacher researcher movement, and self study research. These genres are briefly reviewed here to offer some historical context and illustrate differences among types of inquiry. It must be noted, however, that these traditions frequently overlap and share common elements and language; thus they not always sharply distinguished.

Action research.

Today “action research” is frequently used interchangeably with the term “practitioner research” to embrace several strands of intellectual and social tradition. Historically, the tradition of action research is often connected to Dewey’s writing (as cited in Anderson, Herr, & Nihlen, 2007) from ideas in *Logic: The Theory of Inquiry*, in which he stated:

Educational practice provides the data, the subject matter which forms the problems of enquiry....It seems to me that the contributions that might come from classroom teachers are a comparatively neglected field; or, to change the metaphor, an almost unworked mine. (p. 19)

These ideas, blossoming in the overlap of the scientific and progressive movements, were the inspiration for Schon’s writing on the reflective practitioner (1983) that grounds much of the recent work in action research. Kurt Lewin (1946), however, is credited with first developing a theory of action research that brought some level of recognition and acceptance in social sciences. His work, addressing issues of production in manufacturing and discrimination against

minorities, offered an outline for the action cycle to be undertaken in this kind of research. This cycle included developing a plan to improve current circumstances, implementing the plan, observing effects, reflecting on effects, and planning successive cycles of action (Kemmis, 1982).

The early promotion and development of action research in education in the United States is credited to Stephen Corey (1953) at Columbia Teachers College in the early 1950s. Corey worked with teachers and administrators on numerous projects on what he referred to as cooperative action research. Like Lewin, he used a cyclical approach, though he incorporated elements of hypothesis formation and testing in his system. Both men focused on collaborative efforts and emphasized the recursive nature of the process (Zeichner & Noffke, 2001). Within a decade of Corey's first efforts, however, interest in the movement began to wane as the emphasis and preference for positivist research and the shift toward a more mechanistic view of teaching took hold (Noffke, 1997). Ironically, as these projects dwindled in the United States, the idea of practitioner research in education emerged and flourished in the United Kingdom.

British teacher-as-researcher movement.

Lawrence Stenhouse and the Center for Applied Research in Education (CARE), established in the 1960s, were associated with the rise of action research in the United Kingdom during this period. Elliot (1991, 1997) suggested that action research took hold as a reaction to imposed behavioral objectives and reaction to the tracked educational system. The development of action research in the United Kingdom depended on the development of school-based and state-funded collaborative action research projects (e.g., The Humanities Curriculum Project, the Ford Teaching Project, and the Teacher-Student Interaction and Quality of Learning Project). All of these efforts involved university-based researchers working with teachers and promoted a

pedagogically-driven vision of curriculum development that was dependent on teacher reflection in context (Zeichner & Noffke, 2001). Over time, debates about the nature and place of action research within schools and as a methodology provided the foundation for the work of Carr & Kemmis (1986), who saw earlier models of action research as conservative and increasingly positivistic. Their “emancipatory” action research, centered in projects in Australia, was based on critical theory as described by Kemmis and McTaggart (1988b):

a form of collective self-reflective enquiry undertaken by participants in social situations in order to improve the rationality and justice of their own social or educational practices, as well as their understanding of these practices and the situations in which these practices are carried out. (p. 5)

From this critical perspective, a vigorous action research movement was established among teachers around curriculum development and policymaking (Grundy & Kemmis, 1988).

Questioning continues, however, about whether the emphasis on critical-emancipatory purposes of this action research is consistently stressed in the efforts of teachers engaged in action research (Zeichner & Noffke, 2001).

Participatory action research.

The work of Paulo Freire was the inspiration and model for action research projects in Latin America beginning in the late 60s. Such project work spread throughout developing countries in Africa, Asia, and into the United States over the last few decades as participatory action research (PAR) (Anderson, Herr, & Nihlen, 2007; Zeichner & Gore, 2001). The early efforts of Freire and other Chilean literacy workers had dual purposes: to develop literacy skills in adult participants and simultaneously engage them in social critique and action. Anderson, Herr, and Nihlen noted that for PAR, “literacy involves learning to read the word and the world”

(p. 24). The emancipatory focus remained a central element in PAR as it moved around the world. General characteristics of PAR, as described by de Schutter and Yopo (in Anderson, Herr, & Nihlen, 2007), consider social events in the context of macro-level social forces; understand social processes and structures from a historical context; emphasize integration of theory and practice; view research and action as a single process; co-produce critical knowledge for social reform; and apply research results to a concrete situation. The emancipatory stance of these projects placed emphasis on a broad social analysis, rather than on the level of teacher or classroom, and highlighted concerns with equity and oppression.

The North American teacher research movement.

The North American teacher research movement evolved in response to several factors in the mid-1980s, rather than as an offshoot of the previously mentioned movements or projects. Anderson, Herr, and Nihlen (2007) noted a number of these factors, such as the increasing acceptance and use of qualitative research; the study and success of school-based learning communities for school change (e.g., Fullan, 1982; Lieberman & Miller, 1984); the rejection of a growing technical view of teaching, which initiated a re-professionalization movement through Schon's reflective practice (1983); the pioneering work and dissemination of numerous writing projects (e.g., Atwell, 1987; Bay Area Writing Project, the Brookline Teacher Research Seminar, 2003; Goswami & Stillman, 1987; the National Writing Project); the growing use of action research in teacher preparation (e.g., Cochran-Smith & Lytle, 1993; Zeichner & Gore, 1995, Zeichner & Noffke, 2001); and the 1980s school restructuring movement, whose proponents encouraged teacher inquiry and reflection (e.g., The Holmes Group, 1990; the League of Professional Schools; The Coalition of Essential Schools).

As might be expected of a movement with this range of influences, numerous projects were taken up by teacher researchers. Cochran-Smith & Lytle (1993) suggested three types of empirical teacher research: journals based on classroom experience; oral inquiry, which is the examination of practice in group settings; and classroom studies using observations, interviews, and artifacts. They also included conceptual research of interpretations and analyses of practice, schools, and education produced in teacher essays and books. Key features of these efforts were the primacy of voice and central role of teachers as researchers, the emphasis on the emic view, and the systematic inquiry generated by local classroom or school experience (Zeichner & Noffke, 2001).

Self study.

One of the fastest growing areas of practitioner research, self study involves the study of university-based researchers on their own practice. The emphasis on this kind of higher-education practitioner research in teacher education lies in deep reflection leading to individual professional growth (Anderson, Herr, Nihlen 2007). Also referred to as autoethnography, self study has been carried out primarily in the U.S., U.K., Canada, and Australia. Proponents of self study (e.g., Cole & Knowles, 1995; Loughran & Northfield, 1998; Russell & Kothagen, 1995) have argued that self study can transform teacher education through the examination of practice and the existing assumptions underlying teacher education and research (Cochran-Smith & Lytle, 2004).

Shared Elements of Practitioner Research

Although these strands of practitioner inquiry stem from different historical and epistemological traditions, Cochran-Smith & Lytle (2004) suggested that they share several features that distinguish practitioner inquiry from more traditional forms and paradigms of

education research. With practitioner inquiry, practitioners (e.g., teacher, teacher educator, school administrator, adult literacy program leader) simultaneously take on the role of researcher. This contrasts with conventional research on K-12 teaching and teacher education, wherein practitioners are usually the topic of study, the objects of someone else's inquiry, or the informants and subjects of research conducted by those outside the situation. In many versions of practitioner inquiry, collaboration in the form of joint discussions of methods, data analysis, and writing is a prominent feature. A key assumption here is that those who live and work in particular contexts have significant knowledge of the problems and questions and, through systematic data collection and analysis, how to solve those problems within the particular professional context. It is assumed that the knowledge needed to understand, analyze, and ultimately improve educational situations cannot be generated primarily or only by those outside of those contexts and then be transported from "outside to inside" (Cochran-Smith & Lytle, 1993) for direct implementation and use. Unlike the knowledge generated by traditional research, then, the knowledge generated through practitioner inquiry is intended primarily for use within the context in which it is generated (Carr & Kemmis, 1986; Noffke, 1997). However, the local knowledge generated by practitioner researchers is also often useful beyond the local context in that it suggests new insights and frameworks in many important domains of research on teaching and teacher education (Cochran-Smith & Lytle, 1993, 2004).

Another consistent element of practitioner research noted by Cochran-Smith and Lytle (2004) is that inquiry emerges from questions based in school or classroom experience. In traditional research on teaching, questions come from the literature, policy analysis, and sometimes from negotiations with research subjects. With practitioner inquiry, on the other hand, questions are often informed by the literature, but the focus of investigation comes from the

problems and issues of practice and from discrepancies between what is intended and what occurs. These questions influence how practitioners theorize their own work, the assumptions and decisions they make, and the interpretations they construct about students' learning.

Cochran-Smith and Lytle (2004) further suggested that when the practitioner is a researcher and when the professional context is a site for the study of problems of practice, boundaries and roles are blurred, generating innovative research, new kinds of knowledge, as well as new tensions and professional dilemmas. Practitioners construct questions, interrogate their own assumptions, gather data of many sorts, develop courses of action that are valid in local contexts and communities, and continuously re-evaluate situations for their effectiveness. The key assumption is that inquiry is an integral, not separate, part of practice as experienced by the teacher. Another assumption is that learning from practice is an essential task of practitioners across contexts and the professional lifespan, as well as an essential element of learning to teach in pre-service programs. In this view of knowledge production, attention to elements of reflective teaching and learning and the experience and skills to question, observe, collect, analyze, and act on data must be developed and refined in practice. Another assumption is that teachers will develop the expectation that they should use these skills intentionally in their schools and classrooms and disseminate the information as valuable and usable knowledge.

As a research genre, then, practitioner research is unique with respect to its "authority, approach, audience, and relationship to the data" (Campbell, 2004, p. 35). As a new way of conceptualizing the relationship between knowledge and practice, and as a research method that affords teachers a role in generating knowledge, it is perhaps not surprising that the use of inquiry has also drawn criticism over the years.

Criticisms and Limitations of Practitioner Inquiry

Cochran-Smith and Lytle (1999b) pointed to three areas of criticism about practitioner research movement. First, the *knowledge critique* questions whether practitioners in fact generate useful and needed knowledge about teaching from an emic view. Critics assert that only formal knowledge in the traditional philosophical sense has valid epistemological merit and reject the notion of practitioner research as a unique form of knowledge generated from practice (Fenstermacher, 1994).

Cochran-Smith and Lytle (1999b) also identified the *methods critique* which has produced the most scathing comments on practitioner research. They suggested that practitioners do not have the skill, experience, or objectivity to carry out research in the context of their own classrooms. Alternatively, the use of qualitative methods is questioned as a valid form of research (Carr & Kemmis, 1986). Huberman (1996), for example, challenged the notion of practitioner research as a form of research, giving it at best a diminished value, and questioning whether teachers can meet conditions of rigor and objectivity in their efforts. Along the same lines, Zeichner and Noffke (2001) noted that practitioner research struggles for legitimacy around the questions of rigor and generalizability, or trustworthiness, as a means of generating knowledge.

Finally, Cochran-Smith and Lytle (1999b) referred to the *ends critique*, which questions forms of teacher research that do not have explicit connections to social and political agendas, focusing on outcomes that are local and pragmatic. This criticism claims that the power and potential of practitioner research is diminished when separated from the ability to alter the nature of practice and role of teachers, i.e., when the political and moral elements of practitioner research stemming from traditions of critical social theory, feminist theory, or pedagogy as

praxis are removed from the purposes of practitioner research. This critique comes from practitioner researchers in reaction to the disparate use of inquiry for multiple purposes, without necessarily maintaining ties to the historical, emancipatory roots of some genres.

Along related lines, Cochran-Smith and Lytle (1999a, 2004) pointed to the “protean nature” of practitioner research, which can be used for multiple purposes, in effect being “shaped and reshaped to further virtually any educational agenda” (2004, p. 17). Practitioner research may take the form of a last-semester project or a single assignment that ultimately stresses inquiry as *project*, rather than promoting an *inquiry stance* that extends through the teacher career. Alternately, the project may result in emphasis on efficiency of practice rather than the questioning of assumptions or posing of problems. The authors noted, “It would be unfortunate if the generative nature of teacher research ended up contributing to either its marginalization and trivialization, on one hand, or to its subtle co-optation or colonization, on the other” (2004, p. 17). The malleable and adaptive nature of practitioner research could diminish its potential and eliminate concern for rigor, purpose, and consequence.

As an element of pre-service teacher education, additional limitations and criticisms have been levied against the use of practitioner research. First, there is the difficulty posed by the additive nature of some practitioner research experiences. In their review of how prospective teachers experience the process of learning to teach through teacher education programs, Wideen, Mayer-Smith, and Moon (1998) found three types of programs. The first was the *positivist tradition* of teacher education and research, also referred to as the “traditional institutional model” of teacher preparation, in which theory, skills, and knowledge about teaching are provided in coursework from the university, with some field work element provided by a school site in which the knowledge from the university is applied. A second model, the

progressive tradition, adds innovation to the traditional model, with new courses and year-long approaches developed by individual teacher educators within a program. These innovations generate rich scripts of learning to teach, but also create tensions and fragmentation from within the traditional program. A third group of programs concerns itself explicitly with issues of *social critique*, including multiculturalism, gender, and systematic reform. These programs are characterized by explicit concerns and research around the “problematic and at times dysfunctional” (p. 133) structures of schools and society that impact teaching.

In summarizing the findings of research on learning to teach from these three perspectives, Wideen, Mayer-Smith, and Moon (1998) noted that alternatives to traditional methods in teacher education, and specifically reflective practice and action research (Featherstone, Munby & Russell, 1997; Korthagen & Wubbels, 1991), provide promising opportunities for teacher candidates to examine what they know and believe about teaching and to engage in a process to acquire knowledge, rather than rely on being given requisite knowledge (Hollingsworth, 1992). However, this finding was tempered by evidence that adding alternative elements, such as practitioner research, to traditional programming was unlikely to provide the necessary reform to adequately prepare teacher candidates. Wideen, Mayer-Smith, and Moon suggested that only wholesale reform of teacher education could provide the necessary programming for effective teacher preparation. Britzman (2003) also warned that efforts of additive practitioner research are not sufficient to address all elements of learning to teach and that teacher candidates need various opportunities to consider the influence and dynamics of contexts that pupils experience outside the classroom.

In addition to these gaps, there are other challenges connected to pre-service programs as they are currently constructed. Burnaford (1999, 2001) noted that ownership for action research

conducted in pre-service education is largely “in the hands of the university” in the form of a required project, which diminishes the ownership and motivation of candidates in conducting research. She also argued that candidates’ limited authority and access to the student teaching classrooms hinders collaboration and precludes genuine impact on teaching, learning, or the classroom.

Conceptual Literature on Learning to Teach Using Practitioner Research

Despite these criticisms, the outlook for the use of practitioner research as a vehicle for learning to teach remains positive, with reports of increasing use in pre-service programs. Anderson, Herr, and Nihlen (2007) noted that a survey conducted in 1999 of American Association Colleges for Teacher Education affiliates showed that almost half of the reporting institutions required participation in some kind of practitioner research as an element of their pre-service preparation program. Nonetheless, the bulk of conceptual and empirical literature on the role of practitioner research and knowledge/practice relationships has been dedicated to in-service teachers. Pre-service inquiry is more often briefly mentioned as a subtopic rather than the focus of conceptual writing, leaving this an under-examined area in literature (Grossman, 2002; Noffke, 1997; Zeichner & Noffke, 2001). There are, however, two sets of researchers who have provided conceptual frames for practitioner research as knowledge production in the context of professional development through the teacher career. First, Cochran-Smith & Lytle (1999a, 2004) conceptualized inquiry-knowledge-practice relationships through three distinct frames of teacher learning: knowledge-for-practice, knowledge-in-practice, and knowledge-of-practice. Zeichner & Noffke (Noffke, 1997; Zeichner & Noffke, 2001) considered broad ‘frameworks of purpose’ or ‘motivations’ that drive practitioner research, described in three overlapping dimensions of practitioner knowledge: the personal, professional, and political.

Both frames are useful when considering the kinds of projects undertaken by researchers, acting as complementary conceptions of pre-service practitioner inquiry. These conceptions of teacher learning act as a middle range theoretical framework (Merton, 1968; 1996) for understanding the role of practitioner inquiry, knowledge, and practice in this proposal. They provide a frame of reference in considering the research projects reviewed in the empirical literature on pre-service practitioner inquiry and also act as the conceptual lens for the qualitative analyses of projects in this study. I begin by examining the work of Cochran-Smith and Lytle. I then consider Zeichner and Noffke's conceptual frame.

Inquiry, Knowledge, and Practice Relationships

Cochran-Smith and Lytle (1993, 2004) examined the underlying purposes of inquiry, the assumptions that follow from these purposes, and the resulting consequences for teaching, learning, and teacher preparation. They proposed three distinctly different conceptions of teacher learning that coexist as competing views of knowledge and practice: knowledge-for-practice, knowledge-in-practice, and knowledge-of-practice. These frames identify differing assumptions about knowledge and practice and ways of improving teaching and learning. These frames address what knowledge is valued, who produces the knowledge, and how it is utilized in learning to teach.

Knowledge-for-Practice

Cochran-Smith and Lytle (1999a, 2004) first described the knowledge-practice relationship, referred to as *knowledge-for-practice*. The assumption here was that to improve teaching, educators needed to implement knowledge (content, theory, pedagogy or strategies), accrued from experts outside of the school and classroom. This knowledge included what has been previously discussed as "formal knowledge" or research-based findings, as well as subject

knowledge, foundations, and theories of education, human development, pedagogy, assessment, school contexts, and teaching as a profession. In this conception, learning to teach is “the process of applying received knowledge to a practical situation” (Cochran-Smith, 1999a, p. 257). Such a theory assumes a relatively static view of what occurs from classroom to classroom and school to school, making the same knowledge applicable across contexts. Identifying and utilizing best practices based on empirical evidence of effectiveness is another example of such knowledge, suggesting that teachers who are most knowledgeable about such practices and apply them in their classrooms will be the most effective teachers.

Elements of the No Child Left Behind Act of 2001 (NCLB) embody this conception of knowledge-practice relationship in teaching. Under NCLB, for example, federal funding for school programs is dependent on whether proposed practices have a basis in “scientifically-based research.” In requiring the use of programs and practices that have been clinically tested, decisions about appropriate curriculum and pedagogy come from researchers, are chosen by administrators, and put into practice by teachers. The U.S. Department of Education established the What Works Clearinghouse as a depository for scientifically based programs, practices, and publications intended to act as a resource for teacher leaders and administrators. Advocates argue that utilizing “what works” and developing a “knowledge base” of scientifically-based research will improve teaching and pupil outcomes by exchanging the “folk wisdom of education” with scientifically-based knowledge (Whitehurst 2002). The assumption is that teachers do not generate valued knowledge in practice, and outside experts are better sources for making decisions.

Cochran-Smith and Lytle (1999a, 2004) pointed out two versions of practitioner research that exemplify the conception of knowledge-for-practice. First, some research conducted at a

school or district level is intended to ensure that teachers accurately and consistently apply specific instructional programs or strategies identified as a best practice. In this model of inquiry, teacher practice is systematically studied, analyzed, and documented as a means of uniformly improving practice chosen by outside experts. This might take the form of a group of second grade teachers examining their efficiency and effectiveness in the implementation of a packaged reading program chosen by the curriculum coordinator.

Over the last 10-15 years, “professional learning communities,” also known as “teacher learning communities,” have been promoted in the US and elsewhere as a potential lever for educational reform, and in recent years, as a response to meeting NCLB Annual Yearly Progress (AYP) goals. From this perspective, teacher learning in school-based communities that systematically examine assessment and other data take collective responsibility for students’ learning as a means of school reform (e.g., McLaughlin & Talbert, 2006; Boudett, City, & Murnane, 2005). These communities of learning are often spearheaded by university faculty, school district curriculum specialists, or educational publishers—the outside experts who provide formal knowledge for improving teaching and learning. In all of these examples, inquiry is a way to implement practice or disseminate codified knowledge from outside experts.

Knowledge-in-Practice

The second conception of teacher learning in Cochran-Smith & Lytle’s (1999a, 2004) framework is referred to as knowledge-in-practice and is closely tied to ideas previously discussed as practical, personal, or craft knowledge of teaching. From this perspective, it is assumed that what effective teachers know is embedded in the “artistry of practice, *in* teachers’ reflections on practice, *in* teachers’ practical inquiries, and/or *in* teachers’ narrative accounts of practice” (p. 262). This view acknowledges the constant change, spontaneous action, and

interactions that take place in classrooms. Experience, deliberate reflection on practice, and inquiry into the personal knowledge that comes from these experiences are necessary for learning to teach effectively. This view contrasts with the formal knowledge view in that the knowledge base here is not a codified collection of content and practices that can be applied to practice as a means of problem-solving, but that practitioners must “invent knowledge in action” (p. 21) and, through deliberation and reflection, connect their learning with pupil learning (Clandinin & Connelly, 1995; Grimmett & MacKinnon, 1992; Munby, 1987; Russell, 1987). These forms of practitioner research are consistent with Schon’s (1987) idea of a professional practicum where teacher candidates can explore issues of situated practice without being overwhelmed by the requirements of management and organization. This was achieved through dyad work of veteran and novice teachers, or, at times, group or school community undertakings. In pre-service education, this “assisted performance” of novice teacher learning is supported by supervising or cooperating teachers through reflection on practice and self-reflective activities (Feiman-Nemser & Remillard, 1996).

Practitioner research, from the conception of knowledge-in-practice, has followed along a few lines. For example, practical inquiry, as described by Richardson (1994a & 1994b), calls for university-based consultants to work collaboratively with teachers to help them see differences in their beliefs and practices and subsequently experiment with alternative practices, frequently as forms of professional development (e.g., Duckworth, 1996, 1997; Hamilton & Pinnegar, 1998; Schultz & Hall, 2004). A second form of practitioner research falling within this frame attempts to identify and transmit the practices used by effective or accomplished teachers to less experienced teachers. This may take place in mentor/mentee programs, now required in most states in the US, through examination of practice via collaborative reflection on practice. The

vast network of state and local mentor programs aimed at successful completion of the National Board for Professional Teaching Standards (2008) certification provides another example of master teachers assisting less knowledgeable or experienced teachers through the examination of practice.

Knowledge-of-practice

A third way of conceptualizing the knowledge-practice relationship is through knowledge-of-practice (Cochran-Smith & Lytle, 1999a; 2004). This view assumes that knowledge for teaching effectively is generated from working in learning communities based on teachers' own schools and classrooms. In addition, knowledge and theory produced by outside researchers provides the basis for teachers' investigations into their own practice, which also connects to larger communities of inquiry, as well as social, cultural, and political issues. In their research, Cochran-Smith & Lytle argued for clear distinctions from the two previous conceptions. This work was not founded on a formal knowledge-practical knowledge distinction, nor did it work from distinctions between expert and novice teachers. The idea was not to help teachers develop knowledge already held by outside experts or expert teachers, nor was this a synthesis of the two previous conceptions. Rather, it was based on fundamentally different ideas. They emphasized:

implicit in the idea of *knowledge-of-practice* is the assumption that through inquiry, practitioners across the professional life span can make problematic their own knowledge and practice as well as the knowledge and practice of others, and thus stand in a different relationship to knowledge and action. (1999a, p. 273)

This suggested that the knowledge teachers need to teach effectively comes from systematic and intentional inquiry and reflection about the elements of teaching, learning, curriculum, schools,

the role of teachers, and education, for example. In the conception of knowledge-of-practice, collaborative efforts among teachers, administrators, and academics, for example, brought together different kinds of knowledge, with all participants acting as co-contributors, researchers, and co-constructors of knowledge in the undertaking, replacing an expert-novice relationship. The outcome was “understanding, articulating, and ultimately altering practice and social relationships in order to bring about fundamental change in classrooms, schools, districts, programs, and professional organizations” (p. 279). Additionally, the broad agenda was political – to transform the relationships among stakeholders throughout the educational system and rework traditional roles of power, voice, and participation. The role of teacher was vastly enlarged to include “decision maker, consultant, curriculum developer, analyst, activist, school leader” (p. 282).

Examples of practitioner research that fall under this conception of knowledge are numerous and include projects focused on issues of social justice and a more democratic society (e.g., Gore & Zeichner, 1991; Hyland & Noffke, 2005; Lynn & Smith-Maddox, 2007; McIntyre, 1997; Oyler, 2006). The work of Carini and her associates at the Prospect School and Center (Carini, 1975; 1986; Himley, 1991; Himley & Carnini, 1991, 2000) provided examples of learning to teach through knowledge-of-practice using oral inquiry based on classroom observations, curriculum materials, and artifacts. Pre-service initiatives intended to connect teacher candidates’ personal experiences to critical social, cultural, political, theory through critical reflection, ethnography, or action research (e.g., Cochran-Smith, 1991, 1995; Cochran-Smith & Lytle, 1993; Gore & Zeichner, 1991; 1995; Price, 2001; Price & Valli, 2005; Valli, 2000; Valli & Price, 2000) provided another conduit for practitioner research from the knowledge-of practice perspective. A number of long-lived literacy and writing projects, such as

the National Writing Project or Bread Loaf School of English, acted as intellectual communities for exploring critical dimensions of teaching and learning. There have also been numerous studies of content area pedagogy and curriculum examining candidates' understanding of teaching and learning in particular subject areas (e.g., Bianchini & Colburn, 2000; Boyd, Boll, Brawner, & Villaume, 1998; Dawson, K. 2006). A final example draws upon the increasing number of school and district based collaborative partnerships and the work they undertake in exploring a wide range of school issues (e.g., Noffke et al., 1996; Weinbaum, Allen, Blythe, Simon, Seidel, & Rubin, 2004). Cochran-Smith & Lytle (1999a) argued that this conception of practitioner research "permits closer understanding of knowledge-practice relationships as well as how inquiry produces knowledge, how inquiry relates to practice, and what teachers learn from inquiry within communities" (p. 250).

Inquiry-as-Stance

Cochran-Smith & Lytle (1999a, 2009) also stressed the development of an *inquiry stance* as part of professional development in practitioner research. The acceptance of inquiry as stance as the purpose of practitioner research presupposes that inquiry will be a central tenet throughout the structure of the program, including courses, assignments, seminars, and field experiences. That is, inquiry is seen as a way of consistently viewing teaching and learning through questioning, analysis, and reflection that is introduced in pre-service and carried through the professional career. This concept differentiates inquiry in teaching, learning, and education from an activity or project. The tension between *inquiry-as-project* and the development of *inquiry-as-stance* is a particular challenge in pre-service programs, which require some major assignment or project in the form of practitioner research in their programs, a common feature of many programs utilizing some form of practitioner research. In order to be effective, inquiry

stance must be more than an additive feature or single program endeavor (Cochran-Smith & Lytle, 1999a; Gore & Zeichner, 2001; Zeichner & Noffke, 2001).

Cochran-Smith and Lytle (2009) described the construct of inquiry as stance as having four central dimensions:

(1) a perspective on knowledge that rejects the formal knowledge-practical knowledge dualism and instead puts forward a conception of local knowledge in global contexts; (2) an expanded view of practice as the interplay of teaching, learning, and leading, as well as an expanded view of who counts as a practitioner; (3) an understanding of practitioner communities as the primary medium or mechanism for enacting inquiry as stance as a theory of action; and (4) the position that the overarching purpose of practitioner inquiry is to provide education for a more just and democratic society. (p. 126)

Inquiry as stance, then, affirms inquiry as a legitimate form of knowledge generation and research, a belief that stands in contrast to the limited notion of knowledge as formal or practical, and inquiry as something other than research as suggested by Fenstermacher (1994), Hiebert, Gallimore, and Stigler (2002), or Hammer and Schifter (2001), for example. Knowledge from inquiry is used “locally,” derived from the emic perspective of the classroom and school, but useful for wider dissemination in a globalized society.

The expanded view of practice in this concept of inquiry as stance includes pupils’ learning, teachers’ learning, and leaders’ learning in “investigations into the social, cultural, intellectual, relational, and political aspects of knowledge construction.” As such, practice is far more than what a practitioner says or does in the classroom. Furthermore, this is related to the relationship of knowledge and practice, described earlier. From this perspective, practitioners

are not simply consumers and users of outside expert knowledge; rather, they play a critical role in generating knowledge of practice through inquiry.

Inquiry as stance recognizes that community, and school learning communities in particular, are the source or vehicle to drive inquiry into practice. Increasingly, communities of practice exist as collaborative investigations. Participants include a wide variety of practitioners, including small groups of teachers, teachers and administrators, graduate classes, teacher education cohorts, and partnerships from the school and community, to name a few. Communities of practice exist as a form of lifelong learning and adaptive professional development for educators.

Finally, the fourth dimension of inquiry as stance identifies the central and all encompassing role of democratic purposes and social justice ends in all other dimensions of the concept. This suggests that the purposes of social justice are woven into the fabric of inquiry. questioning access to knowledge, critical thinking about the purposes of education, and challenging inequities in schools and society.

Cochran-Smith and Lytle (2009) suggested that the “way forward” with inquiry as stance will deepen knowledge and link local communities; reinvent professionalism for practitioners in leadership; renegotiate understandings of research/practice/policy relationships, and connect the inquiry movement to larger transformative agendas. This conception of inquiry as stance positions practitioner research as a powerful individual and collective force with the potential for to change the role of practitioners and extend the influence of knowledge from inquiry.

Taken together, these three frames and the perception of inquiry as stance differentiate the various ways in which inquiry is used in pre-service and in-service professional development. It is sometimes difficult to determine the underlying assumptions and purposes that particular

researchers bring to practitioner inquiry, however. For that reason, the more general dimensions of professional knowledge and practice described by Zeichner & Noffke (Noffke, 1997; Zeichner & Noffke, 2001) are a useful, complementary means of conceptualizing the knowledge/practice relationships in practitioner inquiry.

Dimensions of Professional Knowledge and Practice

Another way of conceptualizing the role of practitioner research in pre-service comes from Zeichner & Noffke (2001), who argued "...practitioner research is both about changing practice as a result of study and about changing practice to understand it" (p. 306). Beneath this general objective is a myriad of motivations for undertaking practitioner research in learning to teach. Zeichner & Noffke employed a framework for understanding practitioner research in terms of its personal, professional, and political dimensions. In this view, practitioners become knowledge producers to increase individual development, improve classroom practice and the school community, provide usable knowledge for the field at large, and to address larger societal issues and inequities. In developing this frame, the researchers noted that despite differentiation between categories for the purposes of discussion, the boundaries between dimensions are not firm. In particular, they argued that all elements of practitioner research should be recognized as inherently political since they address issues of power and control. Additionally, it is common practice to attend to multiple purposes in utilizing practitioner research in pre-service, and these various intentions are not always clearly outlined (Noffke, 1997). For example, practitioner inquiry might be a collaborative undertaking among teacher educators, teacher candidates, cooperating teachers, and administrators intended to improve personal classroom practice of the candidate and teacher, but also serve to inform school-wide practices and teacher preparation programs, leading to more equitable policy and practice. The multiple purposes in this

undertaking would simultaneously address the personal, professional, and political dimensions of inquiry. The three dimensions, then, should be viewed as categories that may be used concurrently to characterize practitioner research knowledge, in contrast to the distinct and separate categories proposed by Cochran-Smith & Lytle (1999, 2004).

Personal Dimension of Pre-service Practitioner Research

Zeichner and Noffke (2001) noted that the personal dimension of pre-service practitioner research is first and foremost about understanding classroom practice and what and how students learn. The resulting research is a personal effort to better understand and improve local practice, even as it may result in outcomes for general principles or theories of curriculum. Thus, practitioner research undertaken by teachers or candidates to address problems of curriculum and classroom instruction, understand outcomes of practice, or improve pupil outcomes through the recursive process of inquiry falls within this category. The personal dimension also includes several other strands that are the starting point for practitioner research.

A second aspect of the personal dimension noted by Zeichner & Noffke (2001) concerns itself with the increase of self-awareness of practice. Through practitioner research, teachers and candidates confront and examine assumptions about practice and education. Practitioners come to recognize contradictions between ideas of practice and what actually occurs in the classroom. Strong emphasis is on examining actual accomplishments, rather than intentions or theories.

A third element of the personal dimension of practitioner research noted by Zeichner & Noffke (2001) is the impact of the research process on practitioners. Several variations are evident here. Practitioner research may create greater receptivity to formal research, encouraging practitioners to value and utilize formal knowledge, for example (Gitlin et al., 1999). Additionally, in conducting practitioner research, practitioners are given opportunities to

work collaboratively to “break down barriers between academics and teachers such that they are working together to [re]search questions of schooling that allow the implicit theories of all participants to be exposed and examined” (Gitlin et al., 1999, p. 767). In the process of learning to teach, this establishes an expectation and norm for collaborative examination of practice that expands the role of teacher and provides professional development practices for the teaching career. In a related line, practitioner research has been related to the development of identity, collaboration, and communities of learning. Finally, practitioner research as a study of impact on the participants may also include identifying and challenging belief structures. For example, practitioner research is used when examining cultural identities and how they affect teaching and learning.

From the personal dimension, a key to the development of a practitioner researcher is the idea of the reflective practitioner (Schon, 1983) who is able to “learn to learn” through practice. Zeichner & Liston (1987) explicitly connected the development of reflection in pre-service learning and its role in practitioner research, noting that reflection is a fundamental element of inquiry that must be cultivated in terms of dispositions and skills. Historically, the literature on reflection reckons to the writing of Dewey (1933), who differentiated between reflective action, which is intentional and active consideration of practice, and routine action, which is characterized by acceptance of tradition or voices of authority from outside the school or classroom. Reflective action, as described by Dewey, requires the development of open-mindedness, or introspection; a willingness to accept responsibility for actions and decisions; and wholeheartedness, or the confidence and ability to depend on self-evaluation, rather than relying on evaluations and directives from others. Reflective action also assumes the development of observational and analytical skills to support the active, intentional examination of beliefs and

practice. From this view, pre-service preparation must attend to dispositions and skills to explicitly support reflection as a means of learning to teach.

More recently, Schon (1983) examined the process of reflection, acknowledging the complexities and importance of the role of context. He also highlighted the importance of personal associations and beliefs that are brought to bear by a particular situation, the importance of framing a problem, testing the issue through interventions, examining outcomes, and reframing and evaluation. Ross (1987) pointed out the similarities in the elements described by Schon to the processes of practitioner research methods. He further identified elements of competent reflection to be addressed in pre-service practitioner research, including: “(1) development of the processes involved in reflection, (2) development of attitudes essential to reflections, and (3) a definition of the appropriate content of reflection (i.e., what students think about)” (p. 133). Here, as in much of literature on practitioner research, the development of reflection as a process and outcome are seen as essential components in learning to teach.

Professional Dimension of Practitioner Research

The second dimension of practitioner inquiry as proposed by Zeichner and Noffke (2001) addresses issues of professional knowledge: “(a) as a contribution to the profession’s knowledge base, (b) as a means of professional development, and (c) as an enhancement of the profession’s status” (p. 308). Practitioner research as a means of contributing to the profession’s knowledge base has been discussed at some length, but it is worth emphasizing the emerging role of practitioner researchers as knowledge producers, which stands in contrast to the view of practitioners as the consumers of knowledge provided by academics. This knowledge is particularly valuable as garnered in situ, generated through practitioner research, with the potential to alter, as well as add to, personal knowledge and knowledge of the profession

(Cochran-Smith, & Lytle, 1993). Furthermore, the purpose of professional knowledge is to question and examine, rather than reinforce traditional forms of knowledge.

Professional development, beginning in pre-service and extending through the career, is another purpose for undertaking practitioner research in this dimension (Cochran-Smith & Lytle, 1993; Noffke, 1997; Zeichner & Noffke, 2001). Many factors are required for effective teaching, but equally important is the fluid and appropriate use or enactment of knowledge. Teaching is not routine, static, or predictable in the day-to-day experience for the simple application of formal knowledge. Problem-solving, reflection, decision-making, and recursive action are increasingly seen as necessary components of effective classroom experience (e.g., Freese, 2006; Gore & Zeichner, 1991; Grossman et al., 2000). The notion of teacher as part of a professional community is supported by a growing number of researchers in education who highlight the importance of collegial and collaborative school community undertakings for a variety of purposes, including professional development, improved pupil outcomes, school reform issues, and dissemination of knowledge (e.g., Blythe, Allen, & Powell, 2008; Crocco, Bayard, & Schwartz, 2003; Darling-Hammond, 2005; Griffin, 1999; Lieberman & Miller, 2008; Weinbaum et al., 2004). Practitioner research provides unique opportunities for pre-service teachers to be introduced to communities of learning and to consider their role in the professional community.

Political Dimension of Practitioner Research

Many theorists promoting the use of practitioner research as a form of teacher preparation have emphasized the inherent political dimension of teaching and education (Britzman, 2005, Cochran-Smith, 2005; Griffin, 1999; Noffke, 1997; Zeichner & Noffke, 2001). Zeichner and Noffke (2001) stated, “we assume that all forms of educational research embody particular

stances, either to maintain existing lines of power and privilege, or to transform them along more just and caring lines” (p. 309). Some genres of practitioner research focus on emancipatory ends, as in participatory action research, while other forms hold a more subtle approach in examining educational practices that make all pupils’ and teachers’ experiences more just and equitable. The topics, which stem from critical social theory, range from gender and schooling (e.g. James, 1999), to issues of race and racism in teacher preparation and education (e.g., Hyland & Noffke, 2005; McIntyre, 1997; Schoorman, 2002), to the development of teacher candidates as agents of change (e.g., Gore & Zeichner, 1991; Price, 2001; Price & Valli, 2005). Internationally, several trends in emancipatory research have been brought to pre-service preparation. One example is in the participatory action research movement in Australia (Carr & Kemmis, 1986; McTaggart, 1997), targeting broad social change, beginning in classrooms. Alternatively, British teacher researchers have addressed power and authority issues in the control of education as profession (Elliot, 1991), with practitioner research providing voice and authority for teachers.

Zeichner & Noffke (2001) conceptualized and unpacked the relationships of teacher knowledge and practice through the frames of personal, professional, and political dimensions. They placed the use of practitioner research within these frames, recognizing the various purposes of inquiry in pre-service and professional development. As with the work of Cochran-Smith and Lytle (1999a, 2004) this conception of inquiry, knowledge, and practice relationships highlights the complexity and potential of practitioner research as a means of enhancing learning to teach. However, how inquiry is used in helping people to learn to teach is dependent on these various understandings of knowledge and practice relationships. I now turn to a brief discussion on the conceptual literature of learning to teach to more specifically place pre-service inquiry in the context of this work.

Conceptualizing the Role of Pre-service Inquiry in Learning to Teach

In addition to the conceptual literature on the relationship of pre-service inquiry, knowledge, and practice, this proposal also draws from the conceptual literature on the role of inquiry in learning to teach. The literature on learning to teach, like the literature on knowledge/practice relationships, is concerned with the kinds of knowledge, skills, and dispositions necessary for effective teaching and how candidates and teachers acquire and use this knowledge. Learning to teach, however, generally refers to a broader base of literature on how teachers develop professionally over time, including learning that occurs outside of teacher preparation programs and throughout the teaching career. Feiman-Nemser (2008) described this literature as “a complex area of inquiry that sits at the intersection of several fields of research and areas of study, including research and theories of learning, studies of teaching and teacher knowledge, research on teacher preparation, new teacher induction and professional development, studies of school change, and teaching culture” (p. 698). Thus, there is a great deal of overlap between the two bodies of work. As a means of introducing the connections between pre-service inquiry and learning to teach, I begin with Feiman-Nemser’s (2008) conceptualization of learning to teach discussed in broad strokes, as a context for describing the place of pre-service inquiry in this literature. This is followed by the empirical review of the literature on pre-service practitioner research.

Feiman-Nemser (2008) conceptualized learning to teach through four broad themes describing the range of knowledge, skills, and dispositions recognized as critical for effective teaching: learning to *think* like a teacher; learning to *know* like a teacher; learning to *feel* like a teacher; and learning to *act* like a teacher.

Learning to Think Like a Teacher

The first theme, learning to *think* like a teacher, demands critical examination of existing beliefs and dispositions and challenges preconceived notions about education and transmission models of teaching. Rather, the idea promotes understanding of teaching, learning, and pedagogy as developed through metacognitive awareness in practice. Thinking like a teacher addresses the oft reported difficulty of confronting entering characteristics of new teachers in order to think about, understand, and teach in ways that differ from personal experience. Lortie (1975) referred to the years spent as students as the “apprenticeship of observation,” that forms a resilient foundation of beliefs and dispositions having a significant impact on teaching and learning to teach.

Prospective teachers carry a wide range of preconceptions about teaching (Wideen, Mayer-Smith, & Moon, 1998). Richardson & Placier (2001) noted that many of these ideas are notions focused on personality or affective qualities of teachers, overshadowing the role of content and context in learning. Other beliefs predispose candidates to transmission methods of teaching, in contrast to constructivist views of promoting learning (Feiman-Nemser & Buchmann, 1989; Richardson, 1996). Practitioner research offers opportunities and experiences that interrupt, confront, and alter preconceived notions of teaching and learning, presenting one of the most promising avenues for change (Darling-Hammond, 2005).

Learning to Know Like a Teacher

Feiman-Nemser’s (2008) second theme in this framework, learning to *know* like a teacher, reflects the multiple strands of knowledge needed and developed in practice for effective teaching. Learning to teach requires deep content knowledge, pedagogical knowledge, and understanding of child development, the influence of language and culture in the classroom, and

the purposes of schooling. In addition to having this knowledge *for* teaching, Feiman-Nemser also emphasized the knowledge *of* teaching, or knowledge gained in practice. This notion of candidates and teachers generating knowledge in practice is central to the inquiry experience and the inquiry/knowledge/practice relationship discussed earlier. Pre-service inquiry could address two issues of learning to teach, as identified by Hammerness et al. (2005). The first difficulty is what Kennedy (1999) has referred to as “the problem of enactment” or the issue of putting into practice what has been understood from theory taught in coursework. In order to develop deep and usable constructions of knowledge that bridge the theory/practice divide, teacher candidates need extended opportunities to practice and construct a range of skills for planning, instruction, assessment, and problem solving. Practitioner research offers such possibilities, particularly when conducted in conjunction with extended practicum experiences and in collaboration with other educators.

Secondly, Hammerness and colleagues (2005) noted the “problem of complexity” (p. 359) working with groups of students with diverse needs, balancing numerous academic and social goals while making instantaneous decisions from moment to moment every day. Practitioner research is intended to help prospective teachers think systematically about how to guide decisions and support continuous improvement of teaching and learning. The act of reflecting, analyzing, and responding to issues of practice supports reasoned decision-making and changes in practice that might not occur without systematic study of practice.

Britzman (2003), for example, noted that practitioner research offers the strategies and reflexive analytical skills to address complexities of teaching faced by pre-service and in-service teachers through “observation, taking on the perspective of others, identifying ones’ own deep investments in relation to others, analyzing instances of power and pedagogy, raising questions,

and working with a range of interpretive strategies” (p. 239). Britzman also pointed out that when teachers see themselves as researchers, and their work as research, they question their practice and the dynamics of classroom life through their professional career, rather than taking for granted existing conditions and practices and settling into unexamined routines of practice.

Learning to Feel Like a Teacher

Learning to *feel* like a teacher highlights personal engagement and the struggle for a professional identity demanded by teaching. Feiman-Nemser (2008) noted multiple challenges in learning to feel like a teacher, including conflicting views of self when integrating past, present, and future ideals and experiences. She noted that learning to teach also poses challenges, as candidates are pressed to develop intellectually, morally, and emotionally as persons and professionals. Pre-service practitioner inquiry, especially when conducted in collaborative arrangements, provides the opportunity for developing a sense of professional identity from the position of co-inquirer with cooperating and supervising teachers, interrupting traditional hierarchical structures in the practicum.

Learning to Act Like a Teacher

Finally, Feiman-Nemser (2008) considered learning to *act* like a teacher, or the role of the individual within the larger community. This refers to teacher identity in and beyond the classroom, including working with and among colleagues in a community of learners. Effective teaching is increasingly dependent on working collaboratively with other teachers and administrators, as well as students and their families. As the role of teacher expands, learning to teach becomes more complex and demanding and requires new ways of approaching teaching and learning. Collaborative pre-service inquiry provides opportunities for learning the skills necessary for teacher learning communities. Additionally, it establishes the expectation for

continued practitioner research, normalizing the view of teacher as knowledge generator with the potential to contribute to other teachers and the field at large.

Based on the conception provided above, it is clear that the task of learning to teach is formidable, with implications for teacher preparation and the use of inquiry in the pre-service period. First, knowledge and practice cannot be provided in a one-size-fits-all package of pre-service preparation to adequately respond to the complexity of teaching, learning, and the expanding role of teacher. Teachers must be prepared as “adaptive experts” (Hammerness et al., 2005), responsive to diverse contexts and situations that they are likely to face in field experiences and teaching assignments.

Secondly, learning to teach and professional development must be ongoing processes that *begin* during pre-service, but necessarily become career-long endeavors (Cochran-Smith & Lytle, 1993, 2004; Darling-Hammond, 2005; Hammerness, 2005; Oyler, 2006). Oyler (2006) pointed out that when learning to teach is a lifelong undertaking; teachers take the position of “questioning, rather than answering” (p. 4). That is, instead of depending on fixed responses to problems in teaching and learning, teachers and teacher candidates must have knowledge, skills, and dispositions to continuously examine classroom practice to redefine effective teaching and learning. This recalls Cochran-Smith and Lytle’s notion of inquiry-as-stance (1999, 2004), a view of practice that depends on systematic questioning, data collection, reflection, and analysis to continuously inform and reform classroom practice through inquiry.

Third, traditional forms of teacher education are not adequate to prepare teachers for the expectations and challenges of today’s classrooms and schools. Demands of learning to teach require innovations that bridge theory and practice provide opportunities and skills to examine practice, and support professional development throughout the career. Practitioner research is

increasingly promoted as a pre-service programming innovation intended to promote lifelong professional development and to address thinking, knowing, feeling, and acting as an effective teacher. Darling-Hammond et al. (2005) stated, “The role of inquiry is viewed as critical where the goal of teacher education is a lifelong ability to learn *from* teaching, rather than a more contained image of learning *for* teaching that is expected to be complete within a short span of time” (p. 405). Over the last ten years, numerous practitioner research projects have been documented in the literature, as more teacher preparation programs recognize the potential for practitioner inquiry in preparing candidates to be better prepared for the demands of today’s classrooms. This work is described in a review of the empirical research offered below.

Review of Empirical Literature on Inquiry in Pre-service Teacher Education

A review of the empirical literature was conducted on learning to teach using practitioner research at the pre-service level over the last decade, from 1997 through 2007. During this time, the conceptual frames on inquiry/knowledge/practice discussed previously were developed (Cochran-Smith & Lytle 1999, 2004; Noffke, 1997; Zeichner & Noffke, 2001). This was thus a review of the past decade, in which pre-service practitioner research was increasingly employed in teacher preparation programs. The review included studies published in peer-reviewed journals, texts, and handbooks. A variety of strategies were used in the search, including ERIC searches, a search of the most relevant handbooks, peer reviewed journals, and published reviews of related literature for cross reference, using genres of participatory action research, action research, teacher research, the North American teacher research movement, narrative study, self study, and inquiry. From these searches, studies were narrowed to those meeting the following criteria. First, studies were focused on pre-service teacher education programs or professional development programs with PK-12 teacher candidates who did not have prior teaching history.

Also included were longitudinal studies that followed teacher candidates who conducted practitioner research during the pre-service period and into their teaching positions.

Collaborative undertakings between pre-service and veteran teachers were also included.

This review did not include action research/self studies by university-based academics conducted on their own practice unless teacher candidates were also conducting their own inquiry or candidates were specifically included in a collaborative effort of studying practice. Studies limited to reflection or critical reflection were not included, since practitioner inquiry as defined here assumes a planned collection of data for analysis, with the purpose of recursive action based on findings. Additionally, a few studies were eliminated using the criteria specified by Wilson, Floden, and Ferrini-Mundy (2001) for rigor in description of participants, processes of data collection, and analysis. For example, some studies were not specific in outlining how participants were chosen or the number of participants. Some were vague or provided few details about data analysis procedures. Finally, a significant number of the articles were descriptive program models. These articles generally provided information about the ongoing development or recent implementation of practitioner research in a university course or field experience. Although “findings” or “outcomes” were sometimes noted, these were not included unless data collection procedures or methods of analysis were clearly outlined. These articles were interesting and valuable in their own right, but did not qualify for this empirical review. The number of these articles does, however, reflect growing interest in practitioner research in pre-service teacher education.

The studies included in this review are organized into categories according to the researchers’ stated purposes for having pre-service candidates undertake practitioner inquiry. These include: a) development of reflection and professional identity; b) subject specific

inquiry; c) collaborative studies; d) inquiry and social justice; and e) inquiry as innovation in pre-service preparation. The first group of studies includes research about teacher candidates' engagement with inquiry in order to enhance reflection on practice or the development of professional identity. The second group of studies, subject specific inquiry, focuses on learning to teach subject matter. These studies are generally based on inquiry conducted in conjunction with methods courses in various content areas. The purpose of inquiry in the third group, collaborative studies, is to examine outcomes of collaborative inquiry in the pre-service practicum as teacher candidates undertake inquiry as members of professional learning groups. The fourth group of studies, inquiry and social justice, includes studies with an emancipatory purpose, including challenging beliefs about diverse populations and preparing teachers to be agents of change. Finally, studies from the final group, inquiry as innovation in pre-service preparation, investigate the use of inquiry as an innovative component of teacher education to better prepare teacher candidates for classroom experiences. Many studies could be appropriately placed in more than one of these categories, since holding multiple purposes in conducting practitioner research is the norm. I have attempted to place each study in the category that is most consistent with the stated purpose and reported findings.

The overwhelming majority of studies reviewed here were conducted as qualitative research. Most studies utilized traditional data sources of interpretive qualitative research, including observations, interviews, field notes, journals, and documents collected from teacher candidates in their coursework. These studies provided detailed descriptions of inquiry programs, inquiry projects, and the experiences of teacher candidates. These interpretive research methods helped to reveal how and why candidates experience practitioner research, as well as the outcomes of conducting inquiry as part of pre-service preparation. These studies also addressed

contextualized accounts of teacher candidate experiences in conducting inquiry in various school settings.

A number of studies also utilized surveys and questionnaires, often as measures of self-reported efficacy, in practice or in conducting inquiry. Some researchers analyzed this data through interpretive methods, while other researchers included quantitative analysis of responses and identified their work as mixed methods studies. Using these data facilitated the gathering of larger numbers of self-reports and comparison of the results from one cohort to another. Additionally, the various data sources were utilized to triangulate findings, lending credibility to outcomes.

Two studies analyzed data solely through quantitative methods. One study, by El-Dib (2007), involved the development and application of a tool for assessing reflection in inquiry, while the other used quantitative analysis in assessing change in teaching practice through the use of technology. As with those studies that utilized surveys, the quantitative measures provided objective information on what occurred at a particular point in time from larger participant populations. These few studies leave room for a wider use of quantitative methods in the study of pre-service inquiry in learning to teach, however.

I begin the review of the empirical literature by discussing a recent synthesis containing a review of the use of pre-service practitioner research. I then move to the aforementioned categories of studies, based on purposes of undertaking pre-service inquiry.

In her review of the research on pedagogical approaches in teacher education, Grossman (2005) included a short synthesis of research on practitioner research as a pedagogical approach, a subset of pre-service research considered for the proposed project. Of the eight studies conducted between 1985 and 2001 and noted in Grossman's synthesis, three fell within the

timeframe utilized in this review and are discussed in detail below. Grossman pointed out that relatively few of the empirical studies she reviewed met the stated criterion for rigor, limiting the number of studies considered. Three pairs of studies had a common author, further narrowing the pool of data sources for this research. Grossman found that researchers offered universal support for the potential use of pre-service practitioner research, but little evidence that engaging in research had a positive impact on classroom practice. The research did provide suggestions for effective pre-service programs, including placing student teachers with more experienced teachers (Clift, 1990; Cochran-Smith, 1991; Nath & Tellez, 1995) and providing adequate time to engage in sustained inquiry (Gore & Zeichner, 1991, Price, 2001). Grossman also noted that collaborative research with cooperating teachers requires negotiations that can be challenging. In general, Grossman surmised that this thin body of research offers minimal empirical support for the use of pre-service practitioner research. Since that time, a significant number of studies have been conducted on the use of pre-service inquiry.

Reflection and Identity

As noted earlier, a number of studies have investigated the use of pre-service inquiry as a means of professional development to enhance the use of reflection or the development of professional identity. I began with studies in which the purpose of conducting inquiry was to encourage or enhance reflection on practice.

Reflection

Reflection, defined here as purposeful and ongoing study of pupils' learning and practice (Freese, 2006), was referenced consistently across the studies included in this review of the literature. The four studies included in this group made reflection the central concern of their research, examining whether and how pre-service practitioner inquiry improved the ability or

increased the likelihood of teacher candidates reflecting on practice to improve teaching and learning. It is often assumed that experience with pre-service practitioner research enhances reflection and thus improves practice. Two studies in this review used qualitative methods to study the use of pre-service practitioner research as a means of developing or enhancing reflection; one utilized mixed methods for similar purposes; a fourth study assessed candidate reflective practice using an inventory designed to measure levels of reflection.

First, Freese (2006) conducted a collaborative self study with one teacher candidate over a two year graduate program using observations, journal reflections, dialogue journals, and the candidate's action research/self study paper as data. The candidate was initially resistant to reflection on practice, and the study documents his arduous journey in managing conflicts, fears, and eventually the benefits of practitioner research on teaching and pupil learning. Freese noted specific attitudes and dispositions that can impact growth and development, including fear, responsibility, dealing with contradictions between beliefs and practice, and close-mindedness. She reported a shift in beliefs, attitudes, and dispositions through reflection in inquiry, which allowed the candidate to track changes he had made in practice, as well as their consequences. An important factor here was the length of the study. Freese noted that most studies on pre-service practitioner research have been of shorter duration (one or two semesters) and perhaps not long enough to have had a significant impact or to measure the effects of the experience.

In a study conducted over a four-semester period, Chant, Heafner, & Bennett (2004) followed a cohort of fourteen teacher candidates, examining the development of personal theorizing, "the systematic reflection process undertaken by teachers in an attempt to recognize and utilize personal understanding as part of instructional improvement" (p. 1). Their data came from participant artifacts, observations, reflection records, and semi-structured interviews at the

end of each semester. They reported increased appreciation for the value of action research, as well as development of personal theorizing during this period. Three findings were highlighted. First, practitioner research supported the development and articulation of the process of self-definition as a teacher. Second, candidates showed initial resistance to investing in practitioner research (similar to reports in the Freese study); however, over time, candidates recognized a connection between the inquiry process and improving their own instructional weaknesses, which led to increased comfort in reflecting, sharing, and examining practice. Finally, the researchers reported that by the fourth semester, most candidates had embraced the idea of using inquiry to address their professional obligation to continuously improve practice. Again, the authors noted that adequate time, support, and a willingness to fully engage in inquiry and reflection were necessary to alter the candidates' views on the benefits of practitioner research,

In a study with similar findings, Smith and Sela (2005) developed a course "Teacher as Researcher" at Oranim Academic College of Education in Israel to provide novice teachers "with reflective tools for systematic examination of their work as teachers" (p. 293). Using documentation from staff meetings, personal diaries, and formal feedback from a questionnaire from 31 participants following their fourth year practicum experience, researchers assessed their program, and candidates' experience. Smith and Sela reported that their experience, and that of the participants, was consistent with other studies cited in this review in regards to initial confusion and hesitation about conducting practitioner research. Ultimately, however, student teachers realized that their practice was enhanced through reflection in inquiry.

Finally, in a very different kind of research project connecting inquiry and reflection, El-Dib (2007) conducted an exploratory study of the development, validation, and use of an inventory for analyzing undergraduate teacher candidates' reflective thinking when engaging in

action research in Egypt. The inventory, which was used with a sample of fifty teacher candidates from two cohorts, who conducted action research as part of their third or fourth year of teacher preparation, had four categories: planning, plan of action, acting, and reviewing, scored across four levels (low, low medium, high medium, high). Results were disappointing, with 95% of participants scoring at an overall level of reflection at the low or low-medium levels. The results were attributed to a view of teacher as technician and an educational system that did not genuinely value reflective and analytic understandings of teaching and learning. El-Dib noted that while the action research project was a program requirement, the current grading system grants a single final exam the weight of 80% of the total grade value; the result was that a third of the candidates simply chose not to engage in the action research experience, yet were still able to complete the program. El-Dib offered his study as evidence that a new national, five-year education plan should address these systemic inadequacies in current teacher preparation programs to move from technical to reflective models of teaching and learning. While the results of the research were disappointing, this work is important as one of just a few studies in this review that explores ways of measuring changes connected to practitioner inquiry that would complement, support, or challenge qualitative data.

This group of studies makes it clear that developing programs with practitioner research as a component for prompting reflective action on practice is a challenging task that may require systemic as well as programmatic changes. For candidates, undertaking inquiry is a complex experience that requires guidance, patience, and sufficient time with the process to understand and experience its benefits. All researchers continued to support the idea that practitioner inquiry can enhance reflection in practice.

Professional Identity

A number of other studies addressed whether and how pre-service practitioner research supports the development of professional identity, or developing understandings of the role of teaching as practitioners, what good teaching is, and a vision for themselves in the school community (Hammerness, et al., 2005). Kosnick and Beck (2000) offered an especially strong research model and study report. These researchers had a total of 60 participants from two successive academic years who conducted action research as a component of their pre-service program at the University of Toronto. A rich collection of data sources included interviews, observations, questionnaires, faculty interviews, researcher journals, candidate assignments, final action research projects, and exit survey data. Their results suggested that action research supports student teachers in the complex role of teaching by initiating them into six tasks that influence professional identity: developing and modifying curriculum and pedagogy; becoming a teacher-researcher; learning to observe pupils closely; caring for the whole child; being a positive role model for students; empowering pupils in their own learning; modeling and fostering collaboration and cooperation; assessing and reporting on pupil outcomes; and continuing professional development. They also noted that the short duration of pre-service programs can only “move pre-service teachers in a worthwhile direction, but it will not take them as far as is needed” (p. 132). Kosnick and Beck also underscored a number of essential aspects about *how* action research was incorporated: action research taking place in a central curriculum area addressed regularly; action research integrated into coursework in the university; an emphasis on the value of inquiry as “real research;” a genuinely collaborative relationship between university faculty and candidates as they conducted research together; faculty models of reflection, caring, and collaboration; candidates clustered in school placements with regular

supportive visits from faculty; a final research conference that motivated candidates. The researchers identified two areas for additional review: longitudinal studies that continue to follow candidates into their classrooms to examine the “durability” of results and closer relationships with cooperating teachers and administrators in placement schools.

The findings in the Kosnick and Beck study are consistent with a number of similar, but more modest, undertakings. In a study conducted with six pre-service teachers, Moore, Bartlett, Garrison, Hagemo, Mullaney, Murfitt, and Smith (1999) also reported positive outcomes in the development of professional identity. Candidates explored a range of images of teaching, rather than maintaining a static image of the “ideal teacher” inadvertently promoted by traditional teacher education (Tom, 1985, p. 36), and were able to shift their focus from their own learning to their pupils’ learning. After eight weeks of reflective and student-centered inquiry, candidates were able to use the data they collected to make decisions about practice. Similarly, Sugishita (2003) offered a study of six K-8 teacher candidates in their last year of a two-year graduate program in California. Her data sources included 30-minute interviews about reactions to inquiry projects from each candidate; feedback from two focus group meetings of candidates; three short surveys collecting personal information, reactions to inquiry, and assessments of data summary sheets assigned as part of the project; intern coursework; lessons; and children’s work. Sugishita reported standard concerns by candidates about the amount of time required to conduct inquiry, but reported that as research proceeded, candidates were very positive about their inquiry work and saw benefits in pupil outcomes that came from understanding student needs and the modification of practice.

One additional study in this group focused on identity. Auger and Wideman (2000) extended the idea of using pre-service practitioner research for promoting the development of

professional identity to using inquiry as a means of establishing personal responsibility for continued professional growth throughout the career, consistent with the trend of increasing accountability in education. Auger and Wideman analyzed the questions, methods, and data sources from 42 undergraduate teacher candidates' inquiry projects, along with participant interviews, group meeting notes, and candidates' reflective journals. The researchers used grounded theory and triangulation of data sources to verify findings. On a positive note, Auger and Wideman found that participants networked with and mentored one another through the inquiry process. These activities encouraged close examination of inquiry findings that moved candidates to a deeper level of understanding about teaching and learning. The analysis of papers revealed less encouraging findings. Thirty-nine of the 42 studies were described as "technical" with a very practical problem-solving focus. Auger and Wideman reported that these studies lacked reflection and emphasized data collection to find practical solutions, with little substantial modification or reorganization of theory of practice (Argyris & Schon, 1978). In other words, they conceptualized inquiry from a knowledge-for-practice conception, as noted by Cochran-Smith & Lytle (1999a, 2004). The few "transformational studies" were not easily resolved in the time available, proceeded with more reflection emphasis on data analysis, and required "intense" emotional support in reorganizing or changing theories of practice. Based on these findings, the researchers supported the use of inquiry in establishing pre-service learning communities and developing tools for meaningful and effective examination of practice. Auger and Wideman made recommendations for increasing rigor and establishing expectations for action research in pre-service; however, their study made an unsettling leap between the reported limitations of pre-service inquiry and expectations of candidate preparedness in conducting practitioner inquiry in future classrooms, without mention of additional and continued support in schools.

The research of Gitlin, Barlow, Burbank, Kauchak, and Stevens (1999) examined the development of professional identity from a different perspective. For these researchers, the purpose of undertaking pre-service practitioner research was to study whether candidates would develop an appreciation and understanding of the role of research in teaching and learning that would positively influence practice and the view of the role of teacher and researcher. They questioned the possible impact of inquiry on pre-service teacher thinking about research and wondered what might be learned from mining the intersection of knowledge, decision making, and effective teaching. Data sources came from questionnaires eliciting descriptions of candidates thinking about research, given at the beginning and end of two kinds of programs with inquiry components. The first program had 17 elementary candidate participants in an “inquiry-oriented program that emphasized being critical consumers of research” (p. 756); the second program used a “balanced approach that included becoming critical consumers of research and the doing of action research” by 20 secondary teacher candidates. The results were disappointing in many respects. Candidates viewed research as a “practical and technical matter” as they entered the program, one which could improve teaching through implementation of methods outlined in the research in their classrooms. Gitlin et al. were optimistic that the use of action research would shift candidates from this knowledge-for-practice conception of research to something akin to Cochran-Smith & Lytle’s knowledge-of-practice conception. In fact, pre-service teachers did not dramatically change their views. They maintained the view that research was a form of knowledge from “outside,” and rejected the “supposed superiority and objectivity of research” (p. 765). A few candidates were able to move toward understanding the value of their own constructions of knowledge in action research. Gitlin et al. emphasized that school contexts do not support action research, teachers do not generally have easy access to

current and relevant research, and candidates tend to be practical, utilizing efficient and convenient methods of seeking experienced teachers as sources of knowledge for immediate support. As with a number of other studies, this work emphasizes the very real limitations in finding immediate success in using inquiry in learning to teach, but remains hopeful that the experience will influence teaching, learning, and continued inquiry over time.

The studies in this group were very consistent in supporting the use of pre-service practitioner inquiry and simultaneously citing time constraints that limited inquiry efforts in pre-service programs. The studies also implied that at present, practitioner research is not an expected part of the professional development of a teacher. Despite the fact that many teacher education programs utilize practitioner inquiry in learning to teach, candidates are consistently surprised, confused, and intimidated by the expectation of inquiry as part of professional expertise. Nonetheless, all researchers were optimistic in continuing to refine the use of practitioner inquiry as a means of beginning the development of professional identity.

Subject Specific Inquiry

A number of studies reported on the use of practitioner research within the context of specific content areas, with a focus on improving practice within the content area. The studies range across subject areas, including science, technology, and the language arts.

Two of the studies came from learning to teach in the science content area. Tabachnick & Zeichner (1999) conducted a study of inquiry during a seminar from a teacher education program to determine whether practitioner research supports conceptual change teaching in science education. A sampling of teacher candidates in the University of Wisconsin-Madison teacher preparation program at the elementary and secondary levels conducted action research as part of a seminar course. Data from three cohorts included interviews, observations, audiotape

of class sessions, videotape of project presentations, journal reflections, and the action research projects. As the third segment in a part of a six-part series on pre-service innovations at the university, details about the program and methodology were found in the first publication in the series (Hewson et al., 1999). Special attention was given to personal understandings of what it means to teach for conceptual change. Tabachnick and Zeichner reported that the candidates were able to quickly shift their focus from their own experience to concern for their pupils' thinking and learning. However, only a few candidates were able to use the information from their pupils to plan their teaching. The researchers cited several factors that hindered conceptual change teaching of science, including candidates' prior beliefs about teaching science, fragmented knowledge about science content, and school contexts that did not provide or support models for conceptual change.

A second study from science, conducted by Bianchini and Cavazos (2007), also found support for inquiry as a means of shifting the candidates' focus from their learning to pupil learning. These researchers developed two cases of learning to teach science by following two male secondary science teachers, from their pre-service program through their first year in the classroom, returning to observe and interview both participants in their fourth year of teaching. Researchers focused on learning to teach science "in ways that build from and celebrate the ethnic, gender, linguistic, and academic diversity of their students" (p. 586). Description of qualitative analysis of interviews, classroom observations, and written work were especially well detailed, and processes of analysis were fully transparent in this study. The researchers offered classroom vignettes providing intimate and illuminating images of teaching and learning that supported findings. Key findings suggested that individual colleagues (mentors, for example) and school culture were most significant in aiding or impeding beginning teachers' learning to

teach science to all students. A central piece of this research consisted in exploring candidates' trajectory from conducting practitioner inquiry in their preparation courses, to whether and how they participated in teacher learning communities and conducted inquiries into practice in their own classrooms. For both of these candidates, pre-service practitioner inquiry was vital to developing a critical stance to teaching science to all students, while continued support and expectations to conduct inquiry in school placements were important to continued inquiry in practice and exploration of issues of equity and diversity in teaching and schools. Bianchini and Cavazos strongly recommended the use of pre-service practitioner research in learning to teach science for students, the development of a critical stance, and in the preparation of candidates as (potential) agents of change.

In one of the few studies that solely utilized quantitative data, Dawson (2006) focused on the impact of practitioner research on the implementation and use of technology in field experiences. Study participants were thirty, fifth-year teacher candidates from a technology integration course over a four-year period. In addition to qualitative analysis of candidates' reflections and final research papers, Dawson also analyzed use of technology in the K-12 classroom based on the Levels of Technology Implementation (LoTi) continuum. LoTi is a conceptual frame adopted by ten states to gauge technology integration. It uses descriptive categories (nonuse, awareness, exploration, infusion, integration/mechanical, integration/routine, expansion, or refinement) that reflect increasingly complex use of technology across six levels of application. The LoTi analysis indicated that levels of use for technology were largely at the lowest levels of awareness (21%) and exploration (56%), and technology did not fundamentally change instruction. Only 15% of technology application was at the infusion level, targeting in-depth coverage of content or prompting higher-level thinking, and 6% of technology use was at

the integration level that emphasized depth of knowledge, authentic learning, and higher-level thinking. No candidates used technology at the highest levels of application (expansion and refinement). Dawson speculated that insufficient time and limited opportunities may account for these findings. Qualitative analysis of data collected through the journals and research papers also suggested that candidates' reflections were often limited to classroom management and logistics, remaining "individualistic" and "shallow" (p. 285) rather than focused on context, collaborative sharing, or action, echoing the findings of Gore and Zeichner (1991). Dawson provided evidence that with ongoing program adjustments, practitioner inquiry can be supportive of deeper reflective thinking by candidates. Candidates also reported that the use of action research to study technology in their classrooms was helpful in establishing a knowledge base and level of comfort in using technology that they could build on in the future.

Using mixed methods research, Boyd, Boll, Brawner, and Villaume (1998) conducted their study in the context of a reading/language arts methods course and field experience in a single term. The study included 47 candidates, 44 in-service teachers, and 4 teacher educators. This qualitative study utilized observations of candidates in classrooms in the university and school settings, learning logs and journal entries, and written responses to open-ended questions at midterm and final exams. Additionally, candidates provided responses to a teacher educator generated Questionnaire of Concerns about approaching teaching reading and language arts as a "professional rather than as a technician" (p. 63). The forty-six item questionnaire was followed by a semi-structured interview of candidates based on aggregate responses to the questionnaire. Three categories emerged from the data. First, candidates were supported in rethinking basic assumptions about schooling and practice, reflecting Dewey's notion of open-mindedness. A second category was the development of a philosophy of teaching and learning. Candidates

initially displayed a lack of confidence and experience in relying on meaning-based instruction over reliance on a transmission model of instruction, but most candidates provided evidence of efforts to construct a coherent philosophy connected to classroom practice. Finally, Boyd et al. pointed to a growth in the commitment to professional development and ongoing inquiry, prompted by direct experience with children in practice.

A second study from the language arts content area was conducted by Merino and Holmes (2008), who noted that there is little research that documenting or illuminating the impact of pre-service inquiry on student teachers learning to teach in culturally and linguistically diverse settings. Their data collection extended over three years, with 56 participants in five cohorts. Participants took part in practitioner research in programs designed to prepare teachers to work in linguistically diverse settings, either at the elementary level or in the secondary English language arts program. Data ranged across surveys, questionnaires, interviews, observations, logs, portfolios, and email dialogue, and was analyzed using “traditional” qualitative approaches for candidates who were exemplary or typical. None of these terms (traditional, exemplary, or typical) were operationalized, and no details further details of analysis were offered, though cases and student teacher responses offered clear support for findings. As with several studies, much of this research article is dedicated to description of the program models, with less weight given to outcomes. Merino and Holmes found that year-end surveys and interviews support the value of inquiry as a means of developing a community of practice. Additionally, candidates reported that inquiry was helpful in reframing a problem “as a point for inquiry and not a personal teaching failure” (p. 6). In other words, challenges, concerns, and problems of practice were considered the basis for prompting questions and action.

In general, studies that came from methods classes, with a connection to a specific subject area, were very supportive of the use of inquiry to improve practice and more likely to report outcomes that looked closely at candidate learning in relation to pedagogy. Several researchers also noted that teacher candidates looked at pupil learning outcomes when making judgments about the success of the inquiry. While the studies did not include analysis of pupil work, this research came one step closer to investigating a link from candidate inquiry to pupil outcomes. Across the span of content areas, the research on the use of inquiry in content areas is very thin and has significant gaps. Given differences in pedagogical content knowledge from content area to content area, more research from a range of subject specific areas is warranted.

Collaboration and Learning Communities

A number of studies have as their purpose the use of practitioner inquiry to prepare teacher candidates for participation in collaborative learning communities. These studies most often highlight the benefits and challenges of collaborative practitioner research. While the general purpose of each study is to examine the use of practitioner research in a collaborative setting, the studies vary in a number of respects: configuration of collaborative partnership (combinations of teacher educators, cooperating teachers, and candidates), grade level (preschool, elementary, or secondary), and focus on collaborative elements (developing institutional partnerships, candidate learning, and/or learning by cooperating teachers). Most of these studies come from professional development schools (PDS), rather than university pre-service programs. All of the studies laud the use of pre-service inquiry, though most also balance this support with a range of challenges and concerns posed by collaborative practitioner research.

Several studies have their origins in professional development schools, pairing teacher candidates and cooperating teachers in practitioner research. Two particularly well documented studies were reported by Levin and Rock (Levin & Rock, 2003; Rock and Levin, 2002), who used multiple case studies to follow five pairs of candidates and their cooperating teachers through a semester-long internship prior to student teaching. The researchers collected data through interviews, audiotapes of shared planning, journals, written research plans, final reports and reflections, and field notes. Their results highlighted five themes: participant clarification of personal teaching theories; exploration of self as a teacher in the classroom context; better awareness of students, including children's perspectives and needs; enhanced knowledge about teaching and curriculum (dependent on the nature of the inquiry project undertaken); and an awareness and appreciation for the process of inquiry, reflection, action, and the professional role of teacher (Rock & Levin, 2002). Levin & Rock (2003) discussed the benefits and cost of collaborative research for mentors and mentees. They suggested that undertaking a shared research experience improves communication, allows for mutual exploration of pedagogical beliefs, and provides important opportunities for dyads to work together prior to the student teaching semester. They emphasized the importance of the experience as being more than social and moral support for candidates.

Crocco, Faithfull, and Swartz (2003) also highlighted the mutual benefits of collaborative research for teacher candidates, cooperating teachers, and teacher educators. They used an action research method to study program effectiveness in a configuration that brought together graduate-level candidates, cooperating teachers, and professional development program faculty. An inquiry on inquiry, this study was conducted in an urban secondary school using data that included candidates' gradfolio, collaborative action research projects, interviews, videotaped

sessions, field notes, and exit surveys from cooperating teachers and candidates. Researchers from the PDS, candidates, and teachers focused their research on the effectiveness of the gradfolio and program requirements. For candidates, benefits included developing an awareness of the research process, gaining elevated status within the school because of collaborative research, having a voice in the assessment and development of the preparation experience, and having additional time and opportunities to work within the school. Teachers reported improved teaching practices, the emergence of critical reflection on the school community and curriculum, and increased collaboration outside of the school by participants. However, again, the findings were tempered by reports of significant tensions caused by bringing together the PDS and school communities. Questions about sustainable support, additional (uncompensated) demands on teachers, and increased workload on candidates offered significant challenges to the program.

Grisham, Laguradia, and Brink (2000) also focused their findings on key elements that contribute to a quality field experience, with practitioner research as a critical element of the practicum. The experiences of five elementary candidates taking part in a 15 month master's program were documented through interviews, journals, observations, and action research projects conducted by the candidates and their cooperating teachers. These researchers emphasized the role of inquiry in developing a sense of community that pervaded the school during collaboration, in which candidates flourished. While practitioner research was only one element of the program that was considered, the authors indicated that it was a critical factor in a transformed field experience. They questioned the ability to sustain such a program over time, however, given the added responsibilities, increased workload, and additional resources to support an intensive field experience.

In a case study of implementing collaborative practitioner research in candidate/cooperative teacher pairs, Poetter, Badiali, and Hammond (2000) documented other challenges and benefits of adding inquiry as a component of candidate field experience. The candidates reported anxiety about the additional requirements imposed by the research and the time required for the undertaking. Researchers also reported that early on, inquiry was not viewed as part of the culture of practice, and thus was not seen as “germane to the task of teaching to most who teach, to those who are entering teaching, or to those who prepare teachers” (p. 170). Over time, the collaborative approach benefited the teams in sharing ideas, investigating practice, and interpreting what occurred in classrooms. The approach also “flattened out” and strengthened the typically hierarchical relationship between candidates and cooperating teachers.

Graham (1997, 1998) reported similar tensions and rewards in her studies on collaborative practitioner research conducted with 25 secondary English education candidates, cooperating teachers, and two university teacher educators documented through phenomenological interviews, observation, field notes, and artifacts. Negotiating roles among team members and potential burn-out of cooperating teachers were noted as challenges to the program, while the reconceptualized roles of all partners was cited as a positive outcome. Graham also emphasized the highly personalized elements of field experiences, grounded in a specific context of school and classroom and tied to the dynamics of candidate and mentor, that can be supported by collaborative inquiry.

In their descriptive case of collaborative research implementation including a teacher educator, a high school English language arts teacher, and two teacher candidates, McEwan, Field, Kawamoto, and Among (1997) also reported a need to negotiate roles, attend to

communication, and share in decision making while breaking down traditional roles among participants. They noted positive effects in fostering reflective awareness, applying of lessons and ideas by candidates in other settings in their program, learning from one another, and advantages in using the team members' various strengths and increased manpower in the classroom. The increased responsibilities of the cooperating teacher and ambiguity of roles were once again cited as challenges.

In a different kind of collaborative configuration, Moran (2007) reported on research in a pre-service program for early childhood candidates working in teams of three to four members from a cohort of 24 candidates. This study used a variety of data including reflective journals, videotapes of teaching, audiotapes of team meetings and children's conversations, lecture discussion, and semi-structured exit interviews, obtained from a sub-sample of six candidates. The researchers found that participation in this form of collaborative research provided the following: increased shared responsibility among co-researchers and decreased dependence on the teacher educator; evidence of emerging self-regulation during teaching in goal setting, use of strategies, and performance evaluation; and an increased appreciation for making visible and public the outcomes of teaching and learning. Moran argued that collaborative research supports the development of an inquiry as stance as part of the conception of professional development across the teaching career.

While studies generally examine the experiences of candidates and peripherally mention cooperating teachers in collaborative inquiry partnerships, a study by Burbank and Kauchak (2003) explicitly compared candidates and cooperating teacher differences in inquiry as learning to teach in pre-service, and learning to teach as in-service professional development. Their study followed ten dyads of candidate/cooperating teacher teams through a year-long program. This

mixed methods study utilized analysis of course assignments, exit interviews, transcripts from course seminars, and an exit survey to report on the impact of collaborative practitioner research. Candidates were less enthusiastic about practitioner research as a vehicle to improve practice, dialogue with a team, and as professional development. However, candidates were more likely than cooperating teachers to say they would undertake practitioner research in the future. Candidates also used the process to clarify teaching identities, although cooperating teachers did not. All participants agreed that the experience provided the opportunity to examine how they serve pupils, but were uncertain of the actual impact of practitioner research on their pupils. Differences between candidates and teachers were attributed to developmental differences between partners. Veteran teachers were not necessarily interested in the questions chosen by candidates, and experience played a role in the ability of veteran teachers to focus on subtle elements of the process that were not obvious to pre-service teachers, for example. This led to a disconnect in investment and ownership in the shared experience.

Providing very different information on use of collaborative inquiry, Schulz and Hall (2004) presented a comparative study of pre-service programs in England and Canada. They described two programs with very distinct contexts, differing definitions of inquiry, and partnerships challenged by different factors. Despite differences and individual challenges, however, researchers argued that systemic, rather than specific, contextual differences posed challenges to program effectiveness. Key to workable relationships and program success were differences in motivation factors between the schools and the university, the participants' willingness (or selflessness) to invest in research efforts, the degree of dissimilarity between partners, and potential for mutual satisfaction across the sites. Unlike studies cited above, these researchers reported a continuing inequality among collaborators, and the candidates

increasingly viewed practitioner research as a “university” undertaking that would not transfer easily to their classrooms in the future. The UK model was overtly driven by outside experts, reminiscent of Cochran-Smith and Lytle’s, (1999a, 2004) knowledge-for-practice conception of inquiry using a novice/expert model of inquiry. The authors also noted that in both institutions, the emphasis of candidates’ research was on the ‘what’ or ‘how,’ rather than the ‘why’ of classroom experience. This falls at the lowest (technical) level of reflective practice as described by Van Manen (1977), again likening the inquiry experience to Cochran-Smith and Lytle’s knowledge-for-practice conception of inquiry, and reportedly diminishing meaningful learning for candidates.

These studies are very consistent in noting challenges of negotiating partnerships, benefits for participants, and difficulties in sustaining programming. They offer support for the notion that pre-service inquiry in collaborative settings prepares candidates to participate in communities of learning in school settings and may develop an expectation for inquiry as lifelong professional development. They are less specific about learning outcomes and do not connect the experiences to pupil work, a shortcoming across pre-service inquiry studies. What is clear from the studies is that pre-service teachers do not arrive with the expectation that inquiry is central to effective practice or professional development, and collaborative communities for teachers are not well established as part of the professional experience. Furthermore, both situational and systemic challenges can impede the effectiveness of collaborative practitioner inquiry.

Inquiry and Social Justice

A number of inquiry genres have explicit connections to emancipatory purposes, making critical reflection and social change central to the research effort. This category of studies is

consistent with the knowledge-of-practice conception provided by Cochran-Smith and Lytle (1993, 1999a, 2004, 2009). It is also reflected in Zeichner and Noffke's (2001) political category of practitioner research, where inquiry was used to do the following: address misconceptions, prior beliefs, or dispositions held by candidates that may impede effective teaching; question inequity in schools and society; and establish teacher research as a foundation for influencing policy decisions. In fact, most of the studies reviewed made mention of the political elements of teaching and education, suggesting an implicit connection between inquiry, reflection, examination of schools and practice, professional development, and issues of social justice and equity. For nine studies, issues of social justice were the central focus of inquiry, rather than an underlying thread. One study examined the experience of learning to teach for social justice using practitioner inquiry from a broad lens. Four studies used practitioner inquiry to examine racial identity and positionality using inquiry as a means of confronting, challenging, and changing existing beliefs and dispositions in preparation for teaching in diverse school populations. Finally, a series of four studies examined the use of inquiry in developing candidates understanding of teachers as agents of change.

Lynn and Smith-Maddox (2007) addressed broad issues of learning to teach for social justice, using critical reflection and dialogue with 14 pre-service teachers from a 2-year Master of Education program, over the course of a year. The researchers intended to develop "alternative learning spaces" where issues of social justice could be addressed; develop identities and examine purposes and goals; challenge classroom choices and pedagogy; and establish a community of practice for self-directed growth. From exchanges in monthly meetings driven by guided discussion and reflection, researchers analyzed dialogue from field notes, transcripts of recorded meetings, and interviews conducted in the latter part of pre-service preparation. Lynn

and Smith-Maddox concluded that the inquiry experience in pre-service was valuable for and valued by participants considering their dual roles of teacher and learner as social justice educators. They suggested that “Inquiry created the conditions and cultivated the capacity” (p. 103) for critical examination of beliefs and practice. The researchers noted that one of the limitations of this study was that they did not ask participants to reflect on their racial identities, creating an environment that did not require students to address the “messiness of racial and ethnic identity and its relationship to the development of social justice practice” (p. 104). Two other studies, however, did directly challenge personal identities of candidates, though each addressed this differently, in response to the candidate population in each study.

Similarly, Schoorman (2002) engaged in critical emancipatory action research with undergraduate teacher candidates with the goal of facilitating multicultural awareness and understanding “without succumbing to guilt, anger, or resistance” (p. 367) that direct confrontation of racial identity might incur. This teacher educator guided candidates through a year-long email exchange with middle-school students in a diverse and impoverished community. Weekly exchanges were collected, analyzed, and discussed based on emerging themes in the writing. Schoorman provided a compelling description of candidates’ growing awareness of personal biases and experiential gaps as reflected in writing exchanges, and greater action orientation towards doing something for others that grew from the experience. Another outcome was the contextualized understanding of teaching and learning that arose from the personalized nature of the project. For example, candidates moved beyond mundane theoretical discussions of the merits or challenges of bilingual education to the consideration of specific and personal implications of an English-only policy for “their” pupils. While much of the findings

pointed to the use of technology as a tool in the inquiry, inquiry itself was given high marks for enhancing multicultural understanding and social commitment.

Two other researchers organized inquiries that directly challenged personal beliefs, biases, and dispositions. Hyland and Noffke (2005) studied how 120 pre-service social studies candidates from two university programs came to understand diversity and group marginality through inquiry experiences. Being particularly concerned with the preparation of candidates for teaching in schools with low-income populations and students of color, they structured the inquiry so that all candidates critically examined their own identities. Candidates conducted community and social inquiry assignments as part of their social studies methods class. Candidate projects, their written reflections, course evaluations, in-class observations of presentations on the assignments, audiotapes of focus-group conversations, and reflections and journals of faculty researchers served as data sources for the study. Hyland and Noffke reported findings in two broad categories of understanding marginality and diversity. All candidates developed a sense of “place” in relationship to oppression, specifically from the experience of a historically oppressed group that existed outside of their personal experience. For a white candidate this meant exploring the African-American community, while an African-American candidate attended a gay rights rally. Candidates identified structural inequalities that impacted schools, education, and learning while developing “sympathetic understandings or changes of heart” (p. 375) that altered opinions and pre-existing notions about the group they studied. These findings were related to new understandings in teaching in two ways. First, inquiry was viewed as a model of practice to be used in classrooms, as well as a strategy for studying own beliefs and practice. Second, candidates were challenged to alter their views of the ‘outside’ group and to develop a critical stance towards preconceptions they held about other oppressed groups that

might be represented by pupils in their classrooms. The researchers identified three program components that influenced candidate responses: meeting people from the oppressed group in their own context; examining inquiry assignments in political and historical perspectives; and deconstructing the experiences through discussion and critical reflection. Hyland and Noffke noted, however, that not all candidates were prepared for the discomfort of interrogating and some chose “safe” experiences that added only superficial cultural knowledge, rather than challenging beliefs or examining experiences of oppression.

In order to examine notions of white identity and issues of racism in classrooms, McIntyre (1997) employed participatory action research methodology with a group of thirteen undergraduate candidates. Data from individual interviews and discussion from eight thematically organized class sessions provided data analyzed from a constructionist grounded theory approach. Disturbing reports of what participants experienced and witnessed in student teaching classrooms led McIntyre to call for multicultural antiracist curriculum in schools, increasing the number of teachers of color, and explicitly address racial identities with teacher candidates so they could support and educate all students. While the participants in the study made ‘incremental steps’ towards these ends through their shared inquiry experience, it is not clear how this was measured or whether it further influenced teacher candidates’ practice. McIntyre, disappointed in what was accomplished in one academic term, pressed for long-term experiences in inner-city schools and extended exploration of racial identity in pre-service coursework. This study, like the research of Hyland and Noffke (2002), noted the emotional difficulty, time, and sensitivity required to negotiate an inquiry that challenges racial identity and supports candidates in learning to teach in diverse settings.

As a whole, the studies, whose stated purpose was to understand whether and how practitioner research could challenge beliefs, change dispositions, and prepare candidates for diverse classrooms, offered the most subdued support for the use of pre-service inquiry. As with every study in this review, however, all researchers remained optimistic and committed to the use of inquiry for addressing issues of social justice. All researchers were consistent in noting that the modest improvements they documented represented positive change in an area that has consistently demonstrated resistance to change. For many researchers, as for candidates in the studies, there was an obvious uneasiness and hesitation in directly addressing and challenging sensitive issues of race and inequity. While at first glance the results may appear incremental, they may represent relatively significant improvement over other efforts to effect change.

An additional four studies in this category used pre-service inquiry to prepare teacher candidates to be agents of change. A series of studies by Valli and Price (Price, 2001, Price & Valli, 2005, Valli, (2000), and Valli & Price, 2000) focused on the potential for action research to influence candidates in becoming change agents. These studies were individually compelling and well presented, but also important as a group, because they presented data from several perspectives, individual candidates, and institutional levels. Drawn from experiences with teacher candidates at the University of Maryland, Valli (2000) introduced the “ironic consequences” of action research when a cohort of candidates working as instructional assistants conducted inquiry in their school sites. The researcher placed emphasis on school initiatives throughout the course, adjusting readings and assignments to reflect the connection of school improvement to action research for candidates, who were more intimately connected to their school systems than most student teachers. By focusing on school improvement early in their careers, Valli intended to have candidates view inquiry as a means of initiating school reform.

Five of the fifteen candidates focused research on school improvement, while classroom practice was at the center of the remaining efforts. Valli observed that, generally, candidates were unable to simultaneously study their own teaching and support school improvement. Candidates took one of two stances: as a reflective researcher working from inside the classroom to understand practice, or as a program evaluator working from an outside perspective. Candidates who studied school improvement ignored issues of personal development and practice in their projects, and candidates who studied their own classroom practice struggled to connect their efforts to school improvement. Valli argued that systemic change—developing programs that make explicit connections between professional development and school improvement—are necessary to challenge this divide.

Valli and Price (2000) also examined readiness and resistance to change in four cases of teacher candidates undertaking action research. The cases included an individual and institutional example of readiness for change and a similar pairing of examples demonstrating resistance to change. Using classroom conversations, surveys conducted at the beginning and end of the course, journals, assignments, informal interviews with candidates, observations of classroom work, and school documents, the researchers documented differences in action and understanding components of praxis in the cases cited, as well as the need to balance these elements in supporting pre-service inquiry.

Using the same data sources, Price (2001) also explored connections among pedagogy, research, and change, viewed from a critical, feminist and liberatory perspective, using eleven pre-service candidates. Of these candidates, nine thought they had made some, although limited, changes in their classroom. However, no candidate reported having any impact outside of his or her classroom. Committed to developing morally and ethically defensible practice, they focused

on becoming agents of change in their classrooms. The candidates themselves experienced a transformation of practice that “threaded together strands of their lives: their past experiences, their current examination of their student-teaching experience, and their visions for future practices, with their students” (p. 70). Price argued that situating action research in pre-service can be a particularly powerful experience that affects how these experiences might be framed by teacher educators.

Finally, Price and Valli (2005) examined the experience of four of pre-service candidates, again focusing on the impact of inquiry on candidates’ views of themselves as agents of change, which further supported these findings. They documented five sources of tension evident in the conducting of action research. First, candidates tended to maintain an exclusive focus on individual or institutional change, consistent with Valli’s (2000) earlier work. Second, candidates struggled with maintaining an awareness of the dual nature of action and understanding in action research. Teacher educators experienced tension in providing guidance and support while simultaneously challenging candidates as they developed research agendas. Tempering passion with reason was cited as a fourth struggle faced by candidates. Finally, Price and Valli noted that action research as a political, emancipatory effort was dampened by social and institutional contexts found in schools. These four studies provided the foundation for understanding the role of inquiry in pre-service teachers becoming agents of change. The researchers contributed detailed studies illuminating the “conditions and contexts that facilitate or obstruct change” (p. 71) on a personal and institutional level.

Practitioner Research as Program Innovation

The final three studies reviewed here were conducted to determine if pre-service practitioner research could be used as a means of generally reforming pre-service education

programs. These studies differed from the previous research reviewed in that the researchers' stated purpose for examining inquiry experiences originated at the program level; they examined the overall efficacy of practitioner research in preparing candidates for teaching, rather than focusing on any specific benefit to teacher candidates, their practice, or pupils.

As part of a study sponsored by the Conference on English Education (CEE) Commission on English Methods Teaching and Learning, Angelotti, Cappella, Kelly, Pope, Beal, and Milner (2001) explored the "viability" of pre-service practitioner research. Five researchers developed programs in their respective universities, piloted the programs, and examined the results collaboratively. The results were descriptions of five different inquiry projects on improving practice through pre-service inquiry. Most significant, however, were the eight crosscutting traits of effective programs that use inquiry to enhance practice. Effective programs 1) establish expectations of an inquiry stance as a natural part of learning to teach; 2) integrate research and student teaching, avoiding the perception of inquiry as an "add-on"; 3) offer inquiry experiences prior to student teaching to provide knowledge in research and teaching, as well as reinforce the link between teaching and inquiry; 4) research is possible at any intersection of field experience and inquiry; 5) equity in collaborative partnerships among candidates, cooperating teacher, and university instructor is the most effective research arrangement; 6) instructors should model how they want students to practice; 7) the effects of pre-service practice on in-service practice requires additional research; 8) ethnographic research methods are especially well suited to pre-service practitioner research.

A phenomenological case study described perceptions of inquiry held by five teacher candidates (Mule, 2006). Mule examined the potential of inquiry as practicum reform using interviews, candidates' electronic portfolios, journals, logs, and lesson plans, as well as field

notes and unspecified program documents as data sources. She provided a succinct description of qualitative analysis from open coding, triangulation with field notes, and category checks, to creation of cases. Mule described five perceptions of inquiry that were held by candidates. First they initially saw inquiry as “running wild, unorganized, and an unnecessary add-on” (p. 210), a view which dissipated over time. They came to experience inquiry as a “space to own” or a means of addressing personal understandings of practice and problem solving. “Inquiry as pleasure” came with a sense of accomplishment in making a difference in children’s learning through inquiry, informing classroom practice, and contributing to the knowledge of teaching. Finally, inquiry was seen as a tool for enhancing collaboration between co-inquirers, as opposed to the traditional arrangement of expert and novice. From these perceptions, Mule proposed four outcomes. First, with well-designed inquiry-based programs, allowing adequate time and scaffolding, student teachers can be knowledge producers. Second, consistent with reports from other studies of collaborative pre-service inquiry, the mentor teacher-candidate relationship can shift from traditional rigid, hierarchical structures that leave candidates passive and unproductive to structures that put active, co-inquirers into practice. Inquiry is an effective tool for fostering reflection of self and practice for professional development, a finding that is also consistent with studies specifically focused on inquiry to enhance reflection. Finally, Mule contended that education reform should include participation in learning communities as a means of learning to teach, in contrast to current “sink or swim” models.

The work of Schulz and Mandzuk (Schulz, 2005; Schulz & Mandzuk, 2005) in two additional studies involved pre-service inquiry in their teacher education program at the University of Manitoba, Canada, including one of the very few longitudinal studies in this review. The researchers videotaped group discussions at the end of each year of the study as the

source of data documenting the experience of ten candidates over a three-year period that included the two-year program and the first year of teaching. As in many studies, these researchers noted that candidates' introduction to inquiry was characterized by uncertainty about the methods of inquiry and uneasiness at the open-endedness of the process. The candidates also realized by the end of the first year that a challenge to the status quo in existing school cultures was a challenge to conducting inquiry. This continued to be a concern at the end of the second year, and candidates reported increased pressure to conform to school culture and avoid resistance and criticism from parents, teachers, and administrators not familiar with this approach. Some first year teachers capitulated to the pressures of the first year in the classroom and conforming to the school culture and did not continue with practitioner research in their teaching. Schulz and Mandzuk reported that other teachers enjoyed supportive environments where collaborative, inquiry-driven curriculum practice was consistent with university experiences; a few did continue to conduct inquiry in some form. The disconnect between university program and school context played a significant role in the experience of the candidates and their views of inquiry. Additionally, the researchers also expressed concern that the inquiry project did not engender a genuine inquiry stance, as intended. Nonetheless, the researchers supported the continued use of inquiry in pre-service with the intention to "move our pedagogy for inquiry beyond the project and skills level" (p. 330).

Conclusion

When taken overall, the studies presented in this review offered several implications, as well as suggestions, for future research. First, there was overwhelming support for the use of pre-service inquiry as a means of enhancing learning to teach. The benefits were noted across all category areas: developing reflection and professional identity, improving practice, working in

communities of learning, and learning to teach for social justice. However, an effective pre-service inquiry program requires enormous investments in time, planning of student experiences, continuous modification of programs, negotiations of collaborative partnerships on a personal and institutional level, in already crowded academic programs and field experiences. Creating sustainability, support, and preparation for cooperating and supervising teachers, as well as teacher educators, is a challenge for effective programs. Additionally, there is continued concern over the differences in developing technical skills for and acceptance of practitioner research and a genuine inquiry stance that is a meaningful part of continued professional development and practice. Additional longitudinal studies, especially those that follow pre-service teachers into their classrooms to see the long-term impact of an inquiry experience, are needed. Second, while there is now a steady stream of studies addressing the use of pre-service practitioner research, much of the focus remains on program development, with a notable gap in research projects connecting pupil learning to pre-service inquiry. This study addresses each of these shortfalls, as described in the methods section that follows.

CHAPTER 3: RESEARCH METHODS AND DESIGN

The purpose of this study was to examine what happens when teacher candidates engage in practitioner research in a pre-service program with a focus on inquiry and the goal of improving pupil learning. For more than a decade, teacher education programs at HU have utilized teacher research, or “inquiry,” as a way to encourage teacher candidates’ questioning, reflection, and decision-making based on the data of classroom practice. With the advent of a broad research initiative in teacher education reform, Teachers for a New Era (TNE), the inquiry project was revised to place an explicit focus on pupil learning. At the same time, an inquiry scoring rubric was designed to assess the inquiry projects. This dissertation drew on the data from the larger TNE research project. This study utilized a mixed methods approach, providing three views on learning to teach through inquiry using quantitative analysis of rubric scores of teacher candidates’ inquiry papers, a content analysis of a sample of candidates’ projects, and longitudinal case studies of two candidates as they completed their master’s program and through the first two years of teaching.

In this chapter I first discuss the mixed methods approach used in this study, including the contributions of quantitative methods and interpretive qualitative methods in the form of content analysis and case studies. I then describe the context of the study in terms of the pre-service program at HU and as a study that drew data from the larger TNE initiative, and also utilizes multiple research settings. Next, three analyses are described as well as issues of reliability, validity, and limitations of the study.

Mixed Methods

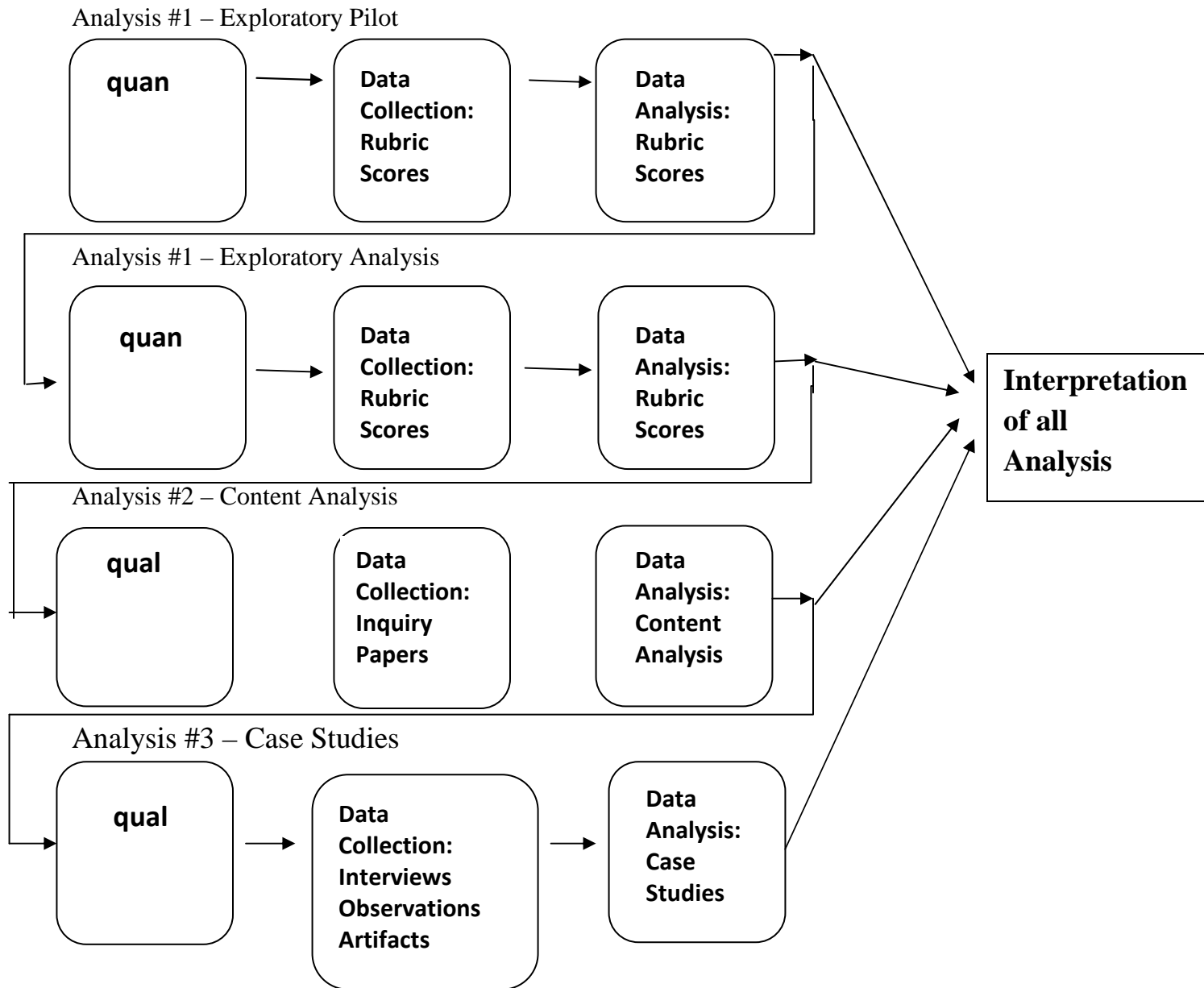
A mixed methods approach was utilized in this dissertation about practitioner inquiry “to understand more fully, to generate insights that are deeper and broader, and to develop important knowledge claims” (Greene, 2007, p. 251) than might be captured from a single method. Given the complexity and scope of understanding learning to teach through practitioner research in the teacher education program and into the first years of teaching, a mixed methods design was most useful for investigating this complex issue through multiple vantage points (Creswell, 2009; Teddlie & Tashakkori, 2003). Using qualitative and quantitative methods offered a number of methodological advantages in the thorough investigation of the questions, including the potential for: (1) triangulation, or convergence in the results of the same issue, across methods; (2) complementarity, or elaboration and clarification from the results of one method to another; (3) initiation, or the re-framing of the research due to the discovery of contradictions among methods; (4) development, whereby the results of one method informed the findings of another method; and (5) expansion, or extending the research parameters by using different methods for various research elements (Greene, Caracelli, & Graham, 1989).

In using multiple methods, then, a more comprehensive view of learning to teach through inquiry was possible. The interpretations and findings generated from three analyses worked together to address the various research questions, and contribute to an understanding of learning to teach through inquiry in a broader and richer way than any single analysis might have done. The research approach was a modified sequential explanatory mixed methods strategy, as described by Creswell (2009), whereby the findings from the initial quantitative analysis were further developed through qualitative content analysis. This design was modified sequential explanatory strategy in the sense that an additional third phase of qualitative data was used as an

additional sequential strategy in order to further expand and elaborate on the findings of the previous analyses. The collection period for the third phase began prior to the first two phases and extended for a period of three years, for the development of case studies (see Figure 3.1). Unlike many sequential explanatory strategies, this design gave equal weight to quantitative and qualitative data collection. Analysis #1 was a quantitative analysis of rubric scores for 92 inquiry projects collected from two cohorts of master's level candidates in May, 2006 and May, 2007, conducted as a pilot and exploratory analysis. The results of this quantitative analysis was then further developed in Analysis #2, a qualitative content analysis of twelve selected inquiry projects, representing the range of rubric scores in Analysis #1. The data for Analysis #2 were collected and analyzed following the analysis of rubric scores in Analysis #1, in August, 2007. Finally, Analysis #3 included two longitudinal case studies of teacher candidates in a program focused on the role of inquiry, further expanding the findings of Analysis #1 and #2 by taking a longitudinal perspective that explored whether and how candidates take an inquiry stance in practice. The data collection for Analysis #3 began in August, 2005 and continued through June, 2008. All three analyses were intended to provide complementarity, allow for initiation, and triangulate findings (Greene, Caracelli, & Graham, 1989).

Using this mixed methods approach, the study cut across two dimensions, through increasing depth and across time. First, the different analyses provided a telescoping vision in examining the issues of learning to teach through practitioner inquiry. Analysis of a relatively large sampling of scored papers provided a broad view. This was refined through the close examination of a more finite sample of the papers using content analysis. Then, an intimate examination of learning to teach through inquiry was offered in case studies, providing deeper

Figure 3.1 Mixed Methods Modified Sequential Explanatory Design



- Capitalization indicates weight in quantitative or qualitative data, analysis, and interpretation in the study.
- Quan and Qual stand for quantitative and qualitative, respectively, and use the same number of letters to indicate equality between the forms of data.

(Creswell, 2009, p. 210)

exploration of the issue with a very limited number of participants. Secondly, the study also addressed the teacher candidate experience over time, drawing on data from the entering point of the pre-service program and extending through the second year of teaching. Each phase in this design addressed particular questions which contributed to the overall understanding of what happens when teacher candidates engage in practitioner research in a pre-service program focused on inquiry with the goal of improving pupil outcomes.

Analysis #1: Quantitative Methods

The quantitative portion of this study consisted of analyses of rubric scores from teacher candidate inquiry papers collected from two cohorts of teacher candidates in spring, 2006 and 2007. Analysis #1, the quantitative analysis of rubric scores and first phase of the sequential explanatory strategy, addressed the sub questions: *What is the range and variation in teacher candidate scores on inquiry papers, as measured by the inquiry scoring rubric? Are there differences among category scores on inquiry papers, as measured by the inquiry scoring rubric? Are there differences in scores of subgroups of teacher candidates?*

As tools in scoring performance assessments, rubrics have been increasingly utilized in connection with educational projects ranging from large-scale tests of constructed-response items related to mandated accountability tests, to commercially produced or teacher-made products for assessing performance tasks in the classroom (Meier, Rich, & Cady, J., 2006; Novak, Herman, & gearhart, 1996; Popham, 1997). Rubrics are generally used as an evaluation tool and as a scoring strategy on complex tasks to provide reliable scores, validate judgments, and support improved instruction and learning outcomes (Popham, 1997). Clearly established expectations and explicit criteria make rubrics especially valuable in prompting self-assessment and providing

focused feedback to instructors and pupils (Jonsson, & Svinby, 2007). A number of these purposes were reflected in this study in assessing teacher candidate inquiry projects.

There were two points of data collection and analysis for the quantitative phase. First, an exploratory pilot study was conducted using a sample of 46 master's level papers in May, 2006. The first analysis of rubric scores had several purposes: first, to establish the reliability of the new inquiry scoring rubric; second, to determine the range and variation of paper scores on the inquiry scoring rubric; as well as to highlight differences among categories that would indicate relative strengths and weaknesses. Furthermore, anecdotal evidence and early survey data had indicated that there were differences between elementary and secondary candidates, prompting comparisons of these subgroups.

This information was then used as program feedback to make adjustments to the inquiry seminar. The following year, a second sample of forty-six papers was collected and analyzed from the spring, 2007 cohort of master's students. For this second cohort, it was hypothesized that with the new inquiry assignment and inquiry scoring rubric, as well as the new focus on pupil learning in the inquiry seminar, candidates' inquiry paper scores would improve over those in the first cohort. No differences were expected between categories of the rubric, which are explained in detail later in this chapter. Differences found in the first cohort between elementary and secondary candidates were expected to continue in the second cohort.

Interpretive Qualitative Methods

The qualitative methods in this study consisted of a content analysis of a sample of inquiry papers representing the range of scores in Analysis #1 and two longitudinal case studies of teacher candidates. The purpose of utilizing interpretive qualitative analysis was to develop and extend the findings of Analysis #1 through deeper analysis of inquiry papers and

participants' experience in learning to teach through inquiry. Specifically, Analysis #2, the content analysis was intended to address the questions: *What is the nature and quality of inquiry projects conducted by teacher candidates, including: What questions do teacher candidates ask in inquiry? How do candidates analyze and interpret data? How do candidates make sense of pupil learning? How do candidates use the information gained from inquiry to improve their practice and pupil outcomes?* The purpose of Analysis #3, the case studies, was to address the question: *How do two novice teachers use inquiry from their pre-service program in their first two years of teaching?*

Thus, two phases of the research, Analysis #2 and Analysis #3, were addressed through interpretive qualitative research methods. The term "interpretive" was used in keeping with Erickson's (1986) notion of a family of research methods that includes ethnography, case study and content analysis used in this study. Additionally, consistent with the sociocultural perspective that framed this study, a key feature of interpretive study is the aim of "understanding the meaning people have constructed, that is, how they make sense of their work and the experiences they have in the world" (Merriam, 1998, p. 6). Interpretive research exposes the "invisible" of everyday life to provide local meaning and perspective. It gives meaning to participants' actions within a particular context, such as a school or classroom. Qualitative research is defined by its emphasis on verbal and descriptive data, highlighting qualities or fundamental meanings. Thus, this study utilized data from interviews, observations and written artifacts—or as Wolcott (1992) stated, "watching, asking, or examining." The advantages of this approach, noted by Miles and Huberman (1994), include rich descriptions and explanations that preserve chronological flow, offering connections between events and consequences.

Additionally, qualitative data is likely to yield “serendipitous findings and...new integrations” (p. 1) that generated or redefined conceptual frameworks.

Analysis #2 utilized content analysis, a form of interpretive qualitative research. Weber (1990) defined content analysis as “a research method that uses a set of procedures to make valid inferences from text. These inferences are about the sender(s) of the message, the message itself, or the audience of the message” (p. 9). Krippendorff (1980) added that the research technique should allow for “*replicative* and valid inferences” (p. 21), suggesting that content analysis should be explicit, transparent and systematic. The means of reducing a large body of text to more relevant, manageable data depends on the interests and purposes of the researcher, but conforms to basic strategies of interpretive qualitative methods including data reduction, organization, and theory development. Content analysis is sometimes viewed as a more “objective” approach than other qualitative methods, since it allows for the quantitative description in establishing patterns, for example. Aletheide (1987) stated that in conducting content analysis, predetermined categories and variables initially guide the study, though additional categories are expected to emerge throughout the study and analysis. As with other forms of qualitative research, however, content analysis is an essentially inductive process (Rossman & Rallis, 2003). Using these general guidelines, then, this content analysis explored the kinds of questions posed by candidates, what they counted as pupil learning, how they analyzed and interpreted classroom data, and whether and how they adjusted practice on the basis of classroom data.

Analysis #3 focused on two case studies, using data drawn from a larger longitudinal qualitative case study, referred to as the Qualitative Case Studies Project, or QCS (described in detail later in this section). This study drew heavily from the anthropological approach of

ethnography, which values the description and interpretation of social behavior in cultural contexts (Schram, 2003). Analysis took the form of detailed, “thick description” (Geertz, 1973) of patterns, principles and meanings derived from interviews, observations and interpretation of artifacts from data-gathering over three years. The aim of Analysis #3 was to interpret the data to determine whether and how teacher candidates evidenced an inquiry stance as novice teachers.

Research Sites and Context

This research was conducted at a number of sites. They included HU and the context of the inquiry program in the school of education, and the TNE reform initiative. Additionally local public and private elementary and secondary schools hosted student teachers and hired teacher candidates followed in the case studies. A description of these sites and contexts are provided.

Heights University

HU serves approximately 15,000 undergraduate and graduate students, with the school of education graduating approximately 300 undergraduate and graduate teacher candidates each year. This highly competitive private university prides itself on providing the foundation of a strong liberal arts education, supporting a robust program of faculty research, and remaining dedicated to the mission of social justice. The school of education offers programs to prepare aspiring teachers in the areas of Early Childhood Education, Elementary Education, Secondary Education (in a range of content areas), Moderate Special Needs, Severe and Low Incident Disabilities, Reading Specialist, and Teaching English Language Learners in undergraduate, fifth year and master’s level programs. The mission of the school of education includes an explicit commitment to preparing teacher to teach for social justice and building a community of learners, teachers, and scholars to improve education at all levels. For more than a decade, five themes have been central to the school’s philosophy. These themes include: promoting social

justice, constructing knowledge, inquiring into practice, affirming diversity, and collaborating with others.

Inquiry at Heights University

In addition to methods courses and practica, all education students completed a capstone inquiry project. For master's level students, who were the focus of this study, the inquiry project took the place of a comprehensive exam. As noted earlier, teacher education programs at HU have utilized inquiry as a way to encourage teacher candidates' questioning, reflection, rethinking of beliefs and assumptions, and decision-making based on the data of classroom practice. Teacher candidates were required to pose an original question, collected multiple school and classroom data sources, and used the data to guide instruction and future practice. The final product was a lengthy inquiry paper, examining the relationships of teaching, learning and social justice in the classroom. As in many other teacher education programs where teacher research or inquiry is a central activity, it was assumed that inquiry encourages teacher candidates to reflect on their emerging practice as professionals, raise questions about school organization and practices, rethink curriculum and instruction, improve practice and pupil outcomes, and begin the life-long process of learning to teach using their school and classroom as a site for inquiry. However, at HU, there was no empirical study of teacher candidates' learning, or the learning of their pupils. An informal review of many past inquiry projects conducted by teacher candidates revealed that although inquiry seemed valuable in prompting teacher candidates' to develop new insights, few inquiries focused directly on pupils' learning or linked teachers' learning with pupils' learning.

Teachers for a New Era

This situation changed when HU faculty instituted a research initiative connected to TNE, in 2003. The existing inquiry project became a target of interest as a major component of the teacher education program and one of only two assignments that all teacher candidates completed during their course of studies. Subsequently, the inquiry study became one of six studies in the portfolio of research designed to examine the effectiveness and processes of teacher education (see Appendix A for Evidence Portfolio).

The TNE initiative, funded by the Carnegie Corporation of New York and other supporters, is intended to promote reform in teacher education through efforts at selected institutions across the nation (see Appendix B for Conceptual Framework). TNE reform is driven by three design principles. The first principle, respect for evidence, emphasized that decisions about teacher education should be driven by empirical research with the primary assumption that the effectiveness of teacher education is determined by pupils' learning growth. The second principle emphasized participation by arts and sciences faculty members in the education of teachers with collaborations between arts and sciences and education. Finally, TNE viewed teaching as a "clinically taught practice profession," where universities are closely connected to schools with residency and/or induction programs extending at least two years after graduation. Data for this research was drawn from two of six studies that constituted the portfolio created by the multidisciplinary Evidence Team (ET) of the HU initiative. Charged with assessing teacher education, the ET concluded that no single outcome or research design could capture the impact of teacher education. Instead, the team developed an evidence portfolio with quantitative, qualitative, and mixed methods studies designed to examine impacts and relationships among teaching, learning, learning to teach, and social justice. These studies were designed to

complement one another and provide a rich picture of what it means to examine the effectiveness of teacher education. Two of the TNE studies, the Inquiry Project and Qualitative Case Study Project contributed to this research effort.

Inquiry project.

As noted previously, the inquiry experience of teacher candidates became the focus of one study in the portfolio of evidence. A team of researchers, a subset of the ET, in conjunction with faculty, redesigned the inquiry seminar experience and inquiry paper assignment to focus more explicitly on pupil outcomes. At the same time the inquiry scoring rubric was developed to evaluate the inquiry papers (see Appendix C for Inquiry Scoring Rubric). This research study was “Inquiry on Inquiry” (Barnatt, Cochran-Smith, Friedman, Pine & Baroz, 2007), with the intent of developing reliable and useful measures of learning to teach through inquiry, and documenting the experience of teacher candidates at HU for the purpose of providing program feedback for faculty. Data from the rubric scores in this pilot, as well as data from the following year, were used for quantitative analysis (Analysis #1). Inquiry papers from the second cohort in spring, 2007, working under full implementation of the new assignment requirements, were used for the content analysis (Analysis #2).

Qualitative case studies project.

The QCS project, also part of the ET’s portfolio of evidence, provided data for the case studies in this dissertation. QCS examined relationships among candidates’ entry characteristics; teaching learning in coursework and fieldwork; developing understandings of teaching, pupil learning, and social justice; teaching practices during student teaching and the first year; pupils’ learning; and efforts to teach for social justice. The QCS project is a longitudinal study following 22 teacher candidates from the master’s level program, through their teacher

preparation program and into their classroom experiences. The cases utilized in this research were taken from the first (2005-2006) participant cohort. The QCS design was originally conceived as a three-year undertaking using a staggered research design with the Year 1 design (pre-service year) applied to a cohort of 12 candidates across elementary and secondary grades/subjects and repeated with a second cohort of 10 candidates the following year. The Year 2 design (first year teaching) was applied in the same manner. Data sources for the larger study included interviews, observations in classrooms and documents and materials representing pupils' and candidates' learning (see Appendix D and E for interview and observation protocols). A Year 3 design was added due to the continuation of doctoral researchers on the project, and the close relationships formed with the participants in the preceding years of the study. In the Year 3 design the novice teachers, now in their second year in the classroom, were interviewed twice, once in the first half of the year, and once in the last two months of the academic year. The QCS project utilized HyperResearch, a program designed to manage and organize large sets of qualitative data (Hesse-Biber, Dupuis, & Kinder, 1991).

K-12 Schools

This research was also conducted in several K-12 classrooms. Participants conducted an inquiry project in their practicum classrooms. These schools ranged from inner-city schools with limited resources, extraordinary numbers of children living at the lowest socioeconomic levels, high minority populations, and numerous English Language Learners populating the classrooms, to suburban schools with excellent resources, and limited linguistic, ethnic or racial diversity. All schools were part of HU partnerships in the region, providing support and oversight from cooperating and supervising teachers through the practicum office.

School settings for the two case study participants were located in the metropolitan area, but outside of the inner-city experience. All of the schools where these candidates completed their student teaching and eventually worked as teachers had excellent physical sites, rigorous academic and extracurricular programs, and adequate resources. One participant completed her student teaching in a city with a largely upper-middle class population known for exceptional performance on mandated tests and a record of high student placement in post-secondary schools, including elite and competitive programs. She was hired for a position in another high school in the same district, with similar demographics and resources. The second participant completed his pre-practicum in a small Catholic high school, while his student teaching took place in a large public high school. He was hired to teach middle school in the same district in which he finished his student teaching. This community is an “edge” city with a working-class population and diversity in classrooms stemming from a burgeoning Latino population and relatively high incidence of pupils identified with special needs.

Researcher Role

My role as part of the TNE initiative began in 2003, at about the same time that HU was selected as a recipient of a TNE grant. I joined the ET as a research assistant just as this multidisciplinary group was being formed. This group was charged with developing a conceptual framework and plan research efforts to be conducted over the next five years, the life of the grant. For the next five years, I continued to work as a research assistant on a number of projects in the ET portfolio, including the two research efforts that provided data for this proposal.

During this same time period, I also acted as a core member of the Inquiry Study group working with the ET and faculty in all elements of this research effort. This included revision of

the inquiry seminar assignment, development of the corresponding inquiry scoring rubric, conducting pilot testing on the rubric, and revision of the rubric through several iterations. I was also trained as a rater for the rubric, subsequently scoring papers over the last three years. In spring, 2008, I assisted in training HU faculty in the use of the inquiry scoring rubric. I coordinated the collection of data from spring, 2006, 2007, and 2008 cohorts, recruiting participants, obtaining their consent, and collecting inquiry papers from teacher candidates. I also assisted in the initial statistical analysis of the rubric scores from spring 2006 data, for the pilot study of the inquiry scoring rubric.

During the 2006-2007 academic year I was an instructor for the inquiry seminar, a year-long course of study, working with three other instructors to implement inquiry seminar assignment changes and unify course practices. Given that papers were randomly selected for Analysis #1, it is likely that several of my students were included in Analysis #1, for the 2007 cohort. However, since no names were attached to any of the data, it was not possible to identify which scores belong to my students. Additionally, the papers of two students from my inquiry seminar class were part of the content analysis, Analysis #2, which, as the course instructor I recognized from working with these candidates in my classroom. However, both of these papers were also scored by at least one other faculty member trained in scoring papers using the inquiry scoring rubric. I did not know that they were included in the sample at the time I scored their projects. Neither case participant was in my seminar course. Thus, although I may have been the instructor for some teacher candidates in Analysis #1 and #2, this did not influence the analyses in any way.

During the same time period described above, I was also a core member of the QCS group, involved in all aspects of the development of the research design, protocols for interviews

and observations, and consensual analysis of data. I was the primary researcher responsible for conducting interviews, observations, and collecting pupil artifacts for three of the QCS participants, beginning with the preservice program and continuing through their first years of teaching. Two of these participants are the focus of the case studies, which make up Analysis #3. I also conducted interviews with HU faculty, supervising teachers, cooperating teachers, mentors and administrators working with these participants in their preservice program or novice year of teaching. At this time, I continue to conduct interviews with these teachers now in their third year of teaching. My various roles in both of these research efforts provided me with an intimate and detailed knowledge of the data, particularly in connecting learning to teach through inquiry.

Analysis #1: Quantitative Analysis of Inquiry Rubric Scores

What follows is a detailed description of Analysis #1. This includes the population and sample, instruments, data collection procedures and analysis.

Population and Sample

The population for Analysis #1 included teacher candidates who completed their inquiry seminar during the spring 2006 or 2007 term at HU. This course, which is the capstone experience in the school of education, required completion of an inquiry project in the semester just prior to graduation. Each cohort was made up of approximately 130 master's level teacher candidates. Of these, 110 and 113 candidates in the respective cohorts agreed to participate in this effort, allowing their inquiry papers to be scored and analyzed for research purposes and program feedback. These participants included candidates seeking certification in early childhood education, elementary education, a variety of secondary education content areas, special education (including moderate and severe special education licensure levels), and reading

specialists. From those candidates providing consent, forty-six master's level papers were selected from the 2006 and 2007 cohorts. A number was assigned to each participant in a cohort and a sample was then drawn using random sampling software.

Instrumentation

An inquiry scoring rubric, developed to reflect the program's new required focus on pupils' learning, was used to evaluate the projects within four categories: *Teacher as Researcher*, *Content and Pedagogy*, *Pupils' Learning*, and *Learning to Teach for Social Justice*.

The category *Teacher as Researcher* was intended to capture whether and to what extent candidates took an inquiry stance toward teaching, including whether and how they drew on conceptual and theoretical frameworks and posed researchable questions; how they collected, reported, and analyzed data to construct and modify classroom practice; and their suggested implications for immediate and ongoing practice. The category *Content and Pedagogy* focused on the subject matter content of lessons, the teaching and learning opportunities created, resources and assessments used and the developmental and cultural relevance of content and pedagogy. The category *Pupils' Learning* was concerned with the cognitive, social, and emotional learning opportunities that were created for pupils; the degree to which these aligned with local, state, and national standards; the sources of evidence that represented pupils' learning; and the success of teacher efforts. The category *Teaching for Social Justice* was designed to capture candidates' reflections on their own biases and beliefs, their understanding of school and classroom contexts and cultures, whether and how they established a climate of respect that affirmed diversity as an asset, and the degree to which their teaching enhanced the learning of all pupils.

Each category was compromised of five items; each rated on a scale of 1-5, from “poor performance” to “exceptional.” The scoring rubric outlined in detail the criteria for each level of performance. For every item, a score of 3 was the minimum acceptable level of response for a passing effort. As such, an overall minimum passing score was identified as a 60 point total score. The rubric was the product of multiple revisions by faculty and members of the ET.

Eleven faculty members and doctoral students (including myself) participated in a three-day training session applying the rubric to a sample of inquiry projects in spring, 2006. Raters achieved ~96% inter-rater agreement and a targeted inter-rater reliability coefficient of .80.

Data Sources

Rubric scores for a total of 92 papers, 46 from each of the two cohorts, were used for Analysis #1, the quantitative phase of the study. The 46 papers from the first cohort were used for exploratory purposes and to establish reliability of the rubric as a pilot, with the analysis from scores in the second cohort providing primary data for examining range, variation and differences found in rubric scores. Each inquiry paper was rated by at least two of the trained raters, with scores of raters averaged for the reported score. The raters were assigned papers to score based on their area of expertise with consideration given to grade level (elementary or secondary) and content area (literacy and language arts, math, social studies, science, special education, English language learners). A third rater was used if there was a discrepancy on any item score of more than one unit (on the scale of 1-5). Refresher training was held in spring, 2007 and the same raters and procedures were used for scoring the papers from candidates in this second cohort.

Data Collection Procedures

Teacher candidates completed inquiry papers the final assignment for their inquiry seminar. Two copies of the papers were collected by instructors and dispensed to trained raters for scoring. Raters were assigned by the department chair. Electronic copies of the papers were also collected by the department chair for archival purposes. Raters scored the papers and returned scoring sheets to the department chair. For the sample of papers drawn for this study, I entered scores from the sheets into an Excel file and transferred them to SPSS for analysis. The data were checked against the original scoring sheets for accuracy by a graduate research assistant.

Procedures and Analysis

The analysis of papers in the first cohort was primarily for exploratory purposes, as well as to establish reliability of the rubric. From this pilot study focused on scores from spring, 2006, I wanted to gauge the range and variation of total mean scores as an indication of the overall quality of the papers. I was also interested in investigating differences in the mean scores of the four categories of the rubric, as a reflection of strength or weakness in these areas, which had been identified by faculty as central to a good teacher inquiry project. Additionally, entry and exit survey data, generated by the TNE ET, indicated differences in how elementary and secondary teacher candidates viewed inquiry and their inquiry seminar. Secondary candidates were not as satisfied with the inquiry experience, indicating that they did not consider the seminar valuable in learning to teach. Anecdotal evidence from faculty teaching the inquiry seminars revealed that secondary candidates seemed less invested in the inquiry projects. Given this information, I wanted to use the rubric scores to compare the outcomes of these two groups. Descriptive statistics were computed, using SPSS, to provide range and variation in rubric

scores. Inter-rater reliability and score reliability were established using Cronbach's alpha values for raters, mean scores on rubric items, and category means. Paired-samples t-tests compared means for the four categories of the rubric. Additionally, independent samples t-test compared total means and category means for elementary and secondary education teacher candidates.

While these papers, from spring, 2006, were also scored on an older rubric, this older assessment tool had never been put through the rigors of piloting or assessed for consistency in use. An informal review of papers from prior years revealed considerable discrepancies among faculty scores using the old rubric. The relatively vague nature of the descriptors left room for a range of interpretations as it was applied to projects. Additionally, attention to pupil learning outcomes was not highlighted in the old rubric, a significant change in program focus.

The primary focus of Analysis #1 was an exploratory study of the rubric scores from the second cohort, drawn from spring, 2007. This analysis was the major focus of Analysis #1 once the pilot study established rubric reliability, the assignment and rubric were refined, seminars focused on pupil learning, and the rubric was made available to candidates as they developed and completed their inquiries. A review of project questions from years prior to the assignment change revealed that teacher candidates were more focused on pedagogy and practice, than on pupil outcomes (Barnatt, Cochran-Smith, Friedman, Pine & Baroz, 2007). Unlike candidates in the pilot study, the second cohort (2007) worked under the new assignment, a revised inquiry seminar, and had the scoring rubric as they conducted their research. I hypothesized that rubric scores would improve in the second cohort, as compared to the pilot scores whose inquiries were conducted before pupil learning was made a focus. I did not expect any differences among scores in the four rubric categories, as the rubric outlined explicit and detailed expectations in

categories identified as key to the completion of a good inquiry. Finally, I hypothesized that differences between elementary and secondary candidates would continue to exist, given that the rubric did not address possible differences among these candidates.

Cronbach's alpha values for raters, mean scores on rubric items, and category means were again computed. Descriptive statistics were generated for this second cohort. Additionally, comparisons of mean scores between the 2006 and 2007 cohorts were conducted, including total scores, mean total scores of the four categories of the rubric, and elementary and secondary candidates' mean scores. It was not possible to further compare other subgroups (content areas or specialty areas such as reading specialist, TELL candidates, or special education candidates), as there were not sufficient numbers of participants to make this a reasonable analysis.

Analysis #2: Qualitative Content Analysis of Inquiry Papers

The second analysis was a qualitative content analysis of a smaller sample of inquiry papers (see Appendix F). This analysis was intended to further develop the quantitative analysis in Analysis #1. A description of Analysis #2 is included in the next section, including participants, data sources, and analysis.

Participants

The twelve participants in Analysis #2 were among the master's level teacher candidates who completed their inquiry seminar during the spring 2007 term in the school of education at HU.

Data Sources

Twelve papers were selected for in-depth qualitative content analysis from the larger group of 46 papers in the spring 2007 cohort included in Analysis #1. Papers from this cohort were used because this was the first group who experienced the full implementation of the new

assignment and inquiry seminar modifications and used the inquiry scoring rubric in developing and conducting their inquiry projects. Three papers from each 10-point spread on the passing range of the rubric (60-69; 70-79; 80-89; 90-100) used in Analysis #1 were chosen for Analysis #2, to ensure a range of inquiry projects. Papers were chosen based on proximity to the median score in the point range being represented. For example, the median score for papers whose total mean fell between 70 and 79 was determined, and the three papers closest to this median score were used for content analysis. In the case where multiple papers met this criterion, papers were chosen randomly using random sampling software. This provided representation across all passing scores, while maintaining qualitative differences from point spread clusters.

Data Analysis

To analyze these papers, content analysis, from the tradition of interpretive qualitative research, was utilized in “the simultaneous coding of raw data and the construction of categories that capture relevant characteristics of the document’s content” (Merriam, 1998, p. 160). Unlike other forms of qualitative analysis, content analysis uses predetermined categories in the examination of documents and text, although additional categories may emerge throughout the study (Altheide, 1987). The categories in this study focused on the elements of practitioner research (e.g., kinds of questions posed, data sources used, analysis and interpretation), how candidates understood pupil learning, whether and how data were used to adjust practice, and how teacher candidates addressed issues of social justice. These categories were chosen as consistent with the rubric criterion, which reflect critical elements in the inquiry process, faculty values, seminar emphasis, and school of education themes. Additionally, descriptions of school and classroom culture were included as factors that might differ dramatically from one candidate to another, and influence the development of an inquiry stance.

Matrices were developed through multiple readings of the papers to record information in each of the categories noted above, and to record key quotations. The matrices were then read and reread to further develop themes and categories using descriptive, interpretive, and pattern codes (Miles & Huberman, 1994). As with other qualitative techniques, analysis was an iterative and ongoing process (Glaser & Strauss, 1967) to guide the inductive processes of coding and analysis.

Analysis #3: Case Studies

Analysis #3 consisted of longitudinal case studies of learning to teach through inquiry, following two candidates beginning with their entry into the pre-service program and through the first two years of teaching. These three year longitudinal case studies extend and develop findings in the previous analyses. This section describes participants, data sources, and analysis.

Participants

Participants for two case studies were drawn from the 2006 master's level cohort in the school of education at HU. They were chosen from this cohort in order to provide data across the longest period of learning to teach.

The larger QCS study consisted of 22 teacher candidates followed for a period of three years, corresponding to their preservice program and through the first two years of teaching. Researchers recruited participants for the QCS project from foundation classes during the cohort's entering summer term. The following restrictions were placed on any prospective participant: a) they could have no experience as fulltime classroom teachers; b) they planned on completing the master's program within one year; and c) they planned on teaching in the local area following graduation. To increase diversity, additional minority participants were recruited. In this way, a list of 18 potential participants was generated. Each participant was invited to a 20

minute interview with a researcher. These interviews ensured that candidates met the requirements stated above, that they showed interest and dedication to the research project, and that they were articulate and forthcoming in response to open-ended questions in an interview situation. Interviewers compiled notes on each candidate and the full team met to choose a cohort of twelve participants that represented elementary and secondary levels, included a range of curriculum areas at the secondary level, and reflected the gender and minority diversity of HU's master's program. Participants were assigned to each researcher, who maintained responsibility for all communication, interviews, observations, and artifact collection for their participants across the research period.

Two participants from the larger QCS sample were selected for this study. One was a female, secondary school history teacher, the other was a male, sixth grade science teacher. Key characteristics of the two participants are included in Table 3.1. I acted as the primary researcher for both of these participants from August, 2005 to present.

Table 3.1. Analysis #3 Case Study Participants

| Participant | Race/ Ethnicity | Gender | Age (fall '05) | Under- graduate major | Full- Time Work before HU | HU Program of Study | Student Teaching Placement | 1 st Year | 2 nd Year |
|--------------|--------------------|--------|----------------------|-----------------------------|---------------------------------------|---------------------------|----------------------------------|--------------------------------------|--------------------------------------|
| Mara | White | F | 22-25 | History/ Fine Arts | Yes | Secondary History | Secondary History Urban | Secondary History Urban | Secondary History Urban |
| Craig | White | M | 40 + | Science | Yes | Secondary Science | Secondary Science Urban | Middle School Science Urban | Middle School Science Urban |

Data Sources

Data for the two case study participants were collected as part of the larger, longitudinal QCS project. For each of the two case studies, data included six interviews conducted during the preservice program, three interviews conducted during the first year of teaching, and two interviews in the second year of teaching (see Table 3.1). Each face-to-face interview between researcher and participant ranged from one to two hours in length. Interviews were thematically organized around topics such as life history and perceptions of teaching and learning; the pre-practicum experience; perceptions and experience in methods and foundation course work; experience in student teaching; using pupil work for understanding pupil learning; inquiry practice in teacher education; and program overview. A portion of each of these interviews focused on the role of inquiry and/or pupil learning significant to this study. Brief interviews with supervising and cooperating teachers, mentors, and supervising administrators were also conducted using semi-structured interview protocols generated by the QCS team.

For each case study, a total of ten classroom observations of approximately two hours in length were conducted, with five observations during the preservice period, four observations during the first year of teaching, and one observation during the second year of teaching. An observation protocol designed by the QCS team included five sections: classroom diagram; school context; school and classroom conditions; chronology of events; scripting of the observation.

The classroom observations provided a firsthand look into how participants evolved as teachers over time. The foci of the observations were teaching (including content and pedagogy); pupil learning (including academic, social, and emotional learning); and social justice (including issues of equity, learning opportunities, classroom community, and discourse

about issues of social justice). Researchers attempted to record as much of what was seen and heard during the observation. Additional field notes were added to the scripted events following the observation, which included additional conversations with the participants before or after the observation, reflections, clarifications, notes on unusual occurrences, patterns that might be revealed across several observations and/or interviews, or dissonance in what was observed and what participants reported in interviews, for example.

In an effort to uncover how teacher candidates understand pupil learning, as well as how they created and evaluated opportunities for teaching and learning, an evaluation protocol, the Teacher Assessment/Pupil Learning Protocol (TAPL), was developed and utilized in five interviews (5, 8, 9, 10, 11), including one interview during student teaching and two interviews in each of the first and second years of teaching. TAPL required participants to collect assessment tasks and pupil work samples prior to each of the designated interviews, including one culminating assignment and two assignments leading up to that assessment, in order to reflect on their understanding of pupil learning. During the interview, teacher candidates were asked to describe the larger unit from which the samples were drawn, describe the assignments, evaluate learning goals and pupil performance, and suggest future changes for the assignment. As part of this process, participants were asked to select “high,” “medium,” and “low” samples from the pupil work and respond to questions about pupil learning as they related to the samples. TAPL assignments and pupil samples for the two participants chosen for this study were included in developing their case studies in learning to teach through inquiry. TAPL also included external evaluation of teacher candidates’ assessments and pupil performance, but are not used here.

Additionally, major course assignments for each candidate were collected for use in the case. For these case studies, the participants' inquiry projects were analyzed as key evidence in candidates' understanding of an inquiry stance and as an example of using practitioner research in learning to teach.

Data Analysis

The QCS research team, including myself as a member of the research group, utilized consensual qualitative research methods (Hill, Thompson, & Williams, 1997), which are concerned with the meanings of participants and uses inductive analysis to build explanations. All data were collected using standardized protocols to provide consistency across responses, and the team of two faculty and nine doctoral researchers arrived at "consensus judgments" (p. 521). This labor-intensive, nonlinear approach for analysis was used because the process allowed for a larger number of cases than a single researcher could complete, while maintaining the integrity of themes that emerged inductively from multiple readings of the data.

Preliminary analysis of interview data was accomplished through a communal and iterative process of developing categories and codes within categories through group discussion, preliminary coding, and further discussion to clarify interpretation of codes. Researchers also refined definitions, provided examples, and suggested additional codes over a period of several months. Reliability of analysis increased through active engagement in coding by all researchers, and shared discussion to create common understandings about codes and categories. Ultimately, a code dictionary in HyperResearch, a software program utilized to organize and manage qualitative data (Hesse-Biber, Dupuis, & Kinder, 1991), was developed to include the code, a definition, and excerpts from interviews as examples of code application. The code system was piloted, with each team member coding the same set of excerpts from across several

interviews, first independently, and then with a partner. To further ensure inter-coder reliability the research team collectively examined and discussed one coded interview to address issues of clarity or consistency in coding. Using this iterative process ensured that researchers could code independently with reasonable reliability. Abbreviated coding checks were undertaken at several points in the research to maintain reliability. The final code list consisted of 108 codes in four major categories (Entering Characteristics, Teacher Education, School Context, and Teaching as a Profession).

For the purposes of this study, further analysis of specific topics drawn from the codes developed as part of the QCS project were required. Using HyperResearch functions, all interviews were mined for excerpts specifically related to inquiry, the inquiry project, teacher candidate/teacher learning and pupil learning. The current HyperResearch data facilitated identification of possible connections between categories and codes possible through comparison of codes across participants and interviews over the three year period.

Development of protocols and preliminary analysis of observations were also undertaken by the QCS team utilizing consensual qualitative methods. Just as the interview protocols were developed through a process of discussion and shared sense-making of project themes and codes, data from the observations were similarly handled. An examination of existing protocols was undertaken, and the construction of five drafts and multiple pilots of the instrument concluded with the current version. Once the final format was established, researchers observed classrooms in pairs to establish consistency across observers.

When researchers completed observations, a preliminary level of analysis was conducted through the use of an annotated observation record for a select group of observations. Researchers identified six of the ten observations from each participant across the pre-service

period and into the first year of teaching, as representative of examples of teaching and learning in their classrooms. The annotated observations highlighted five specific areas: content, teacher pedagogy and opportunities for learning, pupil learning and assessment, social justice, and relationships and classroom management. For each of these areas, researchers provided a brief description of what occurred; indicators of the teaching practices, pupil learning, and social justice events observed; and excerpts from the observation to support the indicators and description. In each case, the researcher sought to capture the general tone of the observation and included evaluative remarks indicating what stood out and what was consistent with or divergent from the teacher candidates' previous lessons.

Two forms of artifacts were considered in building the cases of learning to teach through inquiry in this study. First, the inquiry projects of the two participants were included. These papers underwent content analysis, similar to that undertaken in Analysis #2. Additionally, since this study followed the footprint of learning to teach through practitioner inquiry from pre-service to pupil outcomes, pupil work samples were examined and compared to interview reports by participants, as a record of the kinds of assignments used, content addressed, nature of response to pupil work, changes made to practice and understanding of pupil learning over time.

Cases were generated by multiple readings (Erickson, 1986) of all data sources. This included repeated chronological reading of material from each case in keeping with the order in which the data were generated over the three year period. Each case was also read by data source. That is, I read all interviews, followed by observations, a review of artifacts, and so on. Finally, I read each data source across the two cases. By reading both first interviews, for example, I was able to see similarities and differences in the categories and themes for individuals. Categories and themes were listed, memos generated, and supporting quotes

identified in each reading cycle. Finally, I read the interviews of cooperating and supervising teachers, mentors and administrators for consistency and confirmation of data and themes. The categories were then collapsed and divided into larger domains that were consistent with the conceptual frames of the study. Analysis was consistent with Glaser and Strauss' (1986) constant comparative analysis, an inductive process of analyzing data to build understanding from continual assessment of identified themes and categories.

Integrity of the Study

In a mixed methods study, considerations of reliability and validity are different for the various methods employed, as well as for the integrity of the project as a whole. Here, I address these issues for both the parts and the whole.

Reliability

Reliability, the consistency of obtained scores from one administration to the next, from tested individual to the next, and from one rater to another in using an instrument, is critical to ensuring the usefulness of the rubric and quantitative analysis. Inter-rater reliability was addressed through rigorous and intensive rater training prior to scoring papers, and refresher training before the second round of rating. Internal consistency was monitored by computing correlation values among rubric items and categories using Cronbach's alpha values. These values are reported in the findings.

For qualitative analysis that seeks to "explain the world as those in the world experience it," (Merriam, 1998, p. 205) replicability is challenged as human behavior is not static, multiple interpretations of events may be possible, and there are no benchmarks for repeated measures. Lincoln and Guba (1985) offered the concepts of "dependability" or "consistency" (p. 288) as alternatives to the traditional meaning of reliability as it applies to qualitative analysis. From this

perspective, data are considered dependable or consistent if the results make sense. That is, the question of reliability is shifted from replication to whether the results are consistent with what has been collected. Using this notion of reliability, researchers assess the dependability of qualitative data through several venues: the appropriate and consistent use of instruments and techniques; information that illuminates the researcher's position; a complete description and rationale for participant selection; and full disclosure of the social context from which data is collected (LeCompte & Preissle, 1993). To accomplish these goals, the researcher must provide a detailed and transparent audit trail, or account of how the results were obtained from the data (Guba & Lincoln, 1981). Finally, with multiple methods, the use of triangulation, or collaboration of data across sources, provides additional reliability (Johnson & Onwuegbuzie (2004).

This study aimed to provide dependability in qualitative data and analysis through the use of systematic and transparent processes, including clear descriptions of procedures and rationale for the design and protocols. Additionally, the consensual approach (Hill, Thompson & Williams, 1997) characterizing the development of the QCS protocols and initial analyses provided additional rigor and consistency in qualitative data collection and analysis of case studies. Finally, the mixed methods approach increased the dependability of results through the corroboration and comparison of findings from one analysis to others.

Validity

Validity refers to how well a study reflects or assesses what was intended to be measured. Validity is concerned with "appropriateness, correctness, meaningfulness, and usefulness of inferences researchers make based on data collected" (Fraenkel & Wallen, 2003, p. 158). Individually, and across the methodologies, issues of internal and external validity were

addressed. In this work, content validity, the extent to which the rubric reflected the intended concept of pre-service inquiry, was a key concern. The rubric was generated by faculty with expertise in conducting practitioner inquiry, and years of experience in supporting pre-service practitioner inquiry in teacher candidates. Extensive consensual negotiations were undertaken to ensure content validity through a series of increasingly refined iterations. Additionally, researchers tested the instrument on papers from previous years, sought input at regular intervals from the full faculty, and conducted a pilot before the rubric was used for evaluation in the capstone seminar, all to ensure content validity. Furthermore, by conducting sequential analyses, it was possible to look for potential contradictions as well as consistency within the same inquiry papers through quantitative analysis and content analysis of the same projects. Threats to validity, however, were apparent as faculty struggled to balance the need to include all critical factors that would be part of pre-service inquiry, and to develop an efficient and manageable assessment tool for use by the full faculty for hundreds of papers.

External validity or generalizability was also an issue in Analysis #1, with the use of quantitative methods. External validity was addressed through rigorous sampling methods, including a sufficient random sampling of participant scores in two cohorts to ensure that the results would generalize from the sample to the cohort population.

Content analysis of a limited number of inquiry papers and the two case studies, were not intended to generate generalizable knowledge (Erickson, 1986), but to provide “perspective rather than truth, empirical assessment of local decision makers’ theories of action rather than generation and verification of universal theories, and context-bound extrapolations rather than generalizations” (Patton, 1990, p. 491). This does not mean, however, that external validity was not a significant concern in qualitative efforts. Stake (1978, 1994, 1995) referred to naturalistic

generalization in qualitative data as an alternative view to traditional generalization. Here, “full and thorough knowledge of the particular” provides insight in “new and foreign contexts” (1978, p. 6), such that generalization develops from experience and is a guide for understanding in other contexts, without claiming any ability to make predictions across situations. Firestone (1993) offered another useful view of generalizability from qualitative research. He referred to “case-to-case transfer,” claiming that another researcher will ask: “what is there in this study that I can apply to my own situation, and what clearly does not apply?” (p. 34). Using the findings in this way, Merriam (1998) stated that the researcher must provide detailed description of the context to allow for comparison and “fit” from one situation to another. In order to best provide these findings, the qualitative researcher should use strategies, including “thick description” (Geertz, 1975) so that researchers can determine if their own situations match that of the research. Additionally, describing how representative is the program, situation, or individual to others within a class, referred to as “typicality” or “modal category” (LeCompte & Preissle, 1993), also enables other researchers to make decisions about whether findings may be relevant to their situations. Finally, using multisite designs, including several sites or cases to add diversity to the findings, may also increase applicability (Merriam, 1998). In this research, these strategies were included to broaden potential naturalistic generalization in the qualitative analyses.

Limitations

Limitations related to this study were tied to the context, population, design, and my assumptions as researcher. This study took place in one university program. As such, the experiences of the participants were bounded by the specific program components and particularly the understanding of teacher research presented through the inquiry seminar and inquiry assignment. Additionally, as a highly competitive university, HU attracts highly

motivated teacher candidates who have already proven successful in the academic role. This had an impact on the design of the rubric; it was assumed that one element of the rubric would be sufficient to address all technical and mechanical elements of writing and format protocols. The need for remediation in writing skills is an anomaly among HU students. The particular population also influenced the content, as well as quality, of the final products. HU students are adept at ascertaining what is required and necessary for achieving an excellent grade on any assignment, and they strive diligently to fulfill those requirements. In other words, instructors ask and receive, particularly on a high-stakes assignment. When asked to shift their inquiry toward pupil outcomes, candidates attended to what they understood their instructors required, through interpretation of the assignment and rubric. Candidates were likely to ignore or eliminate from their projects, however, elements that were not explicitly included in the rubric. It is likely that they also considered which type of research might be scored more generously with this particular rubric. This was a critical consideration in the design of the rubric, especially given the limited number of elements that could be included in generating a manageable rubric used to score numerous papers by multiple raters. At several levels, then, the characteristics of candidates and the design of the rubric limited the outcomes found in the papers and reflected in the score analysis.

The participants contributing to the quantitative analysis and content analysis of inquiry projects allowed their assignments to be used as part of this research, but remained anonymous. On the other hand, the case study participants should be viewed as *unique* volunteers from within the larger population, willing to share their experiences and struggles in learning to teach over an extended period, and trusting researchers to report intimate details about their successes and challenges with sensitivity and respect.

My own assumptions and experiences as a teacher, teacher researcher, and teacher educator influence what I value and how I understand practitioner research, teaching, and learning. This in turn affected the meaning I assigned to participant data, particularly interpretive qualitative analysis. The biases that I brought to this study may, in some ways, have been mediated by the consensual analyses conducted in the QCS case studies, clear and transparent procedures, and disclosure of my research perspective and connection to participants and the program.

CHAPTER 4: QUANTITATIVE AND CONTENT ANALYSIS OF INQUIRY PAPERS

Many teacher education programs use teacher research or forms of practitioner inquiry to help teacher candidates develop an inquiry stance on teaching, a way of looking at practice through questioning, gathering data, analyzing outcomes, and acting and questioning again. As noted in Chapter 2, research on inquiry and teacher development suggests that inquiry may be valuable for several reasons. Practitioner research may help teachers to reflect critically on their own practice and develop observation and analytical skills related to using pupil outcome data to adjust classroom practices. These skills are particularly important in increasingly diverse classrooms that demand flexible approaches to teaching and learning. Furthermore, developing an inquiry stance assumes continuous learning throughout the professional career so that teachers know how to develop and adapt over time, and contribute local knowledge gained from practice that may be useful to the field as a whole.

The HU teacher education program has emphasized inquiry on practice for well over a decade by requiring a capstone inquiry project and inquiry seminar. As in many preservice programs, faculty assumed that these experiences supported an inquiry stance and, at least indirectly, had a positive influence on pupils. However, until recently, these assumptions had not been tested through empirical study. As stated previously, while there is growing commitment to inquiry in pre-service programs, there is limited research examining pre-service practitioner research, particularly longitudinal studies that extend into the first years of teaching.

This chapter includes two related analyses of data on pre-service inquiry. As noted in Chapter 3, Analysis #1 is a quantitative analysis of rubric scores from a sample of 92 inquiry papers using descriptive and inferential statistics. This analysis reports the range and variation of scores as an indication of teacher candidates' ability to engage in practitioner research and also

examines differences among the four categories highlighted on the scoring rubric and across cohorts. Analysis #2 builds on Analysis #1 through a content analysis of twelve papers spanning the range of scores identified in the first analysis. This content analysis explores patterns and themes in the inquiry projects, including the kinds of questions asked, how candidates analyzed and interpreted data, how pupil learning was defined and assessed, and how teacher candidates used data to inform practice.

The inquiry papers were a desirable project to examine as they were required of all candidates and were intended to bring together what teacher candidates had learned from theory, in coursework, and the practicum experiences. For master's level students, the inquiry paper was a high-stakes assignment used in place of a comprehensive exam. The inquiries were generated over a period of two semesters with support and guidance throughout the process from clinical faculty and seminar instructors. All of this suggested that the final papers would represent an outstanding effort from students in a highly selective program, reflecting the candidates' understanding of teaching and learning in the best possible light.

As discussed in Chapter 3, the inquiry scoring rubric was designed to evaluate reliably and compare individual and group outcomes on the inquiry project. Because the entire faculty would eventually use the rubric to score numerous of papers, the rubric had to be clear, concise, and reliable as an evaluative tool. The rubric was also intended to identify areas of relative strength and weakness in individual papers and across progressive cohorts through analysis of scores in the various categories. The idea was that data would provide feedback to the faculty for revisions to the inquiry seminar and other ongoing program adjustments. Over time, the rubric scores could also document improvements by comparing outcomes across cohorts.

Samples from two different cohorts of teacher candidates who completed student teaching in spring, 2006 and spring, 2007, were used for Analysis #1. The first sample was utilized as an exploratory pilot study to assess the reliability of the rubric. The participants in the first cohort worked with the newly revised inquiry assignment, which required them to focus on pupil learning, but they did not have the inquiry scoring rubric available as a reference for their own work. Only very minor changes were made to rubric items following the pilot, however, so that the scores from the pilot group could be compared to the outcomes of future cohorts. The analysis of rubric scores from papers completed by participants in the second cohort was the primary focus of Analysis #1, since reliability of the rubric had been established and these candidates, unlike participants in the pilot study, also had access to the new rubric from the beginning of the first term of the inquiry seminar. These participants also experienced an inquiry seminar that had been revised to address the new focus on pupil learning and corresponding elements of the rubric. As a result, my hypothesis was that the scores in the second cohort would be higher than those in the pilot study. I also hypothesized that there would be no differences among the four category means, since the rubric had been developed using these categories to address four areas critical to conducting practitioner inquiry emphasized in the seminar.

Analysis #1 focuses on the range and variation of scores as an indication of overall quality of the projects. Differences in scores among the four rubric categories reflected overall strengths and weaknesses of the projects as a whole. Finally, Cronbach's alpha values were used to establish the reliability of the assessment tool and Cohen's kappa used to ascertain inter-rater reliability. A second analysis, which was a qualitative content analysis of a sample of papers from Analysis #1, was also conducted to extend and complement the quantitative findings.

Analysis #1: Quantitative Analyses of Rubric Scores of Inquiry Projects

Rubric scores for two cohorts in spring, 2006 and 2007 were analyzed as part of the quantitative analysis. The analysis of rubric scores from the first cohort, a pilot study, and the second exploratory study are reported next.

Analysis #1 – Cohort 1 Pilot

Master's level candidates completing their graduate inquiry seminar in spring, 2006 were the first cohort who worked under the revised inquiry assignment, which required candidates to focus pupils' learning (n = 46). As noted in Chapter 3, this was a pilot study used to establish the reliability of the assessment. To that end, I looked within the four categories, *Teacher as Researcher*, *Content and Pedagogy*, *Pupil Learning*, and *Teaching for Social Justice*, and across the 20 items on the rubric using Cronbach's alpha values as an indication of reliability. The results were impressive, as shown in Table 4.1. Reliability testing across all 20 items yielded a Cronbach's alpha value of .94. These values indicated high levels of internal consistency across items and categories. This established the scoring rubric as a reliable assessment tool. Inter-rater reliability using Cohen's kappa statistic was performed to determine consistency among the eleven raters. The inter-rater reliability was found to be .82 which attests to good consistency in the use of the rubric across the raters.

Table 4.1 Cronbach's Alpha Values for Rubric Categories in Cohort 1

| | Teacher as Researcher | Content & Pedagogy | Pupil Learning | Teaching for Social Justice | All Rubric Items |
|----------|-----------------------|--------------------|----------------|-----------------------------|------------------|
| Cohort 1 | .80 | .84 | .86 | .88 | .94 |

Next, I addressed the question of variation and quality of the inquiry papers from this group. Across the 46 projects, drawn from the spring, 2006 cohort of master's level candidates, scores ranged from 56.50 to 92.67, with a mean of 75.74. Figure 4.1 shows the distribution of mean total scores. In and of itself, this range of scores was somewhat surprising. While the mean total score was well above the minimum standard of 60 points, two candidates did not meet this minimum standard, and there were few papers with overall scores above 90 points. Although a score of 90 on the rubric was not intended to correspond to an "A" on an academic paper, it was impossible to avoid this comparison as the scores were analyzed. What this really meant was that there were few examples of outstanding inquiry projects, which was surprising since this was a capstone project for teacher candidates from a competitive university who were about to enter the teaching profession. These candidates were accomplished students who were accustomed to completing excellent high-stakes assignments. Given the relatively mediocre scores on the inquiry projects, then, it was especially important to determine if low scores on certain categories pulled the scores down, or revealed other general weaknesses.

Mean scores in each of the four scoring categories in this pilot were compared using paired-samples t-tests. My hypothesis was that there would be no differences among the scores for these categories because the rubric was designed using four critically important aspects of engaging inquiry that were addressed in the inquiry seminar as candidates developed and conducted their inquiries. Table 4.2 presents the range and means in each of the four rubric categories: *Teacher as Researcher*, *Content and Pedagogy*, *Pupils' Learning*, and *Teaching for Social Justice*. Distribution of category scores in this pilot is also represented as histograms in Figures 4.2 - 4.5.

Figure 4.1 Distribution of Total Scores in Cohort 1 Pilot Study

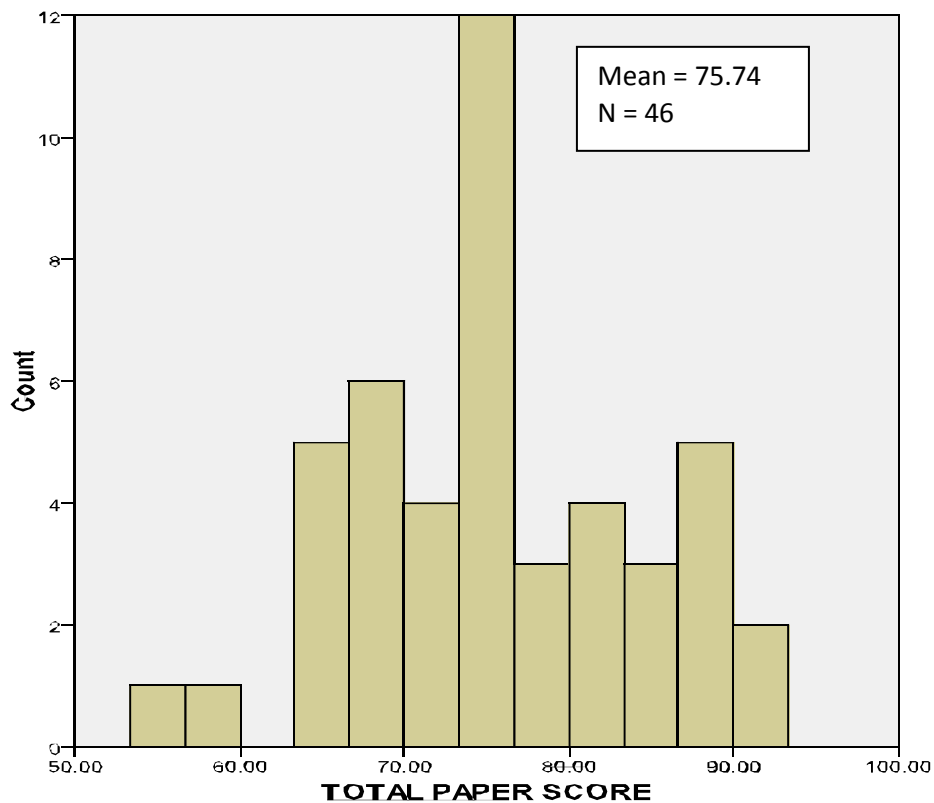


Table 4.2 Range and Means of Rubric Category Scores in Pilot

| Category | Low Score | High Score | Mean |
|---|------------------|-------------------|-------------|
| Teacher as Researcher | 14.00 | 23.50 | 19.05 |
| Content & Pedagogy | 13.50 | 24.50 | 19.37 |
| Pupil Learning | 13.00 | 23.50 | 19.38 |
| Learning to Teach for Social Justice | 12.00 | 24.50 | 18.25 |

Figure 4.2 Distribution of Teacher as Researcher Category Scores in Pilot

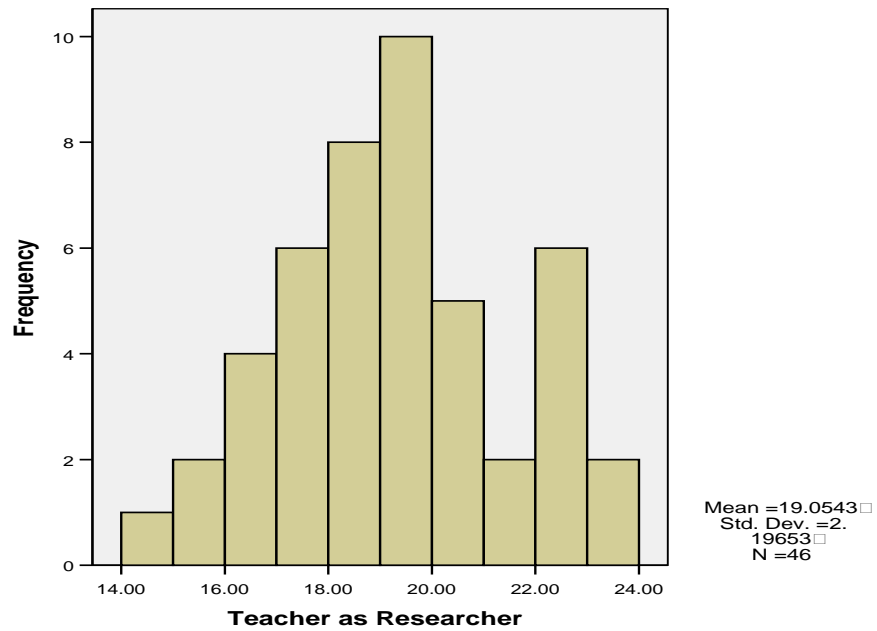


Figure 4.3 Distribution of Content and Pedagogy Category Scores in Pilot

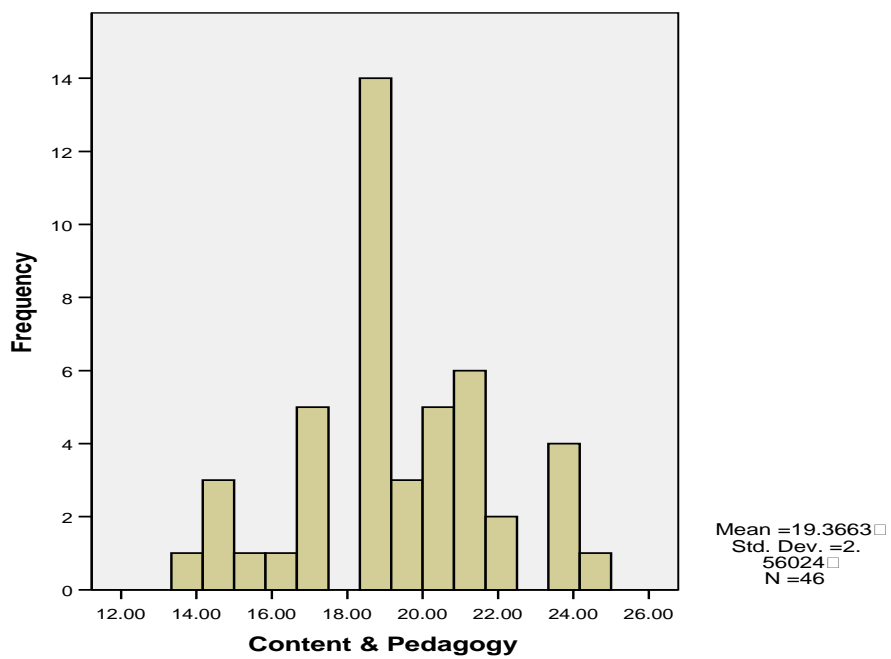


Figure 4.4 Distribution of Pupil Learning Category Scores in Pilot

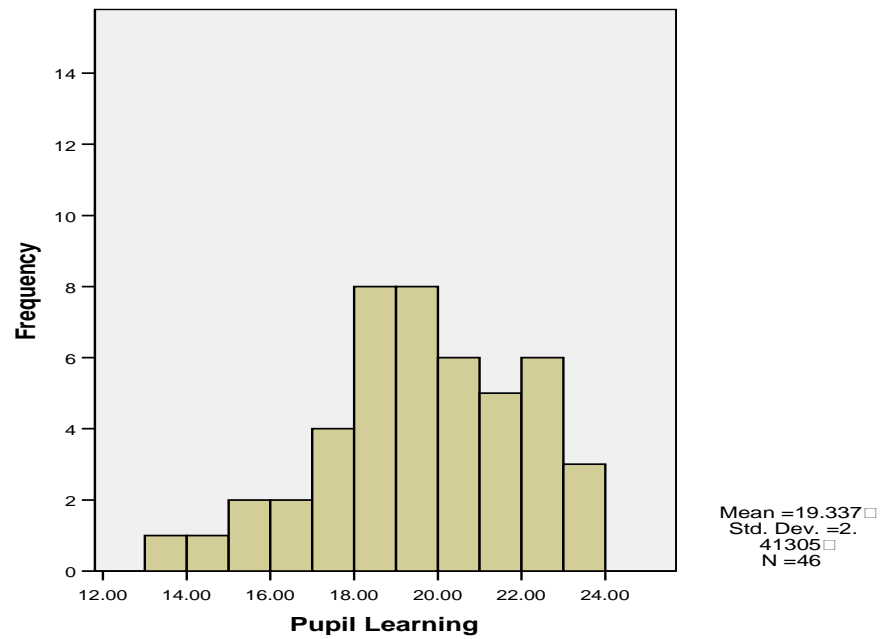
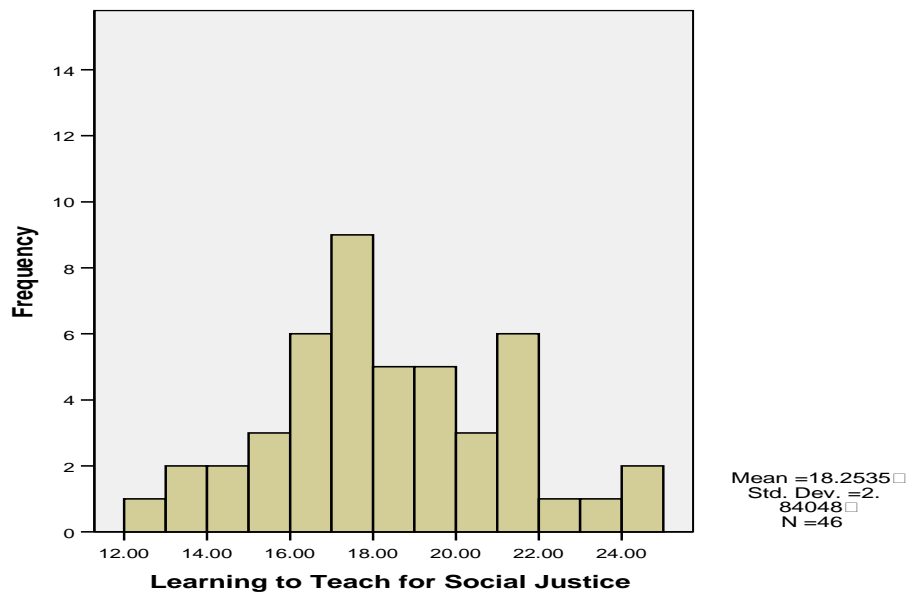


Figure 4.5 Distribution of Teaching for Social Justice Category Scores in Pilot



For each of the four categories, mean scores were above the minimum acceptable total of 15.00 points (3.00 points for five items in each category), indicating that overall, candidates had passing knowledge in each category. Each category also included a number of participant scores below the minimum standard, however, as indicated by the low score in the range and histograms.

The mean scores of three of the categories, *Teacher as Researcher*, *Content & Pedagogy*, and *Pupil Learning*, were not significantly different at $p < .05$, as shown by paired-samples t-tests. The *Teacher as Researcher* category had a mean score of 19.05, with the narrowest range in scores and the highest minimum score (14.00) of all categories, indicating the least differences across candidates. This category was of particular interest as this was the category that measures overall inquiry skills which would be indicative of an inquiry stance. Specifically these items on the rubric addressed the development of theoretical and conceptual frame, collecting and reporting data, constructing and modifying practice, analyzing and interpreting data and overall quality of writing.

The categories of *Content & Pedagogy* and *Pupil Learning* had almost identical means, 19.36 and 19.37 respectively. Again, these category means were well above the minimum standard of 15.00, demonstrating that candidates were able to explicate what they had learned about teaching practice and pupil learning. The range of scores in these categories included a low score in *Content & Pedagogy* at 13.50 and the highest score at 24.50, while the category *Pupil Learning* had a low score of 13.00 and a high of 23.50.

The category of *Teaching for Social Justice* had the greatest range in scores (12.50 points between the low and high scores) with both the overall lowest (12.0) and highest (24.50) scores

across the four categories. The mean was 18.25. Paired-samples t-tests performed on the mean scores of the rubric categories indicated that the total mean score of *Teaching for Social Justice* was significantly lower than each of the other categories, the only significant differences found among the four categories of the rubric.

The lower mean score on the social justice category raised questions about the challenges these items posed for student teachers. Faculty questioned whether candidates would have the authority or confidence to broach questions of social justice in schools or to take action against perceived inequities, and this finding supported those concerns. The results also raised concerns about how the category of social justice had been generated as a distinct category, rather than conceptualized as cutting across categories, which would be more consistent with the way social justice was approached in the program.

As mentioned in Chapter 3, entry and exit survey generated by the ET also indicated that there were differences in how elementary and secondary candidates viewed inquiry and their inquiry seminar, as well as anecdotal evidence from faculty that suggested secondary candidates were less invested in the inquiry projects. Based on this information, I hypothesized that there would be differences between the mean total scores for elementary and secondary candidates, with elementary candidates scoring higher. Independent samples t-test were used to assess differences between total mean scores of the 33 elementary (PreK- 6) and 13 secondary (7-12) teacher candidates. The Levene's test for equality of variances showed no significant differences, indicating the variances were homogenous. Results indicated that elementary candidates scored significantly higher than secondary candidates, $p = .009$. Table 4.3 shows the range and category means for elementary and secondary inquiry projects, while Figure 4.6 provides a boxplot of the differences between elementary and secondary mean scores.

Figure 4.6 Boxplot of Total Paper Scores for Elementary and Secondary Candidates

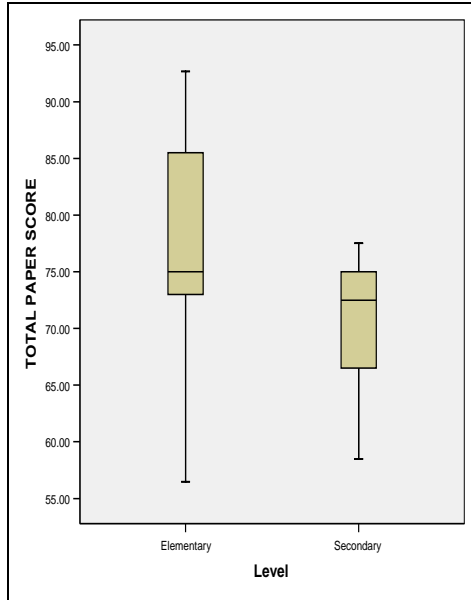


Table 4.3 Range and Means of Total Rubric Scores for Elementary and Secondary Candidates

| Level | Range | Mean |
|------------|---------------|-------|
| Overall | 56.50 - 92.66 | 75.74 |
| Elementary | 56.50 - 92.66 | 77.77 |
| Secondary | 58.50 - 78.50 | 70.60 |

Elementary scores spanned from a low of 56.50 to a high of 92.66, with a mean of 77.77. Ten papers scored above the mean total score of the cohort (75.74). Secondary total scores ranged from 58.50 to 78.50, with a mean of 70.60, with only two scores above the cohort mean. In fact, the two highest scores posted by secondary candidates were relatively low scores at 76.50 and 77.50. On only one item, “Identifying Personal Biases and Beliefs” in the *Teaching for Social Justice* category, did secondary candidates score higher than the elementary candidates, and this was not a significant difference.

To delve deeper into these differences, an independent samples t-test on the mean scores of the four rubric categories across elementary and secondary groups was performed. There were significant differences between the scores of elementary and secondary teacher candidates for the categories *Content and Pedagogy* ($p = .004$), and *Pupil Learning* ($p = .001$), with elementary candidates outscoring secondary candidates. There were no significant differences in

the categories of *Teacher as Researcher* ($p = .111$), or *Teaching for Social Justice* ($p = .114$) although elementary candidates continued to outscore their secondary colleagues. There were differences on Levene's test of equality of variance for the single category of *Teaching for Social Justice* ($F(1, 44) = 5.85, p = .020$). Overall, this suggested that the secondary candidates were less adept in planning, carrying out, and assessing appropriate and effective instruction for pupils, than their elementary counterparts.

When this information was shared with faculty, they raised questions about whether secondary pupils had the same level of access and teaching time as the elementary teachers who were often in self-contained classrooms with the same pupils throughout the day. Faculty noted that due to traditional schedules in high schools, secondary candidates were likely to spend no more than five hours a week with any class, while an elementary teacher spent that much time each day with pupils. This might have influenced candidates' understanding of student abilities and needs, affording less feedback for adjusting practice, and limited time for conducting inquiry in a meaningful way. These factors could also explain why secondary teacher candidates were not as prepared for, or invested in, conducting inquiry on practice.

Analysis # 1 - Cohort 2

One year later, after rubric reliability had been established by the pilot, a second sample of 46 papers ($n = 46$) was drawn from the spring, 2007 cohort, as the primary source of data for the exploratory analysis of rubric scores. These candidates worked under full implementation of the new inquiry assignment with its focus on pupil learning, participated in a substantially revised inquiry seminar, and were given the inquiry scoring rubric at the start of the semester to use as a reference as they developed and completed their research projects. Therefore, my hypothesis was that projects from the second cohort would score higher across categories on the

inquiry scoring rubric. Additionally, I expected that the differences between *Teaching for Social Justice* and all other categories would not be apparent in this cohort, since the rubric provided teacher candidates with explicit description of expectations not available to the candidates in the pilot study. Inquiry instructors were aware of the lower scores in the social justice category with the first cohort, and addressed issues of social justice throughout the inquiry seminar as a key element of the developing inquiries, initiating discussions of what teaching for social justice might look like in relation to the inquiries. Furthermore, candidates in the second group were provided with a variety of exemplary projects from the previous year, which prompted discussions of how issues of social justice permeate the curriculum, school and classroom context, and are tied to pupil outcomes. While social justice had always been a critical element in the inquiry experience, the new scoring rubric and the lower scores for the first cohort increased attention to this category.

Inquiry seminar instructors were also more explicit in attending to the differences between elementary and secondary candidates. Early in the inquiry seminar, instructors pointed out the challenge in access time facing secondary candidates. Secondary candidates were encouraged to identify questions and their target population early in their final term, to counter the limited class time they shared with the pupils. My hypothesis was that there would continue to be significant difference between the paper scores of elementary and secondary candidates, for the second cohort, since there was little that could be done to change pupil access for secondary candidates. I began by once more assessing reliability of the raters and the rubric.

Inter-rater reliability across the seven trained raters, using Cohen's kappa was .80, indicating that scoring remained reliable across those scoring papers. Reliability among inquiry

rubric items for the second cohort was generally as strong as that found in the pilot group, the year before, as reported in Table 4.4

Table 4.4 Cronbach's Alpha Values for Rubric Categories in Cohort 2

| | Teacher as Researcher | Content & Pedagogy | Pupil Learning | Teaching for Social Justice | All Rubric Items |
|----------|-----------------------|--------------------|----------------|-----------------------------|------------------|
| Cohort 1 | .80 | .84 | .86 | .88 | .94 |
| Cohort 2 | .83 | .89 | .88 | .82 | .94 |

The Cronbach's alpha value representing the average across all 20 items was .94, as in the previous year, and was slightly higher for each rubric category, as well. Again, the values were strong enough to support the use of the scoring rubric as a reliable tool for evaluating individual papers, comparing papers, and comparing differences across cohorts.

Once again, there was a wide range of overall scores on the inquiry papers, as indicated in the histogram in Figure 4.7 and Table 4.5. Scores ranged from 53.50 to 96.00, with a total mean score of 79.40. Using 60.00 as the lowest acceptable score, the vast majority of candidates again scored within the passing range, as indicated by total scores. Again, however, two papers scored below the minimum 60.00 standard, each scoring 53.50. The mean total score for the second cohort at 79.40 was somewhat higher than the first cohort mean of 75.74.

Although the mean total scores were generally above the minimum level of competence established by the faculty, the results were again disappointing. There were still not as many examples of outstanding inquiry projects as would be expected, particularly in light of the adjustments made to the seminar. These were accomplished students completing a high-stakes assignment, yet only four papers were scored at 90 points or above.

Figure 4.7 Distribution of Total Scores in Cohort 2

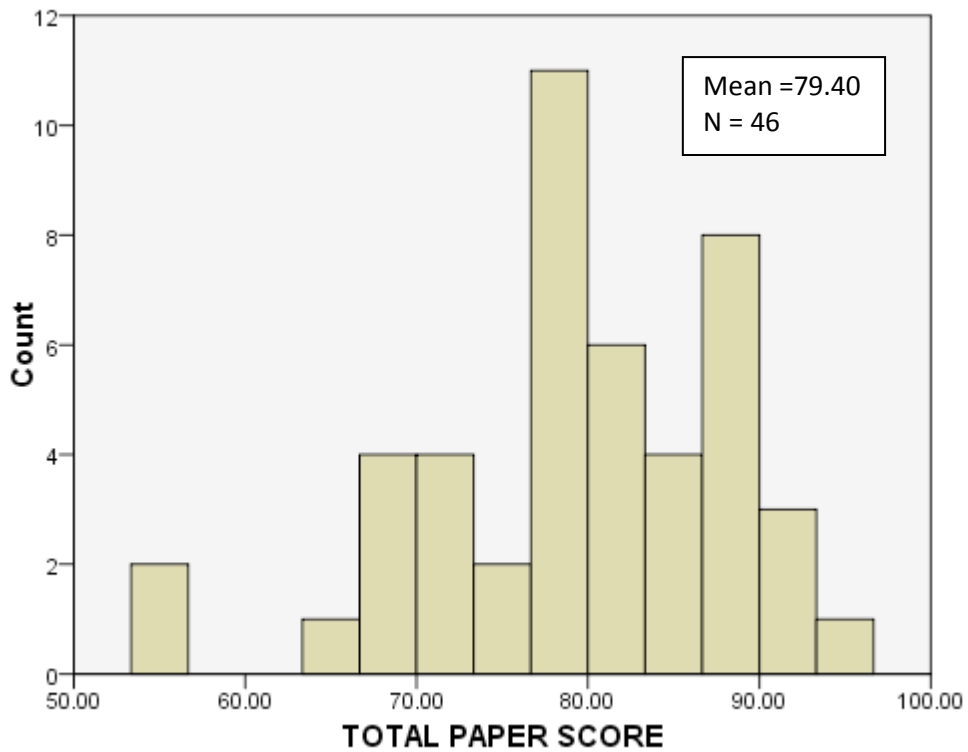


Table 4.5 Range and Means of Rubric Category Scores in Cohort 2

| Category | Low Score | High Score | Mean |
|--------------------------------------|-----------|------------|-------|
| Teacher as Researcher | 11.50 | 25.00 | 19.93 |
| Content & Pedagogy | 12.00 | 25.00 | 20.08 |
| Pupil Learning | 10.00 | 23.50 | 19.72 |
| Learning to Teach for Social Justice | 15.00 | 24.50 | 19.66 |
| Total Score | 53.50 | 96.00 | 79.39 |

Paired-samples t-tests among mean scores of the four categories were performed to determine particular areas that accounted for the overall low scores. None of the paired-samples tests yielded significant differences. In other words, no category could be identified as contributing to lower scores, as compared to other categories.

Papers were then split into two groups, those falling below 80.00 points, and those equal to or above this level, to determine if papers in the higher or lower half of the scoring ranges would differ across the four categories. The 80 point mark was chosen since it was close to the total mean (79.40) and because this separated those papers that scored an average of at least 4.0 (Notable) and up to the Exemplary level on each item. Interestingly, though not intentionally, this split the group exactly into two equally sized groups of 23 papers. Once again paired-samples t-tests were conducted for mean scores of the four categories, for sets of projects falling above and below the 80 point mark. In the 23 papers in the lower group, there were no significant differences among category scores. In other words, all categories scored poorly at equal levels; a paper that scored poorly overall, scored low in each category. Paired-samples t-tests of mean scores for the four categories in the seven papers falling below a score of 70.00 were also conducted. Again, no differences were found among the categories. This was disappointing in that the analysis did not provide additional information to account for weaknesses in the projects.

Paired-samples t-test of mean scores in the four categories for the 23 papers scoring at 80 points or higher revealed that the category of *Content and Pedagogy* was significantly higher than the categories *Pupil Learning* ($p = .032$) and *Teaching for Social Justice* ($p = .034$). That is, candidates who scored well overall were likely to have higher scores in *Content and Pedagogy* than in the *Pupil Learning* or *Teaching for Social Justice* categories. This difference was

interesting in indicating strengths in the best students, and as another piece of evidence that the category *Teaching for Social Justice* posed challenges for candidates.

Comparison of Cohorts

It was worthwhile to compare the scores of inquiry papers of the teacher candidates in the second cohort, who experienced full implementation of changes in the inquiry project and rubric, with scores of the inquiry papers of the pilot study group from the year before. I hypothesized that the second group would have higher scores with the rubric to guide their work. The second group of papers had a higher overall mean score (mean total score 79.40 for Cohort 2 and 75.74 for Cohort 1). This was not a significant difference, however, falling just below the significance threshold, at $p = .052$. In each cohort there were two candidates who did not meet minimum standards. Thus, while there was some movement in the direction of higher scores, candidates maintained a wide range of scores.

There was greater consistency in the category means for papers in the second cohort. Whereas in the first cohort the category *Teaching for Social Justice* was significantly lower than all other categories, there were no significant differences among the means of the four categories in the second cohort. An independent samples t-test performed on the four categories across the two cohorts showed that the only significant difference was a change in the category of *Teaching for Social Justice* ($p = .011$), with no significant differences in the Levene's test for equality of variance. In other words, the scores on papers in the category of *Teaching for Social Justice* for the second cohort improved to the level of all other categories. This suggested that once the rubric was fully defined and available to the candidates while they conducted and wrote their inquiries, they were able to address the assignment requirements in all categories. The improved

scores in this category may also reflect the changes in seminar instruction that were refined with this cohort.

An independent samples t-test on items between the two cohorts indicated that four rubric items were significantly higher for papers in the second cohort, while the Levene's test of equality of variances demonstrated no significant differences for these items. The first rubric item was "Quality of Writing" ($p = .016$). Papers of candidates in the second cohort seemed to comply with conventions of writing and research better than papers of candidates in the first cohort. This was likely due to additional detail noted in this rubric item that had not been outlined in the previous scoring tool.

A second rubric item, "Pupil Progress" in the *Pupils' Learning* category was also significantly higher in paper scores for the second cohort ($p = .001$). This item assessed how candidates set learning goals, documented progress for all pupils, and offered suggestions for modification of instruction where progress was not made. Finding that this item was scored higher than in the previous group seemed to indicate that with the new focus on pupil learning, candidates did consider more carefully whether all pupils made progress as they conducted their inquiries. This outcome provided support for research findings indicating that pre-service inquiry can shift candidates' attention directly to pupils' learning (Bianchini & Cavazos, 2007; Tabachnick & Zeichner, 1999).

The remaining two items, "Identifying Personal Values, Biases, and Beliefs" ($p = .009$) and "Understanding School/Classroom Context," ($p = .001$), were items in the *Teaching for Social Justice* category. The higher scores on the first of these two items indicated that candidates in the second cohort were better able to recognize and describe influences from their backgrounds and life experiences that had an impact on their views of education, teaching, and

practice. Additionally, the papers of candidates in the second cohort scored higher in acknowledging the context and diversity of the school, classroom, and community of their pupils, and building on the knowledge, interests, cultural and linguistic resources of the pupils in their inquiry. The improvement of scores in this category was especially important as the faculty had been particularly concerned that in shifting the focus to pupil learning, some categories, particularly *Teaching for Social Justice*, might be marginalized by the changes in the assignment, implementation of the rubric, and new emphasis placed on pupil learning. The improvement in scores on “Pupil Progress” in the *Pupil Learning* category, as well as the two items in the *Teaching for Social Justice* category, suggest that the candidates were able to address items in all categories in the course of their inquiry, without compromise.

Improvement in scores for the second cohort was likely tied to the more explicit expectations provided by the rubric and to adjustments made to the inquiry seminar to address gaps noted in the pilot study. The new rubric was much more explicit than the previous evaluation tool in outlining expectations for items. The candidates were accomplished students, eager to respond to the assignment requirements and to earn the best possible grade. With the new rubric in place, the candidates responded with greater attention to these items.

The item that most concerned faculty, “Acting on Social Justice,” was not significantly different across the two cohorts ($p = .061$). On the scoring rubric this item reads:

Integrates activism, discussion, and learning experiences addressing issues of diversity, equity, culture, and social justice as an explicit part of curriculum and instruction, at an appropriate level and context for the classroom population, through multiple examples and experiences.

Challenges and questions consistently, through written reflection and actions, policies and programs that contribute to, or maintain the existence of inequity in education. (Inquiry Scoring Rubric)

This item had the lowest mean score of any rubric item in each year. The mean score was higher in the second cohort, though this was not at a significant level. This would suggest that faculty had good reason to be concerned with the candidates' abilities to address the item "Acting for Social Justice," as indicated in Table 4.6. As mentioned previously, faculty were concerned that student teachers would not have the authority or autonomy to act on issues of social justice that might exist in classrooms, and that this item placed unreasonable expectations on candidates.

Table 4.6 Mean Scores for Teaching for Social Justice Items

| Rubric Item | Identifying Personal Values, Biases and Beliefs | Understanding Context | Affirming Diversity as an Asset | Creating Classroom Environment | Acting for Social Justice |
|----------------------------|--|------------------------------|--|---------------------------------------|----------------------------------|
| Cohort 1 Mean Score | 3.70 | 3.62 | 3.54 | 3.92 | 3.46 |
| Cohort 2 Mean Score | 4.13 | 4.04 | 3.78 | 3.99 | 3.72 |

There were other differences between the cohorts. As reported above, the first cohort had significant differences in the rubric scores of elementary and secondary candidates, with elementary inquiry papers scoring higher than their secondary counterparts in the categories of *Pupil Learning* and *Content and Pedagogy*. I hypothesized that these differences would continue in the next cohort, as the rubric did not explicitly address the issues of time and access to pupils which was suggested as the basis for the differences. However, for the 29 elementary level

candidates and 17 secondary level candidates in this sample, there were no significant differences in their total scores, or among any categories for these two groups. These findings suggest the rubric provided clarity in expectations so that all elements were addressed by candidates at both grade levels. It is also possible that instructors were more attentive to secondary candidates as they conducted their inquiries, aware of the differences that were reported in the pilot study.

When looking across these findings then, three points are clear. First, the rubric was reliable across categories and items, and the raters were also reliable in scoring. As such, the rubric could be used with confidence for differentiating among papers. Secondly, while all but two of the candidates scored above the minimum requirements, the overall results were disappointing in comparison to expectations. There were not as many outstanding papers as might be expected given the importance of the project, the time invested in preparation and completing the inquiry, and the caliber of teacher candidates undertaking the assignment. Finally, although the rubric provided information that differentiated among stronger and weaker papers through total scores, there were no particular categories within the rubric that accounted for weaker papers. As a result, the rubric analysis did not provide information that might lead to program revision or deeper understanding of how to support learning to teach through inquiry.

In order to uncover additional differences in stronger and weaker papers I turned to content analysis of a sample of inquiries to extend the examination of the papers in Analysis #1. This is an approach consistent with a sequential explanatory mixed methods design (Creswell, 2009). I targeted items from the inquiry rubric and themes emphasized in the pre-service program for the analysis, examining the nature and quality of papers in this sample through the kinds of questions asked in the inquiries, how candidates analyzed and interpreted data, how they

made sense of pupil learning, and how they used the information gained from inquiry to improve practice and pupil outcomes. Qualitative analysis offered the possibility of understanding how and why papers differed in quality across categories or outside of items included in the rubric, which would not be uncovered by the quantitative analysis.

Analysis #2: Qualitative Content Analysis of Selected Inquiry Papers

As noted earlier, twelve inquiry papers were selected for closer scrutiny using in-depth qualitative content analysis. To ensure a range of inquiry projects, three papers from each 10 point spread in the passing range of the scoring rubric used in Analysis #1 were selected, or three papers from the 60, 70, 80 and 90 point ranges, as described in the previous chapter. Appendix F provides information on the teacher candidates who conducted these inquiries. Of the twelve participants, two candidates were African-American, three were Asian-American, and seven were Caucasian. The school contexts for the teacher candidates who wrote these papers included urban, inner-city, suburban, public and private schools. One school was an all-male population; all others were co-educational. Seven of the inquiries were conducted in elementary schools; three classrooms were sixth grade classes identified as elementary or middle school classrooms; and two inquiries were completed in high school classrooms. This group, then, represented a diverse population, and the findings of this analysis seem to cut across diverse papers, as well as a range of scores.

To analyze the twelve inquiry papers, matrices were constructed that included key elements of the inquiry process as reflected in the assignment and rubric, including the kinds of questions asked, what candidates counted as evidence of pupil learning, classroom interventions, data sources used, analysis and interpretation, and whether and how teacher candidates adjusted practice in keeping with classroom data, as well as demographic information about the

participants and school context information. Matrices were completed based on repeated reading of papers, focusing reading on each of the matrix headings in turn, and identifying key quotes connected to each heading. Collectively, these 12 projects amounted to 700-some pages of narrative and appended materials (e.g. lesson plans, pupils' work samples, classroom assignments, surveys). Matrix construction, which was used as a data reduction technique, reduced the data to approximately 140 pages, which were then examined for overall patterns and themes, particularly in comparing the higher and lower scoring papers. The matrix frame is included in Appendix G. A sample of a completed matrix is provided in Appendix H to give the reader a sense of organization and data collected; this sample does not include handwritten notes, however.

The point of this content analysis was to investigate the nature and quality of the inquiry projects beyond what was possible in the quantitative analysis. Specifically, I was interested in the questions that teacher candidates posed, what candidates counted as pupil learning, how they made sense of pupil data in the process of analysis and interpretation, and whether or not they used their findings to adjust practice and improve pupil outcomes. I was especially interested in exploring whether there were cross-cutting themes or issues that differentiated strong papers from weak papers as measured by the rubric, since it was clear that no particular category of the rubric did so. Therefore, I divided the papers into two groups, with those scoring in the 60 and 70 point ranges representing the weaker papers, and those in the 80 and 90 point ranges representing the stronger papers.

I found that there were patterns across papers. First, the content area targeted in inquiry papers was similar. I also found there were patterns that differentiated the stronger and weaker research papers in several respects. The origin of teacher candidates' questions mattered in the

development of a stronger or weaker paper. There were also differences in how candidates were able to analyze, interpret, and report on pupil learning, particularly in the use of multiple data sources and qualitative data. Additionally papers differed in evidence of recursivity in practice, that is, whether candidates responded to their data by adjusting their practice during inquiry, and continuing the cycle of inquiry to improve pupil outcomes. Stronger papers also provided more evidence of reflection on self and pupil learning, as compared to weaker papers that did not show strong metacognitive awareness in learning to teach. Finally, papers differed in whether they addressed issues of social justice as connected to their practice in an ongoing and meaningful way in conducting their inquiry. In the following section, I consider each of these topics in more detail.

Content Area

I found the content that was addressed in this sample of inquiries was remarkably consistent in the twelve focal papers. Ten of the twelve papers were directly related to literacy and the language arts skills in some way. These included five papers that were connected to reading skills, including fluency, comprehension, word identification, and engagement. One paper focused on the development of vocabulary, while another paper examined the use of critical reading skills to support understanding around issues of social justice. Three papers were concerned with improving writing skills. Of the two papers that were not tied to literacy, one paper was focused on math skills, and one was a case study of a child with severe special needs learning to utilize a tangible object schedule. Across the twelve papers, two projects were targeted towards pupils with special needs, although all but two inquiries included pupils with special needs in the studies. Three papers noted that English Language Learners were among candidates' inquiry participants. The papers, then, while representing little diversity in the

content areas, addressed diverse learners in classroom populations. I found that it was not the topic that differentiated stronger and weaker papers.

It is important to note that none of the candidates chose history or science as their focus. Many of the papers noted the critical importance of the language arts in academic and occupational success. Several also referred to pressures asserted from mandated tests to develop literacy and writing skills. Both of these elements contributed to the significant amount of time and effort that were given over to literacy skills in classrooms. This made the language arts curriculum a particularly compelling area in which to conduct an inquiry project, as there was more time available in the school day dedicated to literacy. Similar patterns were discerned in the analysis of questions from the 46 papers in a previous cohort (Barnatt, Cochran-Smith, Friedman, Pine, & Baroz, 2007). This suggests the centrality of language and literacy in the work of teachers, which was reflected in the inquiries conducted.

Origin of Questions

Anderson, Herr, and Nihlen (2007) noted that an inquiry question comes from a “frustration, a practice puzzle, or a contradiction in a setting (this is what we say we do, but do we?)” (p. 125). This highlights a key difference between practitioner inquiry and more traditional forms of research. In traditional research on teaching, questions frequently come from the literature or arise from questions of policy. However, with practitioner inquiry, while questions are often informed by the literature, the focus of an inquiry comes out of issues from classroom practice or discrepancies between what was intended and what occurs. The way that questions were formed for these inquiry projects reflect how the candidates view themselves as researchers, the value and purpose of their findings, and how they proceed with their findings (Cochran-Smith & Lytle, 1993, 2009). In practitioner research, on the other hand, questions are

informed by theory, but the focus and questions that drive the research stem from problems and issues that arise from classroom practice. These may be questions raised by newly implemented curriculum, or dissonance between what was intended and what occurs in teaching and learning, or concerns about pupil learning. Central to the questions are the pupils and learning outcomes.

Since questions are critical to the practitioner inquiry process, I wanted to examine the origin and types of questions that candidates formed to determine whether there were differences among the stronger and weaker papers. On the scoring rubric, one item in the *Teacher as Research* category evaluated the question posed by candidates. However, this item also included an evaluation of the theoretical and conceptual frame. From the rubric scores, then, it was not possible to separate these elements from one another, and assess the quality of questions.

For teacher candidates, the challenge of identifying and defining a question can be especially difficult. Classroom teachers often mull over a problem of practice for a period of time before undertaking systematic investigation of the problem (Anderson, Herr, & Nihlen, 2007). Teacher candidates, however, have a limited amount of time in a classroom before they must begin the inquiry assignment. Thus, they are more likely to be pressured to develop questions out of necessity, rather than through a problem experienced in practice. In fact, a close inspection of the papers across the higher and lower range of scores indicated that those candidates, who drew their questions from sources outside of some personal puzzle or concern from experience in practice, generally had weaker papers. Of the papers in the 60 and 70 point range, all but one candidate drew questions from the cooperating teacher or from research not connected directly to a problem in practice. This is not to suggest that it is bad for inquiry questions to come from research or theory. In fact, knowing and understanding what previous research says about a particular topic of interest is also critical to good inquiry, and collaboration

with a cooperating teacher is likely to enrich pre-service experience in practitioner research. The content analysis revealed, however, that strong papers worked from what Cochran-Smith and Lytle (1993) referred to as the intersection of research and practice, rather than the idea of inquiry as a project to be researched independent of the classroom experience.

For example, Caroline, working in a high school language arts class provided an example of the separation of research and practice in developing her question: *How does the implementation of different vocabulary strategies and graphic organizers affect my 9th grade English Language Arts students' knowledge and understanding of new vocabulary words?*

Though her references to research supported the intervention she developed for her inquiry, the question was never directly connected to the pupils in her classroom. She began by referencing research that supported a focus on building vocabulary skills, particularly for inner-city schools:

According to Mayo and Boyd (2007) 'Vocabulary acquisition is crucial to academic development' (p. 2). Also they found, "in study after study, students in lower socioeconomic circumstances found themselves at a learning disadvantage compounded by their lack of academic vocabulary' (Mayo & Boyd, 2007, p. 2). Having a strong background in vocabulary allows learners to have a better comprehension of what they read. A strong vocabulary allows students to more poignantly express themselves, thus it is crucial to stronger, more effective writing. As Robert Marzano's (2005) theory indicates, "There is a strong relationship between vocabulary and one's ability to comprehend new information" (as cited in Rimbey, 2006, p. 3). Knowing this, I was curious to see which ways of delivering and teaching vocabulary were effective in increasing student knowledge and understanding. (Caroline, Inquiry paper, p. 2)

Caroline continued to build her case by tying her question to the preparation of her inner-city pupils for high stakes testing:

With the increased importance and focus of Annual Yearly Progress (AYP) with the No Child Left Behind (NCLB) legislation, now more than ever there is an increased importance of high stakes testing. Schools need to foster learning opportunities and strategies for students to be successful on these tests...I believe it is important for students to have good vocabulary acquisition skills as they prepare to take their Massachusetts Comprehensive Assessment System (MCAS) exams next year (in 10th grade) as they often see words on the exam they do not know. (p. 3)

Caroline finished the description of how she arrived at a question and an intervention by saying:

After learning more about the research surrounding improving student comprehension and understanding thorough improving vocabulary, I realized it might be important to introduce more strategies for vocabulary development into the classroom. Seeing as there are many different strategies for attaining vocabulary, I began to wonder which was the best to choose and which would have the most impact on my learners. Also, as the year progressed, it seemed that the lessons could use some more focus on vocabulary development. In conferring with my cooperating teacher, she said she was very concerned that she had not spent much of her time and energy on vocabulary enhancement this year and was very excited about the possibility of trying out new strategies with vocabulary acquisition for this inquiry study. (p. 5)

Caroline explored three logical sources for developing an inquiry question—beginning with research, acknowledgment of pressure from high stakes tests, and ending with confirmation from her cooperating teacher. All three of these sources come from *outside* of the candidate's own interactions with pupils in the classroom. At no point did she suggest that her pupils struggled with these issues, or that the intervention addressed a problem of practice in her classroom.

In contrast, another teacher candidate, Peyton, intimately connected her question to her specific elementary classroom and to one child specifically:

Over the course of my initial weeks student teaching, I focused most of my time and energy on learning the classroom routines, becoming familiar with the first grade curriculum, and most importantly, getting to know my students, both academically and personally. In my pursuits, I began reflecting on the observations I was making in monitoring student progress through an analysis of student work over the course of the year as well as student work habits and behaviors affecting individual academic progress. While many questions arose during this process of searching, I found myself fascinated by one particular student, A., whose complex characteristics both intrigued and perplexed me at the same time. (Peyton, Inquiry paper, p. 2)

Peyton described the child and his specific learning disabilities, behavior challenges, and academic strengths and weaknesses. She then tied her understanding of his behavior issues to systems of token economies described in her coursework, and further supported this strategy with references to research. She finished by saying:

After several weeks of toiling with various questions and concerns that my journal reflections about A. have unearthed, I came develop my inquiry question: How

does positive reinforcement impact the self-confidence and academic performance of one student with a specific learning disability in writing? (p. 4)

Peyton's question was grounded in a problem of practice which then led her to examine the literature to develop an intervention that would improve social and academic outcomes for this child. The difference in the way the questions were developed by these teacher candidates is important. Caroline began with theory and the expertise of her cooperating teacher and generated a question to be applied to her pupils. Her inquiry was confirmation of knowledge from others, which made her a consumer of knowledge. On the other hand, Peyton generated knowledge in practice, beginning with an issue in the classroom and then developing a question and intervention out of the musings and puzzlement of practice.

Similarly, in another strong paper, Mikayla began her inquiry by quoting the National Reading Panel (200) which underscored the necessity for fluency as a component of literacy instruction. She then tied this to her own classroom struggles:

As important as researchers have found fluency to be to students' comprehension, I found within the first grade classroom in which I work, that there was virtually no fluency instruction taking place. As with many classrooms, the emphases during reading instruction were on decoding strategies and basic comprehension, but the art of extracting and displaying meaning while reading seemed to be regarded as a skill that some children simply 'had' and some did not. (Mikayla, Inquiry paper, p. 4)

Mikayla voiced frustration with the reading instruction in her student teaching classroom. It was not simply that researchers suggested that fluency mattered that drove her inquiry, but that

there were particular children who did not have these skills and were not being offered learning opportunities to develop fluency. Working from this intersection of research and practice enriched the strongest inquiries.

Why should the development of a question formed from the intersection of theory and practice rather than simply based on prior research matter in the course of developing and implementing the inquiry? Cochran-Smith and Lytle's (1999a, 2009) discussion of three kinds of knowledge/practice relationships in teacher learning through inquiry is useful here. The weaker papers worked more or less from a conception of the knowledge and practice relationship as either what Cochran-Smith & Lytle refer to as "knowledge-for-practice" or "knowledge-in-practice." That is, inquiries were constructed around the expertise of outside sources—academic research, coursework instruction from professors—or from cooperating teachers. These inquiries tested what might be seen as "best practices" generated by others. The questions did not come from teacher candidates attending to issues that developed in the classroom.

On the other hand, Peyton and Mikayla worked from the tensions in their classrooms to generate their own understanding of teaching and learning with a specific student or particular class. Here, generation of knowledge and knowledge use were local, specific to the context, connected to the teacher and pupils, and relevant to the immediate situation. They also offered the potential for further theorizing. There was evidence of persistent examination and questioning of practice in the classroom prior to undertaking the inquiry. For these reasons, the inquiries were built from more authentic questions and developed into reflective responses to practice that were informed by research, rather than driven by other outside or inside experts.

Interpretation and Use of Data

Content analysis revealed a second way that strong and weak papers differed—in teacher candidates’ ability to analyze, interpret, and report different kinds of data. These differences were more holistic than individual rubric items and cut across the categories in the scoring rubric. While the rubric items “Collecting and Reporting Data” and “Analyzing and Interpreting Data” from the *Teacher as Researcher* category were obviously connected to the interpretation and use of data, items from two other categories also contributed to evaluating candidates’ ability to analyze and report pupil outcomes. For example, from the *Content and Pedagogy* category, the rubric item “Assessment” was tied to issues of understanding pupil learning through formal and informal assessments, which required analysis and interpretation of pupils’ learning on individual and collective sets of assignments. Similarly, with the category *Pupil Learning*, the item “Instructional Decisions Based on Diverse and Multiple Indicators” required candidates to analyze and interpret data in order to make decisions in practice. Also in this category, the item “Pupil Progress” assumed the ability to analyze pupil outcomes, and communicate those findings clearly and in detail. Finally, the item called “Social and Emotional Outcomes” asked candidates to consider and report on learning outcomes beyond academic data. These kinds of learning outcomes are usually assessed through observation, anecdotal notes, journal entries, or check-lists that require interpretive qualitative analysis and reporting. As a whole, then, candidates were asked to demonstrate ability on a range of skills that required facility in the use and analysis of multiple forms of data. Because these items were located across the rubric, the differences in how candidates addressed the data analysis and interpretation were not evident in examining the rubric scores. By looking directly at the papers through content analysis, examining the kinds of

measures used and the way outcomes were analyzed and reported, specific differences became apparent.

Across the twelve papers, candidates included a broad array of data sources in their definition of pupil learning, including pupils' academic, social, and emotional development. Academic learning was the central focus of most projects, however. Academic goals included enhancing critical thinking, questioning, comparing, analysis, decoding, comprehension, and problem solving. Inquiry papers also targeted fluency, oral presentation skills, writing mechanics, vocabulary acquisition, developing voice in writing, and improved math skills.

Beyond academic skills, candidates also looked for changes in demonstrating respect, understanding the concept of fairness, and appreciating multiple perspectives. All candidates recognized the need to motivate, engage, and develop a sense of ownership of learning in their pupils. Candidates scoring at all ranges of the rubric scores acknowledged that emotional and affective elements of the classroom were key components of learning. Social learning through work in cooperative groups, taking part in discussions, attending to audience, and peer collaboration was considered. The range and depth of pupil learning that was acknowledged and addressed by these candidates indicated recognition of the complexity of pupil learning, wherein academic, social and emotional aspects were entwined in outcomes.

In addition to identifying multiple learning goals, the inquiry papers employed a range of measures to assess learning outcomes including pupils' writing samples, analysis of student comments and questions, assignment grades, personal observations by candidates and their cooperating teachers, journal reflections, assessment of performances, quizzes, and tests. Analysis of student illustrations, checklists, teacher-made rubrics, interviews, and attitudinal surveys were also used. Formal assessments provided by District Reading Assessment (DRA)

scores or state level Massachusetts Comprehensive Assessment Scores (MCAS) results were cited by candidates teaching in urban, public settings as means of identifying poor performance and individual student progress. Only one candidate used standardized tests as the primary measure of pupil learning for an inquiry project, however.

All candidates addressed multiple levels and forms of learning as they conducted their inquiries. Differences among stronger or weaker papers, as measured by the rubric, were not in the kinds of learning goals targeted or measures that candidates used, but in the demonstrated ability to analyze and interpret diverse measures, to clearly and concisely discuss the results, and to use these results to modify practice, which is detailed in the next section, as ‘recursivity.’

Papers revealed a wide range in candidates’ abilities to effectively analyze data collected, and to share findings through the inquiry paper. Given reports that teachers are generally not adequately prepared to understand and use data from practice (Boudett, City, & Murname, 2006; Darling-Hammond, Chung, & Frelow, 2002; Kennedy, 1999; Nuthall, 2004; Weinbaum et al., 2004; Zeintek, 2007), this is perhaps not surprising. Teacher candidates were required to use multiple sources of data, qualitative and quantitative, and to triangulate findings among the data sources. Every paper provided a variety of data sources. In papers at the lowest rubric scoring level, however, candidates adhered to an almost formulaic process of assessing outcomes, with one data source to measure academic progress (quiz scores, timed responses, or assignment grades, for example), another to target their pupils’ opinions (usually through interviews or surveys), and one or two observations from journals or reports from the cooperating teacher to support these findings. In low scoring inquiries, despite the use of multiple measures, the assessment of pupil learning was relatively limited. Additionally, these papers were not consistent in reporting on all the data they claimed to have gathered in the inquiry. For papers in

each successive rubric scoring level (60's, 70's, 80's, 90's), there was increased facility in use of multiple sources, detailed analysis, and in effectively reporting data – particularly the use of qualitative data.

Jared's paper exemplified the shortcomings common to the lower scoring papers. In his inquiry he explored the use of focused journal writing to improve writing mechanics in his sixth grade classroom. He compared assignment scores for the pupils against the mean class scores, conducted interviews with three pupils about their experience, and kept notes on collaborative conversations with colleagues in his journal. His analysis focused on seven different graphs manipulating pupil grades on writing assignments in a variety of ways, but offered few qualitative results. Jared did not offer analysis of pupil journal excerpts to demonstrate improved writing mechanics. From interviews, he offered a single statement: "Yannick...stated that the daily focused journals gave him confidence in, and increased comfort with, his writing mechanics and fluency." Jared also failed to reference his own journal entries in his findings or refer to the collaborative conversations, though these were cited as data sources. Even using multiple measures, Jared offered thin evidence of pupil learning with the available data. Similarly, in her inquiry findings Vera discussed four graphs of Developmental Reading Assessment (DRA) scores for her second grade pupils, but placed three pages of notes on survey data, along with excerpts from her personal journal at the end of the findings section without comment. Vera treated this material as though it were either self-explanatory or tangential. Like all candidates in the lower range of scores, she was able to identify a variety of data sources for the inquiry, but was not able to use all of the data to describe or assess the outcomes. For all of the candidates in the lower scoring papers, the lack of analysis of qualitative evidence was notable.

The most significant difference between papers in the lowest range and the next higher level was the facile use, analysis, and reporting of qualitative data. That is, in the higher scoring papers, candidates offered multiple data sources, analyzed them appropriately, and included detailed analysis of interviews and journal entries. In her inquiry, for example, Susan, who intended to improve math skills with sixth graders, provided this table summarizing her data sources.

Table III: Data Sources

| Measure | Data Source Qualitative or Quantitative | Frequency | What I expect to see? |
|---|---|--|---|
| A. Classroom based assessment <i>and</i> Formal assessments | Quantitative | Pre-unit Mid-unit (formal) Unit Review End of unit (formal) | Demonstrated improvement in subject specific knowledge stratified by topic and reviewed by individual. Quantified performance results. Formal assessment reviewed by topic and by student. |
| B. Teacher experience of teaching with targeted approaches to math instruction | Qualitative | Weekly through journaling and notes | An honest assessment of my own experience using these teaching approaches, and potentially other confounding factors that influence the intervention. |
| C. Student experience of teaching with targeted approaches to math instruction | Qualitative (experiential and anecdotal) | Throughout inquiry, at end of inquiry, interview lunch | Whether students experienced the instruction differently from traditional instruction and how they found the experience relative to the teaching and their expected versus actual assessment performance. |
| D. Unit Projects | Qualitative | End of unit | Applied mastery of concepts among students who demonstrate mastery on assessments. |

(Susan, Inquiry paper, p. 12)

Susan used multiple measures, including quantitative and qualitative methods, to assess ongoing progress in her sixth grade math class. Her quantitative data included grades from several classroom assessments, while journal excerpts, pupil interviews, and analysis of unit projects provided qualitative data. Assessment was ongoing during the intervention, and all forms of data

were clearly addressed in the findings. Susan used the qualitative data, particularly the quotes from her pupils to support and extend the quantitative analysis. However, she also included one page of journal excerpts, presented as evidence of her own learning, which was not explained or discussed. Again, the candidate assumed that the reader would understand what she intended to show through these quotes.

For the highest scoring inquiry papers, the use of all data—quantitative and qualitative—was clear, concise, convincing, and fully explained. Amelia, who introduced her second grade pupils to social justice issues through a series of carefully selected texts, offered one such paper. Amelia used multiple data points to demonstrate pupil learning, including pre- and post intervention writing prompts on “fairness” that were scored using a detailed rubric; extensive quotations from pupil writing and discussions; excerpts from her own record of reflections throughout the intervention; as well as sources triangulated with detailed observations by her cooperating teacher. Her results were then compared with findings on issues of “unfairness” conducted by Piaget on young children. Amelia built a compelling case for pupil learning by assessing changes in awareness, dispositions, and the ability to voice critical analysis in writing and discussions.

Inquiring Recursively

The third way in which papers with lower and higher rubric scores differed was in whether the papers reflected recursivity, that is, whether candidates demonstrated ongoing questioning, analysis and reflection, while continuously adjusting practice based on pupil data. Cochran-Smith and Lytle (1993) stated that learning from teaching is central to inquiry, and inquiry should be the “critical basis for decisions about practice” (p. 63). Particularly in light of increasingly diverse classrooms, teachers must be prepared to continuously adapt practice to the

pupils and classroom events, rather than depend on predetermined, generic approaches to teaching and learning. Teaching, then, becomes an ongoing process of questioning and adapting practice in response to the unique context of a particular school and classroom, with learning to teach moving hand-in-hand with pupil learning.

The content analysis showed that higher and lower scoring papers varied in whether candidates learned from their inquiries and made adjustments to practice based on data. Some papers contained rich and insightful analyses of classroom data, revealing the ways in which teachers learned from practice and used their evolving understandings of pupils' learning to guide their thoughts and actions in an ongoing way. Others provided little evidence that candidates learned much at all from their research about pupils' perspectives, possible support, or discussion of the implications of their research beyond completing the inquiry as a program requirement. In an earlier study analyzing inquiries from the pilot group (Barnatt, Cochran-Smith, Friedman, Pine, & Baroz, 2007), we found that an underlying difference in what and how candidates learned from classroom research were contrasting ideas about research and inquiry themselves. Some candidates developed a recursive notion of the inquiry process, understanding research in the way Berthoff (1986) described it in saying: "REsearch: like REcognition, is a REflexive act. It means looking—and looking again" (p. 30). Other candidates seemed to have a rigid view of classroom research as a formal process not to be deviated from and unconnected to their ongoing choices about what to do and how to work with pupils. For example, one elementary teacher candidate introduced a math facts routine wherein pupils had quizzes every day. Prompted by the notion that she could not tamper with her research study by re-teaching the processes, the teacher persisted in this activity even when it was clear that some pupils needed and wanted more instruction. She said, "I made a conscious decision to prohibit explanations

beyond a simple statement like, ‘Do it on the number line,’ [or] “‘If you owed 10 dollars and now you owe another 10 dollars, don’t you owe even more?’ The only other suggestion I had for these students was to ask a classmate or someone from another class during their free time.” This response was exactly the opposite from the response expected and hoped by the candidates’ own teachers. Here a strong—and rather rigid—residual idea about what “research” and “science” are seemed to trump what the candidate had been taught in the inquiry seminar and other course about inquiry as an integral and ongoing part of teaching.

While no candidates in this study voiced such a rigid misconception of research, recursive practice also emerged as a key dimension differentiating strong and weaker papers analyzed in this study. For example, in an exemplary paper, Evan, a candidate teaching language arts to middle school pupils, asked the questions: “*How do students perceive my classroom practice? How can their reflections inform my practice as a teacher and leader in the school?*” He described his work as follows:

My inquiry project rests upon these three clear themes: I seek to identify and analyze the classroom culture to identify successes and failures in its construction and functioning; I utilize this analysis to inform my classroom practice, not only in terms of “culture” but also in academic applications; and, I solicit reactions from my students with the goal of utilizing their perceptions to inform and improve my practice. (Evan, Inquiry paper, p. 8)

Throughout the inquiry, Evan moved between assessing his own practice in the classroom, and directly addressing his pupils’ work, through continuous cycles of questioning, assessing and acting. Evan began by asking pupils to draw a picture of him, as their teacher, in practice. Consistent with the work of Wheelock, Bebell, and Haney (2000), Evan developed a set of codes

based on pupil responses and analyzed the results by looking for patterns and themes that ran through the pupils' pictures. The pictures showed that pupils respected him and viewed the class as academically rigorous, but also illustrated his occasional outbursts of anger, and traditional transmission modes of teaching that characterized his class.

As a result of these findings, Evan developed a writing unit, weaving in academic goals of revision and editing, while having pupils generate essays around their ideal teacher and classroom experience. He adjusted activities to provide more opportunities for group interactions, student initiative and student responsibility for learning. Student samples were analyzed against a writing rubric and suggestions on teaching practice were considered on a regular basis. Several cycles of data collecting and modification were reported. Evan documented an understanding that inquiry involves a repeated process of asking questions, looking carefully at the data of practice, altering practice based on new insights and ideas, asking questions, and so on. At the end of the inquiry, he asked pupils to illustrate themselves in his class. The coded results illustrated a shift in the classroom in the kind of instruction, interactions, and learning. Pupils drew themselves working in collaborative groups rather than sitting in rows of individual desks. There were more illustrations of pupils offering comments or in discussion, and fewer pictures of Evan lecturing or writing grammar lessons on the board. This time there were no pictures of a frustrated or angry teacher. In this inquiry pupil learning and practitioner learning moved hand-in-hand through the process of constant attention and response to pupil data.

Candidates at the lower range of rubric scores offered quite different responses to their research data. For example, Sophie, teaching in a first grade classroom, recorded her frustration when three of seven target pupils did not receive adult supervision for homework assignments

given as part of her inquiry effort to improve fluency. She reported that the parents of two children did not speak English fluently. The third child had been identified with special needs in language skills, and Sophie suspected that the child was working independently at home, practicing decoding errors rather than building fluency. She stated:

M's overall performance and signs of frustration were seemingly evident during the final few weeks of the intervention. I connoted two possible reasons for M's performance. M was either, (1) not practicing consistently or (2) M was practicing in the absence of adult supervision. This meant that she was not, inferentially, receiving constructive and correct feedback on error words at home. She may have been re-reading a word incorrectly for the required eight times or struggling to read the passage, in the course of her practice time at home. Ms. B and I also felt that this may be a case where M's parents did not understand the process of the intervention or the requirement of the same. (Sophie, Inquiry paper, p. 26)

In an intervention that lasted for less than six weeks, Sophie noted this child had been struggling for at least a third of the time period. She stated that home circumstances made it unlikely that parents would be able to provide the kind of structured literacy support that she needed for implementing this strategy. Despite ongoing indications that significant change in the intervention was warranted, no alteration in practice was initiated. She did not attempt any changes in her inquiry that might alleviate the problems (practice in school rather than at home, for example) or improve pupil outcomes. Sophie neglected the idea that inquiry is intended to be recursive, involving not just tracking and analyzing pupil outcomes, but adjusting practice based on new insights, information, and outcomes, with real immediacy required in adjustments to practice.

Additionally, Sophie never acknowledged that her data indicated that at least some pupils were not learning as a result of her intervention. Despite documented difficulties, Sophie insisted that all pupils in her inquiry benefited from the intervention and she failed to offer any suggestions for adjustments to the strategy for the future. A number of papers at the lower scoring range failed to acknowledge that not all pupils were making good progress in the inquiry period, despite data indicating this was the case. These candidates seemed unwilling or unable to recognize that their practice must be changed to ensure pupil progress.

One issue that influenced these problems was time constraints. Every inquiry paper noted the limitations of time in completing inquiries. A single semester was a relatively short period to conduct a meaningful inquiry, particularly because it took some time for candidates to learn classroom routines, know the children, and to discern problems in practice that would form a good inquiry question. This is supported in the literature, where researchers have suggested that a single term is not adequate time for candidates to develop a full understanding and appreciation for practitioner research (Chant, Heafner, & Bennett, 2004; Freese, 2006; Mule, 2006). Additionally, the spring term when most teacher candidates complete student teaching, corresponded to state mandated testing periods in most classrooms. This was frequently cited as a deterrent to conducting inquiries for several weeks as pupils were prepared for testing and tests were conducted. Finally for most candidates, there was a very narrow window in the student teaching period when they could have access to a full class of pupils. Given these constraints, many of the twelve inquiries analyzed for Analysis #2 did not come to a satisfactory close—candidates simply ran out of time. The candidates designed an intervention, collected data and often completed projects without having opportunity to act on the data once they analyzed the outcomes. Recursive action, acting on data and continuously revisiting the inquiry cycle, was

less likely to occur with the limited access and time given to candidates. It is significant to note that of the six candidates whose papers ranged in the 80 and 90 point range, five candidates had been in the same classroom throughout the entire year, and these five candidates had access to pupils regularly through the inquiry period, and remained in these classrooms even after their term ended. Only two of the six candidates whose papers were in lower ranges had the same regular and extended contact with their pupils. The length of time candidates spent in the classroom made a difference in the quality of the papers that candidates produced.

Connecting Teacher Learning to Pupil Learning

Closely tied to the issue of recursivity was the ability to see oneself as both teacher and learner in practice. Candidates who engaged in inquiry without acting on their data—without adjusting their practice in response to problems encountered in the inquiry—were also less likely to offer commentary on their own learning or on the value of inquiry as experienced in the program.

For the twelve papers in Analysis #2, there were differences in whether and how candidates considered their own progress in learning to teach while concurrently addressing their pupils' progress. Some candidates were very explicit about how their evolving understanding of their pupil's progress deepened their knowledge of teaching and learning. Other candidates were generally silent on how the inquiry affected the process of learning to teach. Traditionally, in this program, the emphasis on pre-service practitioner research has been on the learning of teacher candidates, with a clear emphasis on self reflection. With the shift in the inquiry assignment, candidates were required to attend to pupil learning. Examination of these inquiries uncovered the tension between attending to pupil learning and simultaneously reflecting on one's own learning to teach. This analysis showed that candidates able to position themselves as both

teachers and learners in the inquiry experience differentiated themselves from candidates with lower scoring papers.

In one example where the candidate linked her own learning as a teacher with her student outcomes, Mikayla offered this description of how she was able to improve pupil outcomes through her own leap in understanding, early in her inquiry:

An unexpected lesson that was illuminated in this project was the importance of making students explicitly and consistently aware of the objectives and tasks they are expected to accomplish. There was a clear level of improvement within the class once I explicitly, and constantly, reminded them of why they were embarking on this journey, and how it was relevant to their future reading success. This lesson in teaching will prove important in all subjects and classes that I teach. Perhaps the highest example of this concept is the fact that we – as educators-in-training – are constantly told to have clear objectives, communicate them to the students and give students a practical reason for learning; while I had ingested all of these points as *concepts* they did not branch into becoming *practices* until I embarked upon this project and wished to see greater results.

(Mikayla, Inquiry paper, p. 25)

In negotiating the complex tangle of learning to teach while teaching for learning, Mikayla displayed metacognitive knowledge that was lacking in the weaker inquiry papers. She reflected on her pupils' learning and simultaneously reflected on her own learning to teach. Hammerness, et al. (2005) described metacognition in learning to teach as “understanding one’s own thinking and developing strategies for planning, analyzing, and gaining more knowledge” (p.376). They pointed out that effective teachers need to be metacognitive to learn through teaching, accurately

reflect on the instruction, and understand what needs to be improved in practice. They also note the difficulty this poses for novice teachers:

beginning teachers frequently tend to focus on their teaching practices rather than on what their students are learning. They need to be able to figure out what they do and do not yet understand about how their students are performing and what to do about it. They also need to ask themselves and others questions to guide their learning and decision making. (p. 377)

This seemed to be the case with candidates offering less explicit reflection, brief and general statements about their own learning in terms of acquiring research skills, or the implications of their practice. The emphasis on pupil outcomes may have unintentionally prevented metacognitive awareness in learning to teach, as candidates focused on the children's learning. Candidates' reflections were centered on pupil outcomes in response to the assignment requirements, with less emphasis on their own experience of learning to teach.

Research connecting inquiry and reflection indicates that for some candidates self-reflection is shallow, focusing on classroom logistics and behavior management while ignoring context (Auger & Wideman, 2000; Dawson, 2006; Gore & Zeichner, 1991). While it is difficult to show non-examples of reflection connecting candidate learning to pupil learning, this statement from Diana provides some indication of the lack of deep reflection found in lower scoring papers:

Assuming an inquiry stance in the classroom has been extremely rewarding.

Although it seemed difficult at the outset to manufacture a study that I hoped would make a real difference, I have found that this exercise has definitely encouraged me to be even more thoughtful, purposeful, and observant than I

already considered myself to be. Time is so precious and valuable in the classroom that there literally is no time to waste on useless busy work. (Diana, Inquiry paper, p. 25)

In this statement, Diana made no real connections between her learning and the outcomes of her inquiry, and offered only very general notions of how the inquiry influenced her learning to teach. Her comment about avoiding 'busy work' seemed completely unconnected to her inquiry on the development of a word wall to improve pupils' ability to address unknown words in text. In general, the statement offered little metacognitive awareness, and no new, rich understandings of learning to teach. A number of studies have indicated that intense and prolonged periods of research may support deep reflection (Auger & Wideman, 2000; Dawson, 2006; El Dib, 2007; Gore & Zeichner, 1991). This was not the case for candidates in this study, where inquiries were generally conducted within a matter of weeks, and demands from student teaching and additional coursework compromised deep reflection on inquiry.

Another explanation for the differences in connecting candidates' learning to pupil outcomes is that the scoring rubric was not explicit about including self-reflection, although it was the basis for many rubric elements. For example, it would be impossible to address the rubric item "Personal Biases, Beliefs, and Experiences," and the impact of these beliefs on teaching without reflection on the part of the candidate. There are many such items on the rubric. However, the rubric provided no indication that explicit self reflection connecting candidate learning to pupil learning was expected in the paper. As conscientious students, the candidates met the stated requirements of the assignment and were attentive to rubric items as written; however, few candidates offered additional comments on their own experience and

learning that occurred in conducting inquiry, and how these might be connected to pupil learning. This was a significant deficit in the rubric.

Social Justice and Inquiry

As noted earlier, learning to teach for social justice has always been a central part of the inquiry seminar and capstone project, as well as a central theme of the school. Here, social justice is conceptualized as “an activity with political dimensions, [in which] all educators [are] responsible for challenging inequities in the social order and working with others to establish a more just society” (HU website, 2009). This view of social justice is consistent with the literature which assumes that teacher education should prepare teacher candidates to address the inequities of schools and society as part of a democratic ideal (Anderson, Herr, & Nihlen, 2007; Cochran-Smith, 1999a, 2009; Michelli & Keiser, 2005; Zeichner & Noffke, 2001). These values are also consistent with traditions in practitioner inquiry.

Zeichner & Noffke (2001) noted that a number of genres of practitioner research, including action research and participatory action research, maintain an overt emancipatory stance for the purpose of transforming existing systems of power and privilege that affect schools and education. In framing practitioner research as having a political dimension, Zeichner & Noffke underscored the moral, ethical and value-laden rudiments of teaching and education, suggesting that all practitioner research, whether explicit or silent on issues of social justice, assumes political positions in relation to social and economic structures. At HU, faculty makes social justice part of an overt agenda to influence policy and practice through teaching.

The TNE ET research projects sought to develop tools to evaluate social justice as observed in practice, through the development of curriculum, instructional planning, classroom context, and pedagogy with the purpose of improving pupil outcomes and life chances. These

efforts and values were reflected in the inquiry seminar, inquiry assignment, and inquiry scoring rubric. The rubric category of *Teaching for Social Justice* was made up of five items concerned with identifying personal values, biases and beliefs as they impact teaching; understanding the context of the classroom; affirming diversity as an asset, creating a safe and productive classroom environment; and acting for social justice. This final item, detailed earlier in this chapter, explicitly connects emancipatory goals to classroom experience.

Teacher candidates at HU have long been asked to include reflection on social justice as it applies to their inquiry project. It is no surprise then that all of the inquiry papers analyzed here contained some discussion of issues of social justice. This appeared in reflections of their own backgrounds that affect their teaching philosophy, in descriptions of classroom context, and as connected to their choice of inquiry, for example. However, there were differences in whether candidates' reflections were ongoing and genuinely integrated in their practice. Papers at the lower scoring range confined their comments about social justice to short statements that were generic in nature, rather than tying them to their inquiries. High scoring papers clearly outlined a candidate's view on the role social justice as played out with pupils in their particular classrooms, and as connected to their inquiries.

One high scoring paper specifically targeted understandings of social justice as the focus of the inquiry. Amelia asked, "*What happens to my second grade students' understandings of social justice issues when I introduce such issues using a critical literacy approach?*" Amelia introduced a series of developmentally appropriate texts to build critical literacy skills. This included books such as *Click, Clack, Moo: Cows that Type* (Cronin, 2003); *Baseball Saved Us* (Mochizuki, 1993); *If the World Were A Village* (Smith, 2002); and *Through My Eyes* (Bridges, 1999). The books were presented as read alouds, and formed the basis for discussion, journal

writing, and various classroom activities conducted over the course of six weeks. At the end of that period, Amelia introduced the idea of “action” to raise awareness in the school community. Pupils discussed ways of making their voices heard through letter writing and sharing ideas publically. As a culminating activity her class made a school-wide presentation of text segments from *Is There Really a Human Race?* (Curtis, 2006). She explains her goal in saying:

I endeavored to learn about my students’ abilities to understand and appreciate issues of social justice. Equipped with the tools needed to delve into the deeper meanings of literature, I hoped my students would gain insight into the social justice topics we covered and apply the literacy skills they learned in the future. A secondary goal of my intervention was that my students would begin to see themselves as agents of change, capable of taking action when they recognize injustice. Finally, with its focus on the written word, my intervention aimed to promote an appreciation for the use of writing as a tool for expressing opinion and influencing change. (Amelia, Inquiry paper, p. 23)

Amelia’s inquiry explicitly connected issues of social justice to her curriculum, the materials and pedagogy used, and her academic and social goals for her pupils. Since the topic was developed around critical literacy and social justice, Amelia’s inquiry provided optimal opportunities for ongoing and integrated connections between issues of social justice and practice. However, there were other high scoring papers with the same level of integration and connections to practice through the inquiry experience that were less overtly tied to social justice.

Mikayla, for example, asked, *How can the strategic implementation of a class-wide Reader’s Theater project affect first-graders’ level of reading fluency as well as their attitudes and motivations toward reading.* She chose this pedagogical approach as consistent with her

urban charter school's "quest for academic excellence for each student within its diverse populations...striv[ing] to prepare every student for success in college and beyond, regardless of race, religion, citizenship status or socio-economic class." (Mikayla, Inquiry paper, p. 6). She described her objective in this inquiry as follows:

My quest was to find a creative outlet for the children of my class that was both useful and productive academically, as well as potentially serving to boost self-esteem and confidence in the students of the class...I feel an intense desire and responsibility to enhance the self-images of minority children of this country, and help create a school environment in which they feel as they, not only belong, but are successful, vital members of their communities and of society at large. (p. 6-7)

For Mikayla, her responsibility to pupils evolved into an inquiry that targeted reading fluency and comprehension, a challenge among pupils in her class, through the use of reader's theater. By using reader's theater as the vehicle, she provided access to rich learning opportunities so that all pupils – including pupils with special needs and English language learners—were able to participate and demonstrate improved reading skills. Social justice was directly tied to the academic success of pupils from minority groups, low socio-economic levels, and pupils with special needs. This was accomplished through building reading proficiency and developing academic confidence as fundamental skills that enhance opportunities in pupils' lives. This theme was continued throughout the inquiry, ending with this comment:

Reader's Theater also, in this case, proved to provide a realm in which lower-level readers and higher-level readers could participate equally and feel successful. The task of "leveling the playing field" (Binhart, 1999) was truly achieved in this process in a manner that was evident; not only to the teachers, but

to the students themselves as they measured their success in their ability to read the words, perform their role and incite laughter and applause from the audience. This speaks toward the quest of creating an academic and social environment...in which students feel competent, successful and necessary to the completion of a worthwhile product. (Mikayla, Inquiry paper, p.26)

Mikalya's understanding of social justice was threaded throughout her inquiry, an integral part of her question, intervention, and reflections on outcomes.

Ongoing and integrated connections between issues of social justice and classroom practice were not evident in all papers, however. At the lower end of the scoring range, reflections on social justice were more likely confined to a paragraph or two mentioned in a description of school context. Such superficial statements echo the findings of Gore and Zeichner (1991), who found that critical reflection on issues of social justice was lacking in action research conducted by their pre-service candidates. Here, candidates in the lower scoring papers confined their discussion to brief statements that seemed to exist independent of the inquiry; personal statements merely fulfilling the requirements of the assignment. Diana, for example made this brief declaration as her only direct reference to issues of social justice:

When I think about teaching for social justice and how to improve pupil learning, I try to think about all aspects of [students'] lives that they bring with them into the classroom. This is because these are the very things that I'm going to need to address in order to draw out their best work...My hope is to discover my pupils' weaknesses so I can build them up, and to uncover their strengths so that I can build upon them. (Diana, Inquiry paper, p. 8)

Diana made important connections between pupil learning and social justice, and she rightfully indicated that the backgrounds, experiences, abilities, and gaps that children bring to the classroom play a role in developing appropriate and effective learning opportunities. However, Diana did not build on these ideas, and there was no direct connection to the literacy skills that her inquiry targeted. She also missed connections that could have tied to this school's mission to prepare urban pupils for the college experience with issues of social justice. This single paragraph, the only reference she made to issues of social justice in her paper, lacked depth and specific connections to her pupils and classroom.

As with the issue of limited self-reflection, there was a tension between providing the information that the assignment and rubric required, and attending to elements of inquiry in a meaningful way. For candidates scoring at the lower ranges of acceptable performance, the act of inquiry meant meeting the requirements of the assignment, rather than developing a critical, questioning stance as a way of approaching teaching and learning.

Inquiring into Pre-service Inquiry

The purpose of the inquiry seminar and capstone assignment was to provide teacher candidates with a means of improving practice and advancing pupil learning through practitioner research. In this study, Analysis #1, a quantitative analysis of rubric scores reflecting the quality of pre-service practitioners inquiry projects, and Analysis #2, a content analysis of a sample of twelve papers from across the range of rubric scores, were used to assess the nature and quality of inquiry papers of teacher candidates who engaged in pre-service practitioner research with a focus on pupil learning. The analyses uncovered several distinctions among higher and lower scoring papers, generally related to differences between the intent of faculty efforts and unintended consequences of the structure and changes made in the inquiry project.

Faculty intended to have candidates develop an inquiry stance—a way of looking at practice through questioning, gathering data, analyzing outcomes, adjusting practice—recursive examination of pupil learning and practice to guide their work as teachers. As detailed in Chapter 2, an inquiry stance is a way of seeing or positioning oneself, as a means of addressing the complex and changing context of classroom life (Cochran-Smith & Lytle, 1999a, 2009). Inquiry as stance is a long-term and consistent way of viewing practice for the purposes of improving teaching and learning outcomes, and stands in contrast with conducting a time bounded inquiry project. Problems evidenced by candidates in developing questions, acting recursively, or reflecting on their own learning through inquiry, raised questions of whether the assignment and rubric really supported the development of an inquiry stance, or merely outlined the requirements of an inquiry project. By making this inquiry a high stakes capstone project, the notion of inquiry project seemed to be privileged over the development of inquiry stance for some candidates. The structure of the program, in delineating inquiry as something to be completed in the inquiry seminar and through this project, as well as additional pressures of limited time in completing the projects, difficulty in gaining access to pupils, and questionable support from some cooperating teachers also bolstered the idea of project over stance.

Along the same lines, changes in the inquiry assignment also posed challenges to the development of an inquiry stance. Faculty shifted the focus of candidates' inquiries to pupil learning so that candidates would attend to data from practice and improve pupil outcomes. This was reinforced through the development of the inquiry scoring rubric, which candidates used to guide how they conducted their inquiries and presented their findings. In some ways the explicit expectations outlined in the rubric supported improved project scores as candidates attended to the requirements set forth by the instrument. However, because reflection was not given a more

explicit place on the rubric, faculty unintentionally diminished the role of reflection in learning to teach through inquiry. As a result, not all candidates offered deep and insightful reflections about their learning, as well as their pupils' learning. This is particularly troubling given that it has been suggested that pre-service teachers "do not actually learn from experience as much as [they] learn from reflecting on experience" (Posner, 2005, p. 21). For those candidates who did not reflect on their own learning in the inquiry paper, then, it was unlikely that undertaking practitioner research was a transformative experience, changing the way they viewed teaching, learning, schools, and classroom context in ways that would be carried into future practice.

Finally, the structure of the rubric also posed problems for the way issues of social justice were represented and assessed by the rubric. Learning to teach for social justice had long been the overarching theme of teacher education programs at HU, and focusing on social justice issues had always been a part of the inquiry projects teacher candidates complete. In the new scoring rubric, teaching for social justice was targeted as a category, made up of five items. This did underscore the emphasis on learning to teach for social justice that existed in the program and posed explicit expectations for candidates. However, the rubric artificially parsed out elements of what it means to teach for social justice rather than recognizing it as embedded within content, pedagogy, learning opportunities and in the classroom environment. Further, in developing a scoring range for the items in the category *Teaching for Social Justice*, the requirements at the exemplary level of the rubric were very difficult for candidates with limited autonomy and authority to carry out in another teacher's classroom. Analysis of the rubric scores for social justice items and the content analysis of candidate papers pointed to challenges and limited opportunities to address these issues within the constraints of student teaching.

Given indications that candidates viewed their inquiries as an assignment needed to complete the program, the question remained whether these candidates would carry these skills and habits of mind into their classrooms. Would candidates maintain or develop an inquiry stance in their classrooms when there were no assignment requirements to guide their actions? While there was little expectation of formal inquiries with publishable papers as final products being conducted in the first years of teaching, the intent of having candidates conduct pre-service inquiry was that they would continue with systematic and intentional examination of classroom practice once they back a classroom teacher.

Very few studies follow teacher candidates into the classroom to study the impact of pre-service inquiry on teacher practice. Additionally, the literature is rife with descriptions of the first year of teaching; characterized as “survival,” as opposed to learning teach. Therefore, I wanted to extend beyond this stressful initial period. As a result, I conducted a longitudinal study that included the first two years in the classroom, in order to study the long term influence of the inquiry experience and the development of an inquiry stance. Thus, I followed two teacher candidates from the spring, 2006 cohort through their master’s program and their first two years of teaching.

CHAPTER 5: DEVELOPING AN INQUIRY STANCE

This chapter presents two longitudinal case studies of teacher candidates enrolled in a pre-service teacher education program with a focus on inquiry. The cases drew on three years of data from the beginning of the pre-service period through the end of candidates' second year of teaching. Both candidates were part of the spring, 2006 cohort whose inquiry papers were used for the pilot study described in the previous chapter. The intent of these case studies was to closely examine the experiences of candidates (and the teachers they became) to determine what they understood about inquiry as part of teaching and whether and how they developed an inquiry stance in their classrooms. As Bromley (1986) noted, case studies get "as close to the subject of interest as they possibly can, partly by means of direct observation in natural settings, partly by their access to subjective factors (thoughts, feelings, and desires)...Also, case studies tend to spread the net for evidence widely" (p.23). Here the use of case studies was especially suitable as a means of monitoring and exploring the role of inquiry in the process of learning to teach, using descriptions of candidates and institutional contexts, multiple interviews, observations, documents, and artifacts from candidates and their pupils. These cases offered a different view of learning to teach through inquiry than that which was provided in Analyses #1 and #2, which examined the inquiry projects of teacher candidates in a pre-service program by focusing on a single project at one point in time. The aim here was to delve deeper into the experience of learning to teach through inquiry, providing "thick description" (Geertz, 1973) of teacher candidates who completed a pre-service program focused on inquiry and pupil learning, uncovering whether and how these candidates continued to inquire into practice and whether or not they developed an inquiry stance.

As noted previously, “inquiry as stance” (Cochran-Smith, 2002a; Cochran-Smith & Lytle 1999a, 2009) is a perspective on teaching and a way of viewing the complex processes of teaching, learning, and classroom life as sites for inquiry. This assumes continuous examination of assumptions and practices through systematic and intentional questioning, collecting and analyzing data, interpreting and adjusting practice based on data, and questioning the outcomes of these changes. This recursive view of inquiry and teaching is also a means of professional development through the career, standing in contrast to inquiry as short-term project or workshop. Furthermore, an inquiry stance reflects the commitment and ability to adjust teaching in response to changing contexts of classrooms and the increasing diversity of school populations.

As has been true of teacher candidates in other studies, neither of the individuals in these cases anticipated that inquiry or practitioner research would be part of their pre-service program or their professional lives as teachers (Chant, Heafner, & Bennett, 2004; Freese, 2006; Smith & Sela, 2005). The pre-service program at HU provided an introduction to inquiry and required a research project based on candidates’ student teaching experiences, with a focus on pupil learning. Candidates were supported and guided through the project in an inquiry seminar. Additionally, as inquiry was one of the themes emphasized across the program, inquiry skills were stressed throughout courses and in the practicum. Both of the case study candidates successfully completed inquiry projects and reflected on the use of inquiry in interviews and assignments. However, these inquiries were requirements for completing the program and, as revealed by my analysis in the previous chapter, were time-bounded projects rather than efforts to instill an inquiry stance. Thus, it was unclear whether and how these candidates would use the skills learned in the program in their first years of teaching. Would they see teaching as

recursive, continuously questioning and adapting practice? Would they be intentional and systematic in collecting and analyzing data about pupil learning? Would they develop an inquiry stance, or put aside thoughts of inquiry, viewing this as a project that was finished along with their pre-service program? Would the demands of being new teachers diminish any chance of conducting inquiry? Would particular school contexts promote or discourage the use of inquiry to address the needs of pupils? These and other questions informed the analysis of the case study data.

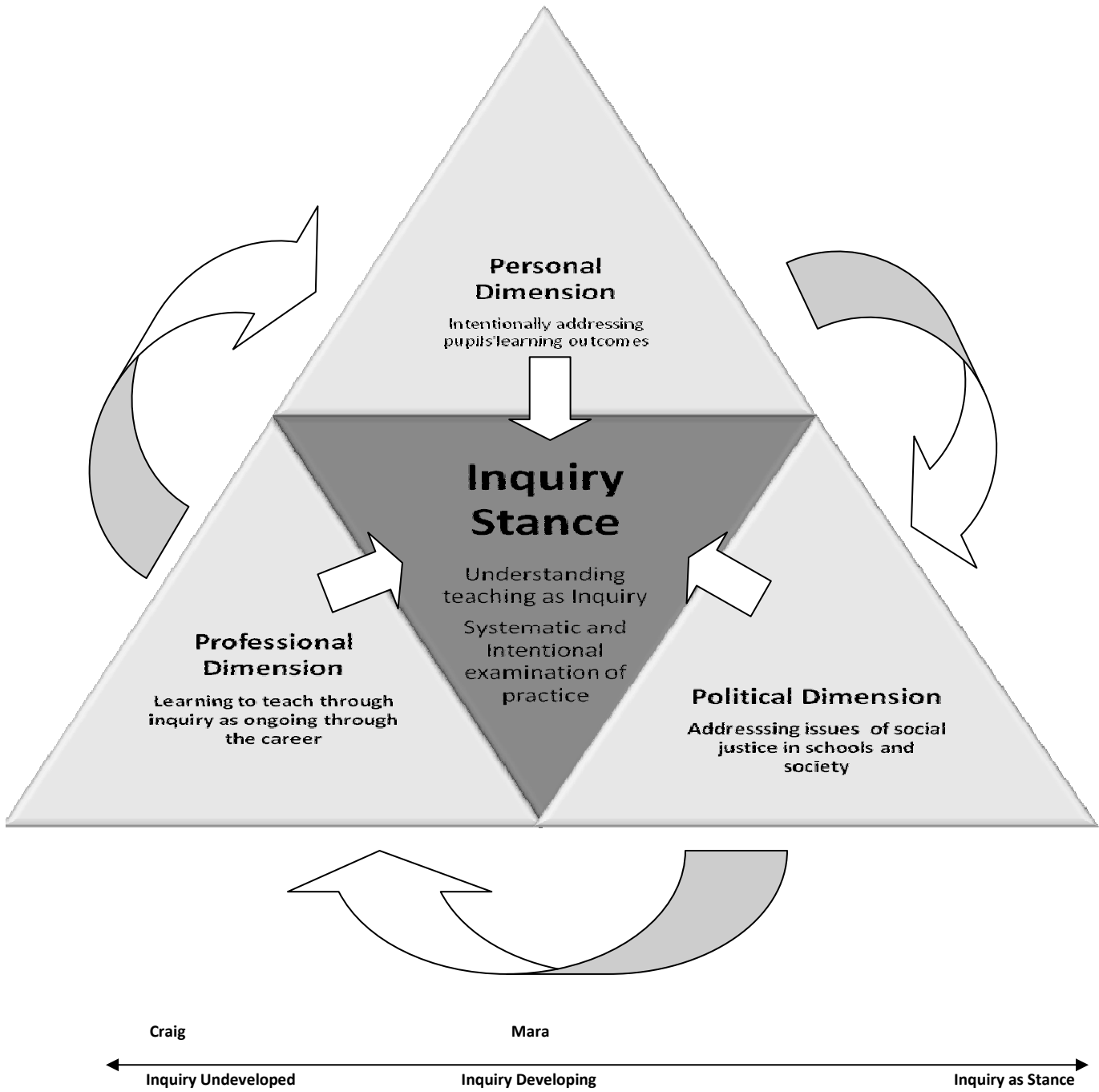
Theoretical Frame

To construct the two cases in this chapter, I combined two frameworks, the practitioner research framework offered by Zeichner and Noffke (Noffke, 1997; Zeichner & Noffke, 2001) and the frame for understanding inquiry as stance provided by Cochran-Smith and Lytle (2009), which were discussed in Chapter 2 and are briefly reviewed again here. Figure 5.1 illustrates these dimensions and the relationship to inquiry as stance. This table also provides a continuum that indicates the relative position of the case participants in developing an inquiry stance.

Zeichner and Noffke refer to three dimensions of practitioner research: the personal, the professional, and the political. These dimensions, which identify motivations or purposes for conducting practitioner research, are “interwoven categories” (Zeichner & Noffke, 2001, p. 21) rather than distinct approaches to inquiry. In reality, practitioners undertaking inquiry generally have multiple purposes for conducting research. Although these dimensions actually work in concert with one another, individually they are useful in identifying and unraveling the various threads that individuals attend to as they learn to teach.

Cochran-Smith and Lytle (2009) state that four aspects comprise inquiry as stance: a conception of local knowledge in global contexts; a view of practice as the interplay of teaching,

Figure 5.1 Theoretical Frame: Personal, Professional, and Political Dimensions and Inquiry Stance



learning, and leading; practitioner communities as the medium for enacting inquiry; and an overarching aim of practitioner inquiry of democratic purposes and more socially just schools and society. These aspects of inquiry as stance also exist as overlapping elements rather than distinct categories.

Cochran-Smith and Lytle's construct of inquiry as stance and Noffke and Zeichner's purposes of practitioner inquiry complement one another. First, Noffke and Zeichner's personal dimension and Cochran-Smith & Lytle's concept of practice as the interplay of teaching, learning, and leading are both centrally concerned with the intentional examination of pupil learning and practitioner change through inquiry. Second, Noffke and Zeichner's professional dimension encompasses the concepts of knowledge in local and global contexts, as well as communities for teacher learning, as described by Cochran-Smith and Lytle, with an emphasis on generating and disseminating knowledge for practice in the classroom (the local) and the field at large (the global). Both frames highlight practitioner inquiry as a tool for ongoing professional development in response to changing contexts and emphasize the way in which the context of the school and communities of practice are central features in learning to teach through inquiry. Finally, both frames consider issues of social justice and democratic purposes fundamental aspects of practitioner research.

Zeichner and Noffke (2001) utilize their dimensions of practitioner research to illuminate the purposes and motivations of practitioners engaged in inquiry, while Cochran-Smith and Lytle (2009) provide a conceptual frame for transforming teaching, learning, leading, and schooling through the development of inquiry as stance. These frames, however, can also be used to examine whether and how new teachers develop an inquiry stance in the early years of learning to teach. That is, the personal, professional, and political dimensions of practitioner research

represent broad categories that address critical elements of teaching and inquiry explored in developing these cases: attention to the learning of both pupils and practitioners themselves (the personal dimension); a view of learning to teach through inquiry as an ongoing and adaptive form of professional development (the professional dimension); and an underlying commitment to questioning inequities in schools and society (the political dimension). The conceptual frame of inquiry as stance provides a detailed construct, consistent with the broader dimensions of Noffke and Zeichner, for examining how these two teachers conducted inquiry in pre-service, and whether they held a perspective on knowledge, practice, teaching, learning, and social justice in keeping with inquiry as stance. Together, these two frameworks organize and examine what happens with demonstration of an inquiry stance for individual teachers in classrooms, as well as identify situations and contexts that impede inquiry into practice.

The personal dimension of practitioner inquiry generally refers to inquiry for the purpose of the intentional study of pupils and their learning (Noffke, 1997; Zeichner & Noffke, 2001). When inquiry is motivated by the personal, the practitioner makes curriculum and instruction problematic in the quest to understand and improve classroom practice and enhance pupils' learning. This includes understanding individual pupils' thoughts and actions, as well as being concerned about educational context and children's lives outside the classroom. This dimension also includes inquiry for the purpose of improving practitioner self-awareness and learning, especially in struggling with the inconsistencies between theory and practice that unfold in daily work. This is particularly critical to new teachers, who frequently experience dissonance between what is taught in their pre-service program and the realities of school classrooms. The personal dimension is also concerned with the impact of inquiry on the teacher researcher, including the process of learning to teach through inquiry that occurs in the systematic examination of

practice. Inquiring into practice is intended to be transformative, changing teachers' beliefs and orientations to practice and raising new questions for research.

The myriad elements of the personal dimension are also central to inquiry as stance, as a way of continuously examining pupils' learning and teachers' understanding of daily classroom practice through questioning, collecting and analyzing data, and acting on outcomes for a better understanding of teaching, learning, and the improvement of pupil outcomes. Cochran-Smith and Lytle (2009) describe practice as the "interplay of teaching and learning," whereby students' learning and teachers' learning are made problematic through inquiry, consistent with the focus of intentional examination of pupil outcomes and practitioner change in the personal dimension of practitioner research described by Zeichner and Noffke (2001).

The professional dimension of practitioner research is concerned with inquiry whose purpose is to contribute to local practice and the knowledge base of education at large (Noffke, 1997; Zeichner & Noffke, 2001). The assumption is that teachers can provide useful knowledge not available to outside researchers. Another key purpose for the dimension of practitioner research is professional development and the growth of teachers throughout their careers.

Two aspects of the concept of inquiry as stance are connected to the professional dimension. First, Cochran-Smith and Lytle (2009) refer to "knowledge in local and global contexts," (p. 127) whereby practitioners are viewed as knowledge generators, engaging in teaching and learning for knowledge that is important in reinventing classroom practice in a specific, or local, context, but also relevant for the field or global contexts. Professional development—learning to teach—is viewed as a lifelong pursuit that stands distinct from workshops or short-term projects. Inquiry itself stands as a form of professional development providing tools and skills to adapt to the changing demands of teaching across the span of a

career. Secondly, Cochran-Smith and Lytle (2009) point to the context of communities of learning in which inquiry takes place. Whether and how these communities of learning support and motivate practitioners to inquire into practice over the professional life span affects the development of an inquiry stance.

Finally, the political dimension of practitioner research (Noffke, 1997; Zeichner & Noffke, 2001) embodies all dimensions of practitioner research, either implicitly or explicitly, through examination of and choices about curriculum, resources, pedagogy, and opportunities for learning. From this view, all teaching and learning, as well as all inquiries into practice, are matters of choice; all choices take a particular stand on issues related to democracy and equity. Whether through purposeful action or passive silence, these choices either help to maintain existing power structures or seek to transform them with the goal of more just and equitable schools and classrooms. Many forms of inquiry and pre-service programs emphasize an emancipatory view.

Along the same lines, Cochran-Smith and Lytle (1993, 1999a, 2009) describe democratic purposes and social justice ends as the aspect of practitioner research that “surrounds and encompasses” (2009, p. 140) all other dimensions of inquiry as stance. Working from an inquiry stance, then, inequities in schools and society are problematized through inquiry, as well as structures and policies in educational institutions; curriculum, instruction, and assessment practices impact pupil learning and educational outcomes. Working from an inquiry stance is ultimately about enhancing pupils’ learning and life in a democratic society through questioning and action.

Thus, I used Noffke and Zeichner’s dimensions of practitioner research, as well as Cochran-Smith and Lytle’s concept of inquiry as stance, as frames for systematic exploration of

teacher candidates' development over time and their understanding of inquiry and its role in teaching. In particular, I looked for examples of teachers' questioning practice from the personal, professional, and political dimensions, as well as how they understood and used theory and research to understand and frame problems of practice. I looked for instances of the teachers' systematic and intentional examination of pupil work to improve practice, as well as how they used evidence about pupil outcomes to modify practice. In looking for examples as well as the lack of examples of these behaviors, I also analyzed the contexts, people, and situations that influenced the work of teaching and learning.

The experiences of the two case study teachers differed in a number of ways. In terms of the personal dimension, the teachers differed in their views of teaching, learning, and inquiry, and the focus of practice during the early years in the classroom. These views affected the questions that teachers asked of their developing practice, how they collected and analyzed data from the pupils, and whether they utilized this information to adjust practice. In terms of the professional dimension, the teachers differed in terms of capacity, or a kind of openness and ability to embrace new ways of understanding teaching, learning, and their pupils. Additionally, the teachers experienced very different school contexts, which had a great impact on their expectations and their ability to inquire into practice in their own classrooms, in terms of grade-level concerns, or in the larger school setting. The general support that these individuals received as novice teachers also varied dramatically, sustaining or diverting them from taking an inquiry stance in teaching. The experiences of these two teachers differed in terms of support for participation in teacher learning communities and professional development, both formal and informal, in the professional context. The expectations and opportunities provided to these individuals affected whether and how they addressed problems of practice. Finally, in terms of

the political dimension of practitioner inquiry, the two case study teachers demonstrated different commitments to issues of social justice and equity. One candidate was largely silent in this regard. The second was encouraged at her school and expected to take an active, questioning stance toward issues of social justice, which influenced her approach to curriculum, instruction, and professional involvement in the school. These differences had to do with whether and how the two teachers questioned or acted on issues of equity in their own practice, school policy, and society at large.

In the remainder of this chapter, I organize my examination of whether and how two teachers demonstrated elements of an inquiry stance in the personal, professional, and political dimensions, with attention to the elements of inquiry as stance. While their stories differed, neither of these new teachers undertook formal inquiry during their first two years of teaching in the sense of posing a question and collecting classroom data. Neither developed what could be called inquiry as stance, or way of knowing about teaching and learning based on constant questioning of the assumptions underlying practices and policy with the goal of social change and social justice. On the other hand, for one of the two teachers, there were indications of a developing inquiry stance that grew over time.

Overall, then, the two case studies that follow in this chapter represent two quite different experiences of learning to teach for two teacher candidates who were part of the same preparation program with a strong focus on inquiry. One teacher displayed an inquiring stance along the personal, professional, and political dimensions, which was encouraged and supported by her school context. The second teacher generally did not demonstrate an inquiry stance in the first years of teaching and was not encouraged along these lines within the school context.

Mara Howard: Background

Mara Howard's plans to become a teacher were launched on a flight from California to Manhattan. The confident, amiable twenty-four year old was taken aback when her seatmate expressed surprise that she worked in the fashion industry. "You don't seem the type," he said. Mara was insulted at first—she was wearing designer jeans, Kate Spade shoes, and carried a Vera Wang carry-on bag—until she realized that he was not referring to her clothing. Reflecting on the comment, Mara realized that, unlike herself, most of her colleagues were not particularly affable. More importantly, she recognized her unhappiness with a career that provided intense stress and little personal fulfillment. She soon began researching options to earn a teacher license. Mara considered herself to a career-changer as she entered a master's program leading to certification in secondary history education. Her decision to become a teacher was actually the result of a long-held notion that education might be a rewarding career:

I think, deep down [teaching has] always been something that I've thought about and I thought about it a lot when I was in New York. And then I got to the point where it was all about a sense of fulfillment. And then it was funny, because I...took my first class. I did all the readings and I was so excited...And I think to myself, I have to keep this a secret...or everyone will know and want to be a teacher....Finally, I sat down and thought about this and realized, 'No, you idiot, not everyone would want to be a teacher. You just figured out what's going to make you happy.' (Interview 1)

Mara's white, middle-class background made her a typical teacher candidate (Wideen, Mayer-Smith, & Moon, 1998; Zumwalt & Craig, 2005). She experienced what she described as a 'traditional' education experience in a middle-class New England town that was devoid of any

real diversity. Her early school experience was remarkable in that Mara was identified as “mildly dyslexic” (Interview 1). With persistent support from her family, especially her mother, she worked with tutors for two years to develop reading strategies to leave the “green rug,” which was designated for pupils with special needs, and moved into the second highest reading circle in the third grade. She attributed a real shift in self-confidence and academic opportunities to a middle school teacher who realized Mara’s academic potential even as she worked to compensate for learning differences. This teacher recommended her for college track classes as she entered high school.

[My teacher] was doing her master’s program at the same time, and it was in writing and reading...different methods. She saw me grow so much from the first day to the end that she actually got my permission and mom’s permission to use me in some of her studies. She was the one who said to my mom, “You know, we’re picking whether or not they’re going in honors or basic. And, I think it’ll be a struggle in freshman year, but I think Mara can do the work, and I think you should encourage her to step up and take the honors. And so that’s pretty much when it happened... (Interview 1)

Mara went on to earn a bachelor’s degree in history and fine arts at a small, selective college in the northeast. She then immediately immersed herself in the fast-paced life of the fashion industry in New York for two years, until she decided that her career trajectory was not fundamentally satisfying and turned to thoughts of teaching. Mara chose the HU teacher education program for its reputation for academic rigor and a stated commitment to social justice. She felt that the high financial cost of the program (funded by loans and her parents) was balanced by being able to complete the course of study in four semesters, over one calendar year,

in a prestigious program. Mara viewed a master's degree in education as a commitment to teaching as a career; she differentiated this from following an alternative route, such as taking a teacher's test for provisional licensure to just "try it out" (Interview 1).

Mara successfully completed the program over four semesters between the summers of 2005 and 2006. She expressed overall satisfaction with the program, her experience at HU, and her practicum. Over the years, she consistently reported that her history methods class had had the greatest impact in preparation for classroom experience. She also noted that actual teaching time during the student teaching semester provided the necessary experience for taking over her own classes. She completed both her pre-practicum and student teaching in the same classroom, choosing this school because of its reputation for academic rigor and similarity to her own academic experiences in high school. Her cooperating teacher (CT) was a 40 year veteran teacher who provided her with resources, guided her planning, and gave her teaching time with increasingly regularity through the year as a means of preparing her for her own classroom.

Pre-service Practitioner Inquiry

In her pre-service program, Mara was first introduced to practitioner inquiry and completed a project on the impact of using non-text based primary sources in her high school history classes. Her question was: *What happens when I incorporate non-text based primary sources such as fine art, musical songs, and oral narrations into my history classes?* Her project scored close to the cohort average, at 75 points on the project, a typical representation of an inquiry project in this program, as assessed by rubric scores. Mara's inquiry project was analyzed for differences that were found among other projects scoring in the lower half of the rubric, as in Analysis #2 in the previous chapter. This included where the question originated, how analysis was conducted, whether and how practice was adjusted based on pupil outcomes,

whether the paper evidenced self-reflection as well as reflection on pupil learning, and how issues of social justice were reported. Mara's paper was similar in many ways to other papers in this scoring range in that she reported difficulty with analysis, did not demonstrate recursivity in practice, and did not reflect deeply on connections to issues of social justice or her own learning in this paper.

In developing her inquiry, Mara struggled to find a question, reflecting the confusion and frustration that many teacher candidates report when first conducting practitioner research. As a result, she started her intervention late in the term. Eventually, Mara's question came from the intersection of theory and practice, or *knowledge-of-practice* (Cochran-Smith & Lytle, 1999a, 2009), where the practitioner generates knowledge based on problems of practice, rather than receives knowledge from outside sources, as described in Chapters 2 and 4. She saw non-text based primary sources as a means of opening the curriculum to pupils who struggled with texts and were less intrinsically interested in history. Mara viewed non-text based resources as a means of addressing diversity, differentiating instruction, and providing rich learning opportunities to all pupils. In interviews, Mara also talked about using this strategy to expand on the "traditional" lecture/discussion routine, which she felt did not address the different needs of all pupils in her classes, maintained by her cooperating teacher. Additionally, Mara felt that this was a strategy worth developing for practice, as the use of primary sources was emphasized in her methods class and consistent with her undergraduate experiences in her dual History and Fine Arts majors.

From this background, Mara was able to draw on familiar theory and literature in developing her inquiry. Her question, then, was important for improving learning and practice in

the context of her classrooms, and supported by theory. This combination provided a strong foundation for her inquiry.

Mara also tied her intervention to issues of social justice in her classroom. She said:

My research question goes along with the teacher education themes held by HU. I believe that all students are capable of learning and deserve the opportunity to learn in a manner that best suits the individual student. Primary sources that are non-text based allow for greater student participation and more hands-on historical discoveries. This directly correlates with the promotion of social justice and accommodation of diversity. Analyzing non-text based primary sources fits into every education reform movement that values authentic inquiry over traditional lecture delivery (Johnson, 2004). By examining non-text based primary sources, students have many different opportunities to demonstrate their strengths, knowledge, and creativity. Students will also have the opportunity to strengthen their existing skills and build new skills. (Inquiry paper, p. 5)

While this was an interesting connection between social justice and academic gains, it was the only statement in the paper that directly referenced issues of social justice. Like lower scoring inquiry papers in the content analysis, Mara's inquiry paper did not expand beyond the introduction of this idea. Without further connections, this remained an underdeveloped connection to her inquiry and practice.

Mara reported several difficulties in conducting the inquiry. She found it difficult to collect data while she was teaching, noting that she either became involved in teaching and failed to record information, or became distracted and less effective in teaching when she did attend to collecting data. As a result, she brought in another teacher to conduct observations and record

pupils' responses. While this solved her difficulty in completing the inquiry, it represented an obstacle to future inquiries. As with others in this scoring range from Analysis #2, Mara also reported difficulty analyzing and interpreting her data, particularly the qualitative sources. Mara was able to call on other teachers to support her understanding of the analysis. Her supervising teacher, who was "simply awesome in making sense of this stuff," and another teacher in her school, who was familiar with practitioner research, helped Mara to organize the material. She explained, "once I was able to step back and look at it this way, I was like, 'Wow!' [Earlier] it meant nothing" (Interview 5). Although her seminar instructor addressed working with data in a general way, Mara did not get additional support from the seminar because she did not begin her analysis until the last few weeks of the term, just before the assignment was due.

Mara did not report adjusting practice in the course of her inquiry; rather, she gathered the data, analyzed the results, and claimed that "doing history" using non-text based resources was a practice that would be useful in her future classrooms. She did not offer limitations of the inquiry, suggest changes to the intervention, or reflect on how future inquiries might be framed in light of this study. Like other candidates from Analysis #2, Mara did not act recursively in conducting inquiry, nor did she reflect deeply on her own learning that might have taken place in the course of inquiring into practice. She simply stated, "From this study I learned many things about myself as a teacher and about my students as learners," (Inquiry paper, p. 24) without expanding on what she had learned in the experience.

Mara reported that the pressures of student teaching, a required portfolio, and another research paper distracted her from writing about her inquiry effort. Mara did feel that she had completed a valuable and well thought-out inquiry, but that the paper was not a good

representation of her efforts or learning. A few weeks after she completed and turned in her inquiry paper, she stated in an interview:

The inquiry paper, as much as I hated writing it, I enjoyed doing it. I think it is a good thing ... I can see many of the kids in that class going on to be teacher researchers. So in that aspect of it I thought it was good. I mean, again, I'm one of those people. I got one B+ in this entire program—in that class. I phoned it in a little bit, I'll admit it. But... I don't know if you can give the kids an option. I mean, we're trying to be teachers, and thinking about teacher researchers is maybe too far away, but I mean I saw some kids in my class really get into it. And I thought it was awesome. And maybe, you know, I don't know. I'm glad I was forced to do it. (Interview 6)

Mara did feel that she had gained something from her inquiry experience, but this was not what her instructors would have hoped for or expected. Mara's experience, however, offered insight into the disappointing range of scores in Analysis #2. While expectations were that candidates would see inquiry as the assignment that brought together learning from courses and practicum, theory, and practice, candidates approached their inquiry as the final hurdle to complete their program. Mara acknowledged that although this was a high-stakes capstone assignment, she had not provided a best effort. In the rush of completing many projects, the inquiry paper became an obstacle rather than a culminating effort. Mara did not understand inquiry as a strategy that would be helpful in the process of learning to teach. To the contrary, the challenges of developing a question, collecting and analyzing the data, and producing a finished product gave her reason to avoid conducting an inquiry while she was learning to teach. Nonetheless, the experience moved Mara from a position of ignorance and indifference to some level of

appreciation for the inquiry as a project. She did value the knowledge that came from her research, and Mara continued to use the intervention from her inquiry in her own classrooms over the next two years.

Throughout her first two years of teaching, Mara did not undertake any intentional or systematic investigation of practice in the classroom. With her introduction to inquiry in the pre-service program and continuous support from her school system, however, Mara did demonstrate *instances* of an inquiry stance. Mara did question and look for evidence of pupil learning; however, she did not undertake systematic examination of practice. As time went on, Mara more closely examined pupil outcomes, but did not always act on the findings. She raised questions about equity in her school and society, but only at the end of her second year in the classroom did she generate curriculum to explicitly address issues of social justice.

It is helpful to examine Mara's experience as a teacher in light of the personal, professional, and political dimensions of practitioner inquiry and notion of inquiry as stance to consider when and why she moved toward an inquiry stance, as well as to identify obstacles to understanding teaching as questioning, analyzing, and adjusting practice based on pupil outcomes. In each of the three dimensions, various factors affected Mara's ability to act as a teacher researcher.

Personal Dimension of Inquiring into Practice

As noted earlier, the personal dimension of practitioner research is concerned with the intentional study of pupil learning, understanding of teaching, and changing practice. It also has to do with how teachers reflect on their own learning and changes that occur in their understanding of teaching and learning in the process of inquiry. Two aspects of Mara's story affected the personal dimension of learning to teach through inquiry; one pushed her towards an

inquiry stance, while the other acted as an obstacle to inquiry. Mara's perceptions of teaching history were grounded in an inquiry approach that fostered an inquiry stance in learning to teach. She believed that her pupils should ask questions like historians, analyze resources, and draw conclusions about historical events while actively participating in activities that demanded historical thinking, rather than relying on the textbook and lectures in a transmission model of learning. To a certain extent, this approach parallels the use of elements in the inquiry cycle that Mara understood from her inquiry seminar. Even as Mara developed this pattern of teaching, however, an obstacle to developing an inquiry stance was posed. The demands of generating curriculum—of having a lesson to present from day-to-day—prevented Mara from taking the time to intentionally question curriculum outcomes and pupil learning. For Mara, consistent analysis of outcomes and changes in practice based on data were evidenced only when other elements of practice were manageable. In the following sections, I address each of these aspects in the personal dimension of practitioner research that encouraged or hindered development of an inquiry stance.

Developing a View of Inquiry

Mara's expectations about inquiry in general were typical of most beginning teacher candidates; that is, she had no understanding of 'teacher inquiry' or 'teacher research' prior to the pre-service program (e.g., Chant, Heafner, & Bennett, 2004; Freese, 2006; Smith & Sela, 2005). While teacher research was not part of her program expectations, models of inquiry had been available during her academic career. For example, as noted previously, she was aware that her favorite middle school teacher had conducted research on practice in her master's program. Similarly, Mara commented on having been well-served by "published professors," (Interview 1) who drew her into their work as an undergraduate student. Mara valued research and saw

educators whom she admired as researchers. Teacher research as a part of learning to teach, however, was not something she connected to learning to teach or learning from teaching. This was reserved for experienced classroom teachers.

It is not surprising, then, that when she entered the program, Mara did not talk about inquiry or research as skills of teaching and learning. She was not concerned with questioning and analyzing practice so much as she was concerned with accumulating knowledge about how to teach. She acknowledged a need for more content knowledge, better understanding of classroom management strategies, and more planning experience, in saying:

I think my weaknesses areas a new teacher I'm going to be spending a lot of time on classroom management, and having all my background in US History. I'm taking my content courses here in modern European history. That I'm totally not excited about, but face it, there's a good chance that I'm going to be a 9th grade teacher, and....So, that's a weakness and I'll work on by taking those other courses, and it's something you gain with experience and you just kind of—the whole newness to me. Some people can write a lesson plan in twenty minutes; it takes me two hours, the logistics of it. (Interview 1)

These pragmatic issues are typical concerns of new teachers that often divert attention away from pupil outcomes (Hammerness et al., 2005; Nuthall, 2004). However, Mara also held beliefs that encouraged a questioning, reflective, and analytic vision of teaching, which is the foundation of an inquiry stance. In the first class she took at HU, Mara wrote a philosophy of education paper, which ended by saying:

As a beginner teacher, I understand that teaching is a skill and a process. And just like everything else in life, I know it will take hard work, dedication, and over

time, improvement. I'm not really sure how my views on teaching will play out in my future classrooms. As a good teacher I will be flexible, dedicated, honest, and not afraid to ask for help. Teaching is a practice that is shaped by different students with different needs and abilities. Without those students, teaching is just a bunch of theories. I am looking forward to trying out these theories and developing good relationships with my students that are conducive to learning.

(Candidate Course Work, Teaching Philosophy, p. 5)

Here, Mara expressed an understanding of learning as an active process that continues throughout the career, and adapts to the changing context of the classroom and needs of particular pupils, rather than as a transmission of content and knowledge that is limited to the pre-service program. These beliefs were consistent with the development of an inquiry stance as a means of continuous professional development, working from the assumption that changing needs of the classroom require changes in practice.

While Mara did not develop an inquiry stance in regards to her own teaching, an inquiry approach was reflected in how she expected her pupils to proceed in learning about history. Mara emphasized “learning how to think” over “learning what to think.” She explained,

My whole college experience was about learning *how* to think, whereas in high school I learned *what* to think. They told you what to think and you were, ‘Okay.’ Where in college they taught you how to think. So I’d love to be that teacher who teaches you how to think...(Interview 1)

In the classroom she stressed critical thinking and reasoning, surprising her pupils by not providing a single “right” answer to historical questions; rather she generated more questions through research and discussion. This is consistent with the idea of “doing history” (Levstik &

Barton, 2005), which promotes an active inquiry approach to history through use of primary sources, historical thinking activities, and consideration of multiple perspectives.

Mara expected her pupils to use an inquiry stance to understand history. Rather than transmitting information, Mara provided opportunities for pupils to struggle with historical sources to understand culture, periods, and events. In one observation, she gave pupils pictures of renaissance art and, through guided questions, had them critique and discuss the work as a representation of renaissance thought. Pupils worked in small groups with an assigned visual, and then presented their findings while displaying the art on an overhead projector. This excerpt from one presentation shows how pupils came to their own understanding of what the visuals represented.

Jake: “So, we’re doing St. Peter’s Pieta. It’s a realistic portrayal. We assume it’s after the crucifixion. You can see [Jesus’] muscles are realistic, he’s skinny, he’s got facial hair, and his stomach is caved in.”

Mara: “Why does he look like that? I’m assuming you’ve never seen anyone dead before, like this. Think about this. Before this, where was he?”

Amy: “On the cross?”

Mara: “Right. So gravity has pulled the belly. So he looks like Bill after Thanksgiving.” (Bill grins—he is thin.)

Bill: “He has fingernails!”

Kate: “No, he has nails in his fingers!”

Mara: “Right. And you can see his muscles, or as you said—he looks ripped or buff.”

Amy: “Talk about light and shadow.”

Jake: “Amy, can I get to that in a minute?”

Amy: “Okay.”

Jake: “Jesus is peaceful, calm. Mary is peaceful too. Now, look at the light and shadow—there’s more light on Jesus and shadow on Mary’s head.”

Mara: “Is that *accidental?*” (Dramatically)

Jake: “Yeeees?” (Sarcastically)

Kate: “Doesn’t it depend on light in the room?”

Mara: “No—the artist knows about where it’s going to be. Whether there will be sun from the sides or above—and time of day will matter, the way he sculpts it. Mary with fold over face—more shadow. Yes, it depends on natural light, but the artist has also planned it. How do you get this out so people perceive it? Sadie?”

Sadie: “Couldn’t the shadow be symbolic? Jesus as a saint? Or really important in more light and Mary is grieving? In shadows, grief?”

Mara: “Yes!” (Excitedly)

There is a long pause while all the pupils look at the picture of the statue in silence. (Observation 3)

These kinds of exchanges and discussions were the norm in Mara’s classrooms. She required her pupils to examine incidents and artifacts from history, posing questions and analyzing data to

develop historical perspective. Mara's approach was, in fact, a historical inquiry approach to teaching and learning: "the process of asking meaningful questions, finding information, drawing conclusions and reflecting" (Levstik & Barton, 2005). She obviously valued the cycle of inquiry in learning within her content area, posing questions, analyzing data, reflecting on findings, and developing new understandings.

Observations of Mara's classes revealed that in a typical period, pupils would arrive having read and responded in writing to a portion of the textbook, a supplementary reading, or reflection on a classroom experience from the previous meeting. Mara began her classes by taking questions, reviewing material, sometimes offering a brief lecture using PowerPoint, and then initiating an activity that would culminate in a full class discussion. Mara viewed questioning and analyzing responses as central to good teaching even in her first practicum experiences. She stated,

[At] the end of all my lessons, I like to have kind of like a couple questions to close out. Let's talk about what we learned. What do you guys think about what we learned? ...So, I definitely think that they're learning, but I don't know if they think that, which is fine... I think learning went on. (Interview 2)

This habit of probing for and assessing learning through questions and informal analysis of pupil comments continued through her classroom experiences and became part of her established practice. This mirrored her expectations for historical inquiry, questioning and analyzing to developing historical understandings. In the classroom, on an informal basis, Mara maintained a questioning and analytical stance approaching what is expected in inquiry. This was a limited means of assessing pupil learning, however. Mara was often too overwhelmed with the demands

of generating curriculum to systematically and intentionally examine pupil work in the form of written assignments, essays, tests, and quizzes.

Distractions in Learning to Teach

A second aspect influenced the personal dimension of practitioner research, keeping Mara from developing an inquiry stance. Outside of informally evaluating pupil learning through their comments and discussions, Mara did not approach her own practice through inquiry. This was largely because matters of planning and preparing lessons were initially overwhelming.

Mara reported that analyzing pupil learning was initially less of a priority than planning and teaching. Three months into her first year of teaching, she noted:

I'm still in survival mode. I would love to get to long-term planning. I can't plan more than a unit ahead. I have my long-term goal. You know, like, this is where I want to be. These are the themes, but besides time length and themes, no.

(Interview 7)

Through much of this first year, there were occasional gaps in her ability to consistently evaluate and respond to pupil work. Mara reported that on a few occasions, she fell so far behind in correcting essays that she simply did not read or grade sets of papers. During two of my observations in Mara's class, pupils asked about assignments that had been completed but not yet returned. Mara would respond by saying they were in progress. It was clear that Mara often did not have the time to do more than grade pupil work, never really analyzing outcomes. Since assignments were assessed slowly, it was also impossible to act on the outcomes to guide and improve the next phase of practice.

Mara did carefully analyze unit tests and major projects that were generally completed at the end of a unit. Here she reflected some vestige of an inquiry stance in examining and analyzing pupil work systematically. She noted that in looking at key assignments, she went beyond determining a grade, saying, “I’m looking for patterns. You know, if I see, oh my God, everyone got this one wrong. Well, is it the question or did I not teach it?” (Interview 7). At these times, Mara was analyzing pupil learning through data of practice, though this did not guarantee adjustment to practice as the unit was finished. Mara was also required to regularly examine pupil work in meetings with the chair of the department as part of her induction program. Again, however, these occasions were focused on units, lessons, and pupil work that had already been completed. There was little opportunity to revise practice based on these reviews.

During this early period, when intentional examination of pupil data was inconsistent, adjustments to practice based on pupil outcomes were not a regular feature of her practice. In an interview during the student teaching period, Mara analyzed assignments aloud for the TAPL portion of the interview protocol, where she was asked to describe assignments and talk about high, medium, and low scoring samples of pupil work. At the end of the analysis she was asked if there was anything she would change about the lessons, assignments, or the unit in general. She responded, “Not this one. I was so pleased with this one” (Interview 5). At this point, Mara was satisfied with maintaining the assignment as it existed, rather than questioning why some pupils were not successful and considering how to change practice to improve their outcomes. A year later, during her first year as a teacher, Mara said something similar when she finished reviewing pupil work on a poster project in which pupils researched and presented on various ‘isms’ (communism, nationalism, capitalism, Darwinism, socialism). When asked whether she

might change this assignment, she answered, “I don’t know...I have to say, ‘yes,’ because you always can make something better, but it really came out nicely” (Interview 7). While she indicated that the assignment could be improved, she did not have specific suggestions, even after talking about the assignment and reflecting on her pupils’ work.

During her first year of teaching, there were moments when Mara was observed informally monitoring learning in the classroom and adjusting practice in response to pupils’ answers and actions. She was able to identify when pupils were not learning and alter her lessons to improve outcomes. In an interview during this period, she offered one such example:

On Monday we did this ‘Causes of World War I chart.’ I made a chart. They did it. And they just were not able to get the reading. I don’t know if they weren’t able to do it, or they didn’t want to do it or...they didn’t read it. So I was like, all right, we need to move on...We did this mnemonic device. We did the chart as a class. So there are a lot of times where I’ll... spend ten to fifteen minutes recapping something... (Interview 7)

Here, Mara reworked her plan for practice by re-teaching material, adding the use of a mnemonic device, and modeling how to complete the chart in response to pupils’ confusion. This example of altering practice based on pupil responses was not from systematic and intentional analysis, although it indicated that Mara was questioning and reacting to pupil learning. At this point in time, Mara did not demonstrate that she was making these kinds of adjustments based on pupil work in the form of written assignments, tests, and projects.

The second year in the classroom brought significant changes to how Mara was able to plan assignments so that she was consistently responding and reacting to pupil work in a timely manner. In the spring of her second teaching year, Mara claimed:

You know I think it's interesting because everyone has been saying you know, 'Oh second year. Things must be so much easier.' And if anything, I think this year... is so much harder because last year I feel like I was in survival mode. The entire year the class would end and I'd be like, 'Okay, all the kids were here. I gave them their homework and nobody died for a day.' You know, whereas, like these classes, I kind of know what to expect and I know where I'm going with the lesson and I've got my central questions. It's been more reflective and I'm like, 'Oh, okay, this piece didn't go so well or that kid really had no idea what was going on.' Where I'm sure that was happening last year, but I was just too immersed in, you know, being a new teacher. (Interview 10)

Mara moved closer to an inquiry stance in part because the demands of the first year were diminished. Her first year, characterized by constant concern for planning and preparation for classes, as well as the seemingly unending pile of papers and projects to grade, left little time or energy to consider questions of practice in a consistent or systematic manner. In her second year, she had lessons, resources, and a sense of how to arrange curriculum so that grading and analyzing pupil work was manageable. With this shift, Mara began to more closely attend to pupil responses to curriculum through pupil work.

Mara began to systematically note changes in assignments, resources, and activities in preparation for the next year of teaching, collecting these materials in binders. She contacted families when pupils fell behind in homework and assignments, and modified assignments for her pupils with special needs in response to close assessment of pupil work through the term. This was very different from the limited assessment and modification of practice that occurred in response to classroom behavior in the first year, instances of inquiring into practice that rarely

came from analyzing pupil work. Understanding and responding to pupil learning was a new and formidable challenge, however. Mara admitted:

I'm still struggling with that. I'm still struggling with that because sometimes I'm looking at kids and I'm wondering, are you being lazy, or are you physically not capable of making these connections yet just because you haven't matured?

(Interview 10)

Mara found that questioning and analyzing brought less certainty and more questions about practice. This is consistent with suggestions made by Himley and Carini (2000) that inquiring into practice does not offer a "fix" for a school, teacher, or pupil so much as produce change in practice, provide new understandings, and prompt additional questions.

As she became more consistent with analyzing pupil work, Mara also became more critical of her own assignments. She claimed:

I'm much more reflective this year. So, last year I may have missed some things that I might not have noticed. And last year I would've been so excited about this project and thought it was the most fantastic thing ever. Day two of presentations, and I already want to change everything. So, I think it's more of a—I don't know—just being familiar with the content. Knowing where I'm going. Being more familiar with, you know teaching and how I'm shaping these kids.

(Interview 10)

Mara began to adjust the assignments that she had used the year before, responding to the needs of her pupils and demonstrating persistent questioning and adjustments to practice, habits that come from a recursive view of teaching and inquiry.

Mara's progression from a focus on curriculum and instruction to pupils and pupil learning reflect reports from the literature on learning to teach (e.g., Berliner, 1994; Feiman-Nemser, 1983; Fuller, 1969; Richardson & Placier, 2001). Before she focused on understanding pupils and pupil outcomes, Mara began by addressing the need to produce curriculum. Until she found ways to organize lessons and projects so that they could be assessed in a timely manner, it was not possible to use these assessments to adjust practice. However, while she was overwhelmed in her first year with issues of practice and did not take an inquiry stance, this is different from suggesting that novice teachers may not be developmentally capable of undertaking meaningful inquiry. In fact, Mara did reflect on practice in interviews that called for analyzing pupil work samples; she did the same in the regular meetings with her department chair, reviewing unit plans and pupil work. Mara acknowledged that on these occasions her experience with pre-service inquiry had been valuable, and did prepare her to analyze pupil learning, saying, "We'll give the inquiry project credit" (Interview 7).

When Mara's focus turned to pupils and their learning during her second year of teaching, she utilized the strategies that had been modeled and explored in her pre-service program and continued to be valued in her school. Hammerness et al. (2005) suggest that the "speed and endpoint" (p. 381) of this progression, from attending to curriculum and instruction to addressing pupils and their work, is supported by pre-service preparation that deliberately reinforces the use of reflection, inquiry, and collaborative examination of practice. In Mara's case, attention to pupils' learning was also encouraged by her school environment.

Professional Dimension of Inquiry in Practice

The second dimension of practitioner research noted by Zeichner & Noffke (2001), the professional dimension, is connected to the profession of education "(a) as a contribution to the

profession's 'knowledge base' (b) as a means of professional development, and (c) as an enhancement of the profession's status" (p. 24). The professional dimension is critical because taking an inquiry stance maintains a view of practitioner research as continuous professional development—lifelong learning and adapting to the ever-changing context of school and classroom. Additionally, the questions that drive inquiry come from professional practice and "local" knowledge intended for use in the context of a specific school or classroom (Carr & Kemmis, 1986; Noffke, 1997), but may also bring insights to teaching and teacher education at large (Cochran-Smith & Lytle, 1993, 2009). Here, Mara's experience within the professional dimension highlights what elements of her teaching experience were supportive of demonstrating an inquiry stance, and whether there were factors that pushed her farther from this view. Three factors are discussed at length. First, Mara's idea of inquiry as project deterred her from undertaking inquiry in her first two years. However, two aspects pushed Mara towards an inquiry stance. Mara's teacher capacity, the ability and openness to lifelong learning, and continuous support from her school for learning communities, examination of practice, and professional development moved her towards inquiring into practice. These aspects are developed in the following sections.

Inquiry as Project

Even as she developed a more questioning and analytical stance, Mara remained unconvinced that she was "doing inquiry." She maintained a narrow view of inquiry related to completing a formal project, similar to what she experienced in her pre-service program. When asked if she felt that she used the skills from her inquiry seminar, she hesitantly responded:

Again, this is something I don't do consciously. I don't journal write...But when I collect assignments I do reflect on them, you know. Maybe it won't happen, you

know, this year. But maybe it's like next year, 'Oh, I need to change this because the kids didn't understand what I was looking for with these directions.' Not necessarily, you know, using statistics to change the way... But, like, you kind of get a general feel that I'm doing [inquiry]. (Interview 11)

Mara's association of the concept of inquiry with a project resonates back to candidates in Analysis #2, who completed the inquiry project to meet program requirements without demonstrating thorough understanding of inquiry as stance. Similarly, Mara did not connect the questioning, analysis, reflection, and adjustment of practice as she experienced it in her work with teacher inquiry. She associated practitioner research with journal writing, statistical analysis, and formal presentations that existed outside of practice in daily life. This may also explain why Mara did not see the connections between historical inquiry and inquiring into practice.

Mara rejected the idea of any "formal" inquiry in her first years of teaching, but suggested that she would consider such research and dissemination of the results in the future. She said:

Maybe at some point in my career, I will have an opportunity to do inquiry/action research about something that really excites me and there is a need for it (aka I might get a grant to do it) and then it will be nice that I have [my inquiry] from HU to use as a reference. (Email correspondence, 2009).

Mara was really discarding the idea of another inquiry project, which she associated with her pre-service experience. She did not consider that inquiry could be a systematic and intentional examination of practice without extended periods of collecting data and a published paper with an audience. With the frustrations of developing, conducting, analyzing, and writing an inquiry

paper still fresh in her mind, Mara was convinced that the early teaching years did not allow for practitioner inquiry. However, there were a number of instances in which Mara's school community provided opportunities for inquiring into practice. There was an expectation for continuous professional growth, which kept the values of inquiry as important contextual elements of Mara's school experience. Also key to Mara's willingness to take part in these activities and to learn from professional development opportunities, was teacher capacity.

Teacher Capacity

A second aspect related to the professional dimension of practitioner research moved Mara towards, rather than away from, an inquiry stance. McDiarmid and Clevenger-Bright (2008) suggest that teacher capacity has a two-fold meaning. First, it is the ability of teachers to receive and retain knowledge, as well as the ability or potential for development and growth, consistent with an understanding of learning to teach as a career-long undertaking. Teacher capacity is influenced by the "apprenticeship of observation" (Lortie, 1975) in K-12 experiences, pre-service and practicum experiences, and the context of the classrooms in which teachers work. For Mara, her academic history, expectations, program experiences, and the context of teaching supported the notion of life-long learning and the development of an inquiry stance. That is, she was encouraged to demonstrate a questioning and analytic perspective on her own learning, and as part of historical thinking. Connecting these views to a stance on teaching, however, did not automatically follow.

From the beginning, Mara voiced a commitment to the field and a belief that teacher education could improve practice and ultimately have an impact on pupil learning. She assumed that a good pre-service program would fill content knowledge gaps, provide strategies and pedagogy, offer valuable theoretical background, and practical classroom experiences. She

expected that a rigorous program would anticipate her needs, and that in remaining open to what was offered, she would be adequately prepared to begin her teaching career. She stated, “And the whole thing about what I expected to learn... I'm just really going into this open-minded, you know, I really didn't know what to expect” (Interview 1). Rather than passively receive information, however, Mara sought out expertise in others with the intent to add or adjust to her understandings of teaching.

Mara spoke on several occasions about setting up situations for potential growth. She chose HU and her practicum setting based on their reputation and the network they would provide for future employment. Mara indicated that she was very successful at fulfilling expectations set by teachers and employers. She was not generally the person with the best academic record or the broadest experience, however. She made up for this by positioning herself strategically so that her steady work ethic and likeable nature would provide her with opportunities that she would have otherwise found difficult to achieve. She knew the value of social networks in her program and in schools and used her social prowess to build networks to achieve professional goals. Mara had to be especially assertive in gaining a coveted placement in the school where she completed her practicum and student teaching. She spent two weeks visiting numerous classrooms and talking to every history teacher in the department to find the best assignment with a cooperating teacher. These efforts are notable not only for Mara's persistence, but because she viewed each of these situations as opportunities to work in an environment with people and in contexts which would best guide her learning.

Mara valued what her cooperating teacher and supervising teacher offered in terms of modeling practice, offering guidance, and making suggestions for pedagogy and resources. Along similar lines, she frequently mentioned the impact of her history methods course, where

she adopted the view of “doing history” rather than studying history. Of the theory, strategies, and resources from this course, she claimed, “I stole it all and made it mine” (Interview 9). She assumed that instructors, cooperating and supervising teachers, had knowledge and expertise from which she could benefit, and remained open to their guidance and accepting of their suggestions.

According to the literature on learning to teach, seeking or accepting change in this way is unusual (Lortie, 1975; Olsen, 2008; Wideen, Mayer-Smith, & Moon, 1998). However, Mara’s perception of change occurred within the context of the program that she chose because the philosophy and emphases were in keeping with her beliefs and past experiences. The same was true of the school district in which she did her student teaching. Early in the program, Mara noted:

I think what ...my cooperating teacher, and my pre-prac and the students have all showed me is a comfort level and believing you can do it. [That] is so much of being an effective teacher I think...I think that’s why I’m getting it, because I know I’m comfortable there. I know I’m—and it’s also in the same sense why I came to HU. I knew I would be successful there. I knew it would work out here. Could I have been successful at a different school? Maybe, but I’m the type of person that [if] I like chocolate ice cream, I’m going to order it. (Interview 2)

Mara thoughtfully pursued program and practicum experiences that were consistent with her past experiences and beliefs about teaching and learning. As Olsen (2008) notes, however, it is not a weakness when an individual makes decisions based on program rigor and best fit. With this kind of fit, it was possible to adjust understandings of teaching and learning with minimal dissonance. Mara expected strong theory-based coursework, student-centered, constructivist

views on teaching and learning, and hands-on experience in the practicum. She was assertive in gaining a placement in a high school with a reputation for exceptional academic rigor, outstanding resources, and a progressive stance in educating economically privileged pupils. Since she ultimately found a teaching position in the same district, very little from the program, practicum, or her teaching position presented any real conflict in Mara's understandings of teaching and learning. The exception, perhaps, was the pre-service program's explicit focus on inquiry. Mara's school system, however, provided continuing support and expectations for inquiring into practice as she entered the classroom.

School Context and Inquiry Development

Another aspect in the professional dimension of practitioner research that pushed Mara toward inquiry was the expectations and opportunities for inquiry development in the school. According to Weinbaum et al. (2004), the unique contexts of individual schools play a critical role in supporting collaborative inquiry. Whether or not a particular school environment supports the notion of an inquiry stance affects the time and resources available to new teachers and ultimately influences whether and how they carry the pre-service values and skills into the classroom. Mara completed her student teaching in the system where she was hired, a system that closely matched the values held by the pre-service program. The district in which Mara completed her student teaching, and was eventually hired to teach in, was a small city known for excellent schools as measured by pupil testing and college placement, with a population from high socio-economic status and a wealth of resources.

Expectations for teachers were high in this district. The head of the history department stated that he expected more than a "highly qualified" teacher; in fact, the district expected teachers to be "intellectuals" who continued to grow professionally, were committed and

connected to pupils, and lived the values of a socially just community (Administrator Interview). The department chair felt that Mara came with gaps in her knowledge base and sometimes approached pupils with too much sarcasm, but demonstrated real commitment to teaching and a willingness to address gaps to improve her teaching. He noted that she listened and learned from critiques and mistakes.

Mara reported that she expected learning to teach to be the lifelong pursuit of a good teacher; as a self-proclaimed “nerd,” this was an appealing element of the profession. She saw the pre-service program as the foundation for launching her career, but did not expect that she would be an accomplished teacher for some time. When asked to draw her trajectory of learning to teach on a graph during an interview in her second year of teaching, Mara indicated a sharp learning curve for the first five years that then gradually moved upward indefinitely. She noted:

I think it would take about four or five years to really figure it out, and then I bet it tapers off a little bit but... I'm sure there are little dips when, you know, somebody gets sick or, you know, you get a new principal who hates you. For the most part I would hope that that line continues to gradually be going up. If it ever gets flat, fire me. (Interview 11)

Mara's graph indicated her expectations for continued professional development far beyond the pre-service period. She placed value on growth throughout her career, embracing the idea of life-long learning based on the changing needs of the classroom. To this end, she also expected to be supported in her school through mentoring and professional development opportunities.

When asked whether the school had provided her with support in transitioning to teaching and continued professional development, she replied:

I feel very supported within my department. The new teacher mentoring program, I stopped going to like the last three months of meetings because I was coaching and I couldn't make it, but I felt that even if it was just to meet people, you know, everyone there was really supportive and although there are all of these programs set up I also felt comfortable enough that I could go to some people and just say, 'Hey, I'm having trouble with this.' It may not have been an organized thing, [but] there definitely [were] numerous outlets of support for me. (Interview 9)

Mara did have numerous outlets of support. Unlike many new teachers who work in isolation with limited time and opportunity for contact with others (Feiman-Nemser, 1983), Mara did not experience the nightmarish entry into an occupation that has been described as one that "eats its young" (Halford, 1998). She had an assigned mentor who met with her consistently throughout her first year for planning and general support, or as Mara said, "you know, a place to go to, or a key person where even if she was busy she'd...make the time for me" (Interview 11).

In addition to mentoring support, the department head visited new teachers' classrooms at least four times in the first year, and, as mentioned earlier, met at regular intervals to review plans, analyze, and discuss pupil artifacts. His office, with floor to ceiling windows, overlooked the work area of all new teachers in the department, with whom he interacted daily. Informally, her cooperating teacher maintained regular communication, taking her as a chaperone on a school-sponsored trip to Prague in her first teaching year. A group of new teachers in the history department formed close professional and personal relationships, interacting regularly around issues of work and the stresses of being a new teacher. In general, teachers in the history department were collegial and supportive of new teachers and one another. In short, Mara had an extensive support system for her introduction to teaching in a school that valued collegial

interactions and positive professional relationships. For many novice teachers, the introduction to teaching discourages development of an inquiry stance. This school community offered formal and informal mentoring, collegial interactions, and expected teachers to conduct inquiry on their practice.

Mara was part of a school community that encouraged, supported, and expected teachers to deepen knowledge and improve practice through continuous professional development and collegial examination of pupil outcomes at the school and classroom level. On a school-wide basis, Mara was expected to participate in full faculty meetings, history department curriculum meetings, and school-wide mentor meetings. These meetings included review of curriculum, results of state mandated tests, and outcomes of Advanced Placement (AP) tests. She also took part in in-service professional development programs in her first year of teaching to continue the process of learning to teach that she had begun in her pre-service program, providing her with an impressive system of support and growth in her first year.

In the second year of teaching, Mara took three graduate level courses to enrich her background in world history and geography and to address the needs of English language learners. Motivation for taking these courses came from a desire to address areas of weakness in content knowledge and to work toward financial incentives, but she also said, “My kids laugh at me. They’re like, why are you writing papers? Why are you still in school? I love learning. So...even once I have the plus 30 [credits], I will always take [classes]...” (Interview 11). The school did provide reimbursement for a significant portion of the cost of courses she took in response to gaps in her practice, and strongly encouraged her participation. When her formal mentoring relationship was discontinued, Mara met monthly with the history department, worked with other sophomore history teachers to revise curriculum, and participated in a “critical friends

group” within the department. She was observed by the department head three times and continued to review pupil work and curriculum plans with him, both formally and informally. Her relationships with other new teachers continued into the second year, also. All of these opportunities in the first two years of teaching supported the idea of professional development and inquiry stance. Mara—and all teachers—were expected to question their practice, analyze pupil outcomes, and take part in a variety of activities that supported ongoing professional growth.

This was an optimum environment to develop an inquiry stance. Despite this, Mara did not make connections between professional growth and inquiry stance. For her, professional development remained the activities that she took part in outside of teaching. When asked whether she considered opportunities to examine curriculum and practice as taking an inquiry stance, Mara insisted, “Not the way I think [HU] kind of promoted it” (Interview 10), returning again to the association of inquiry with project. Even as her opportunities and experiences with inquiring into practice were supported and expanded, Mara did not connect these activities with inquiry as experienced in her pre-service program.

Johnson & Kardos (2005) note that key elements in being able to hire and retain high quality teachers include appropriate and fair teaching assignments, formal mentoring and induction, collegial relationships with peers, adequate facilities and resources, and effective school organization and leadership. By these measures, Mara had every advantage in her first years of teaching. Not only did she avoid distractions and difficulties that might prevent the development of an inquiry stance frequently attributed to beginning teaching assignments (Feiman-Nemser, 1983, 2001), she was encouraged and supported to continue her professional

development and continuously required to examine and reflect on practice and pupil outcomes with colleagues.

The Political Dimension of Practitioner Research

The political dimension of practitioner research from Noffke and Zeichner was again helpful in examining whether Mara understood the underlying political dimension of teaching and practitioner research. As noted previously, many forms of practitioner inquiry consider the ultimate purpose of inquiry to be challenging and changing inequities in schools and society. The HU teacher education program expected candidates to make connections to issues of social justice in their inquiry projects. While Mara did not intentionally undertake practitioner research that might have addressed issues of social justice in her first years of teaching, she did question and act on what she perceived to be issues of social justice in her school, consistent with the development of an inquiry stance. Working from the political dimension of practitioner research as a larger frame, as well as considering the concept of inquiry as stance, highlights factors that prompted Mara to question and act and the factors that supported these occasions of teaching for social justice.

Four factors important to Mara's development in inquiring for social justice are considered in the next section. First, I describe Mara's unfolding understandings of social justice in the pre-service program and through her first two years of teaching. Next, I consider three ways in which Mara acted on her understanding of socially just teaching, describing how Mara provided opportunities for addressing issues of social justice through curriculum and instruction, as well as how she questioned and acted on issues of inequity as social justice in the school, and in the development of a socially just classroom environment.

Understandings of Social Justice

Anderson, Herr, and Nihlen (2007) note the historical roots of an emancipatory approach to classroom inquiry and teaching as a political act. At HU, and in the inquiry project, candidates were encouraged to take a critical stance in examining schools and society. Social justice was emphasized as a central element of the pre-service program, with the expectation that candidates would carry the commitment to equity and opportunity into their classrooms, and as teachers, that they would make issues of social justice part of their curriculum. Interviews and observations documented Mara's growing awareness of and attention to issues of social justice through the pre-service program and in her classroom.

Initially, when Mara entered the program, she struggled to articulate her vision of how social justice was connected to teaching and learning. When asked how social justice might play out in her history classes, she replied:

I have no idea...But—that's the whole thing I was talking about, the actual, practical. Because we talk about multiculturalism, and we talk about diverse learners and ELL students and special needs, and I'm like... 'Yes, that makes so much sense. I'm totally going to teach that way.' And then you step back and its like, 'Oh, my God, how am I going to do that?' So, I really think that this is something that, if I tell you what I think now, it's 99% sure it's going to change and I'm just going to be pulling it out of the air. (Interview 1)

Mara claimed to be interested in HU because of the program's commitment to issues of social justice. In reality, she didn't know how this would connect to teaching, learning, and pupils. As Mara progressed through her pre-service program, the connections she made to issues of social justice were dependent on the specific challenges she faced in her classroom.

In her practicum, Mara focused on meeting the needs of diverse pupils, particularly in one class with a number of pupils with special needs, including a pupil with Down's syndrome. At this point, she began to articulate her understanding of how she perceived social justice to be important to her classroom.

[Teaching] for social justice, I just think it's believing that all kids can learn, and it's the job of the teacher to find the best way for the child to succeed. And, I have no problems with building in scaffolds and making modifications, and I think that's part of the job of the teacher. So I think just teaching for social justice means just judging each student as an individual student and going from there.

(Interview 3)

Mara continued to connect understanding pupil differences and awareness of pupil learning to issues of social justice throughout her student teaching and into her own classroom.

Over this period, her view of what constituted issues of social justice grew. For example, after teaching an American History class, she stated:

I will add to my definition [of social justice]. ...Now it is, I really, really see the whole citizen aspect of it. You know, I have, from day one, believed, like, all kids can learn. You've just got to figure it out. Then it grew into, you know, what I should be teaching and whom I should be reaching and including. Now I think it has progressed to another step of just how important it is to make these kids aware. (Interview 6)

As she completed the program and entered her own classroom, Mara voiced her understanding of teaching for social justice in terms of differentiating instruction, providing learning opportunities, and preparing for participation in a democratic society.

As Mara entered the classroom, issues of social justice were also emphasized in her school. For example, the mission statement of the school maintains that all members of the school community should be aware of, and support equity, respect, and opportunity for all pupils. The chair of the history department specifically noted that he expected history teachers to act as models for equity and to address issues of social justice through the curriculum and participation in school and community events (Administrator interview). As a result, Mara gradually became more explicit about including issues of social justice in the curriculum and questioning inequity that she saw in the school.

Bickmore (2008) further delineates elements that obstruct or facilitate acting for social justice in schools that is helpful here. First, Bickmore notes the *processes* that may impede social justice, i.e., whether or not there are opportunities for “voicing, listening, advocacy, persuasive reasoning, dialogue, dissent, discussion, negotiation, deliberation, consensus-building, decision-making” (p. 155). “Processes” in the classroom are related to whether and how a teacher provides opportunities to address difficult and controversial issues in the classroom, or requires conversations and assignments that may raise awareness of multiple perspectives and inequities in society and school. In order to provide pupils with these kinds of experiences, however, teachers must be aware of moral and political issues and maintain a level of self-confidence to approach complex and controversial topics with pupils. Second, *institutional governance frameworks* that support the “appropriate and consistent” (p. 155) treatment of individuals and issues through civil, legal, and political institutions must be present for social equity. In a school or classroom, teachers may be aware of issues of social justice and may act on, question, or ignore these challenges. Institutional issues may be addressed through district, school, curriculum committee work, and community involvement. Silence in the face of

inequities or inconsistent treatment of people and problems is also an observable stance to be considered in assessing teacher response to issues of social justice. Finally, Bickmore describes *substantive equity*, or the “practice of fairness” (p. 155) for all persons across social differences, including inclusiveness, impartiality, and equity consistent with the ideals of democratic processes and reflected in the classroom environment developed by teachers. Socially just practice is exhibited through teacher models of openness, inclusivity, and respect for all pupils, with expectations for pupils to act in this way toward one another. Finally, this perspective on equity includes efforts made by the teacher to make the curriculum accessible to diverse pupils and to promote pupil learning for every child. Observations of Mara at work in her classroom documented the ways that she addressed social justice through the processes of teaching, questioning, and acting to change inequitable institutional governance practices and in her development of the learning environment.

Learning to Teach for Social Justice

Mara did not shy away from opportunities to consider controversial and complex issues in her classrooms. Observations and pupil work indicated that she negotiated discussions on genocide, politics of war, inequity based on race, human rights violations, and women’s rights as part of her history curriculum. She connected these topics to issues of social justice, raising awareness of historical and contemporary social inequities in her classes. She stated, however, that these topics were chosen in response to state framework requirements. In her practicum and the first year of teaching, Mara noted several times that she was able to embed issues of social justice into curriculum and instruction, but intended to more explicitly include issues of social justice in her practice in the future.

In her second year of teaching, Mara indicated that department expectations also prompted her to consider how to develop social justice in her curriculum. She said:

With the world that we live in, you can't take on everything, and some teachers in my department, you know, like Mike, he's all about globalization and he does his whole Latin America thing... Whereas...[with] other teachers it's civil rights and, like, the race issue. That's their thing. And I have one teacher who is, you know, the role of women... And I just don't know what mine would be.

(Interview 9)

Mara and other history teachers were expected to address the required curriculum that brought issues of social justice from state frameworks to the classroom, as well as develop their own area of expertise around issues of social justice. The chair of the history department and Mara's cooperating teacher echoed these expectations in their interviews. Teaching for social justice was not only supported in this context, but considered a requirement of effective teaching in the history department. The emphasis on social justice introduced in the pre-service program continued to be valued in Mara's teaching context, where issues of social justice were made an explicit part of the "processes" (Bickman, 2008) of the curriculum and teaching.

Implementing a unit of study focusing on social justice proved challenging for Mara. At the end of her second year in the classroom, Mara developed a project specifically targeting social justice on a global level, adapted from an assignment in her history methods course. The assignment called for pupils in her sophomore world history class to identify a contemporary issue of social justice, research the topic, and generate a poster for class presentation. Additionally, the pupils were required to take some sort of action in response to the issue and document the results. The research and poster presentations were generally well done, but Mara

was surprised to find that most pupils made a modest donation to an associated cause to meet the requirement of taking action. This was not the action that she had hoped to inspire. She commented:

I think especially after doing this project at this point in the year, I'm a little disappointed with how it came out, but this was my first time trying the project. I think it is so important that I—and I've always said this before—you know, unintentionally I'm [teaching for social justice], but I think I really need to intentionally do it more. So, you know, that's really driven home because, I mean, a little bit of me almost thinks that this [is] more important than the history content that I'm supposed to be teaching. (Interview 11)

By the end of her second year, then, Mara was explicitly developing curriculum that addressed issues of social justice and struggling with how to make this relevant and meaningful to her high school pupils. While acting for social justice proved to be a disappointing element of the project, Mara planned to make adjustments to the assignment for the next year.

Mara's disappointment with the results paralleled the difficulty that teacher candidates evidenced in their inquiry projects, as noted in the content analysis of papers. In both instances, acting for social justice was a consistent weakness in the projects. It is interesting that Mara required her pupils to act for social justice when she had difficulty integrating the idea of social justice into her inquiry two years earlier. As a teacher, however, Mara did demonstrate a willingness to act for social justice in response to inequities she perceived in the school.

Social Justice in the School

In the first year of teaching, Mara did not address institutional inequities in her school in interviews or during observations. However, in her second year, Mara began to question the

intense pressure placed on pupils and teachers in response to accountability testing and expectations for college, which was the driving force in school-wide decisions about curriculum. Mara felt that the school culture marginalized lower performing pupils. Concerns about AP scores and college preparation were given priority over issues of achievement gaps and resources for lower tracked pupils. These issues became apparent to Mara as she gained more exposure to the various levels of the schools tracking system. In Mara's first year of teaching, she taught World History to sophomores. All classes were Curriculum I college track level, below the honors or AP courses. In her second year, she taught the same content, but was given one Curriculum II level class, which included more pupils with special needs, ELL pupils, and pupils with behavioral challenges. This experience unveiled problems of equity. Mara noted:

I feel like it's so focused towards, you know, the honors, Curriculum I, AP kids, and parents are a little too much of, you know, helicopter moms.

And...sometimes there is this, like, elitist attitude that some of my colleagues have. And after teaching Curriculum II this year, I'm so frustrated because the school doesn't provide them the services that they really need. (Interview 11)

In response to this problem, Mara worked to differentiate her practice, using new strategies and pedagogy, carefully monitoring pupil outcomes, and communicating with parents more frequently to avoid having pupils fall behind. She took a course targeting English language learners to improve her practice. She joined a committee undertaking curriculum revision for the Curriculum II history classes, specifically working to change the text and supplemental resources used in these classes. While Mara did not choose to conduct practitioner inquiry around curriculum issues and the lower track of pupils, she did demonstrate increased attention to

problems of practice that resulted from this equity issue. Working within the existing system, she took action to initiate changes in the school.

Developing a Socially Just Classroom Environment

Mara's pre-service courses and cooperating teacher emphasized the importance of a safe, respectful environment that encouraged academic risk-taking. She came into the pre-service program noting that building relationships with her pupils was a critical part of successful and effective teaching. However, her occasionally flippant manner and sarcasm was a consistent criticism of her classroom practice documented by her supervising and cooperating teachers, as well as the head of the history department. Nonetheless, pupils did respond to Mara's enthusiasm, youth, and genuine passion for her subject matter. They understood that their dignity and views would be respected, and that Mara did care about them as pupils and people. Mara thoughtfully developed a classroom environment characterized by respect and tolerance for multiple perspectives, and provided a model of behavior for equitable treatment and high standards for all pupils. In this excerpt from a class discussion that was prompted by the study of World War I, pupils stated their opinions on the war in Iraq:

Anna: "Are we going to talk about [war]?"

Mara: "Yes. Remember, back up your positions. Do it respectfully."

Eli: "I talked about this with my dad – he was a child of WWII and Vietnam – well he wasn't there, but he was part of a sit-in for the president of his college. He says we're heading for the same thing."

Jake: "When you see the genocide in Sudan—I can see people fighting.

World War I was very abstract; II, too."

Mara: "Okay, one at a time. Comment on comment. Back up your positions."

Sam: “Canada’s army is a peace-keeping army. If everyone did that, we wouldn’t have as much trouble. We don’t have any support for this [the war in Iraq]. Our allies think we’re nuts. We’re in something that really isn’t our business.”

Sara: “I’m really for the war. I don’t think people should live here if they wouldn’t defend their country.”

Anna: “Seriously?”

Sara: “Yes. I think we have to listen to our leaders and be ready to fight for what is right. You can’t just hide because you’re afraid. You can’t have all the advantages and just sit back and criticize.”

It is obvious that most pupils are shocked at this response and there is a general murmur of surprise.

Art: “Are we talking about a specific war? Or Iraq?”

Mara: “What do you have something to say about?”

Sean: “I support the war in Iraq because this is about freedom from terrorism.”

Kris: “I feel like it’s causing instability in our country.”

Eli: “Yeah; there were seeds of war, but we freakin’ watered it. I’m against the war and this makes me upset with my country. It’s hard to feel good when we look like we’re doing the wrong thing.”

Cody: “We need to respect soldiers more – need to improve their conditions. We can’t let them suffer for decisions someone else makes. No matter how you feel about the war, you need to remember where they are. I’ve got family there, man.”

There is a murmur of consensus and sympathy to this comment from the class, although no one builds on it and no one else declares they know of someone near them in the war.

Mara found negotiating these exchanges challenging, particularly when she held strong opinions herself, though she generally maintained a position of neutrality. She insisted on respect for differing views on controversial and complex topics, and she very carefully monitored these discussions to differentiate between comments of opinion and fact as a means of maintaining a safe environment to discuss and debate these issues.

Mara's greatest challenges in maintaining a safe and respectful classroom environment came from ignorant and thoughtless comments made by pupils, rather than intentional remarks. Mara did not hesitate to address issues of disrespect in the classroom and chafed at the lack of awareness and sense of superiority that some of her privileged pupils brought to the classroom. For example, she talked about pupils in one class who seemed persistently insensitive:

They're almost even offensive....in that class I have one African-American student, and we're doing imperialism in Africa. [Another student] keeps calling Africa a country. I'm like, 'It's a continent. Let's keep that in mind; it's a continent.' And, like, she's just, she just says ignorant things and, like, so many times I'm...correcting them... 'All right, that's a judgment. Judgments are different than facts. Let's look at the facts.' You know. She's, like, 'Well, I don't know.' It was just kind of frustrating. I had to call her after class. I was, like, 'I don't know if you know this; I don't know if the other student feels this way; but some things can be perceived some ways.' And she was like, 'Oh, really?' (Interview 7)

Mara didn't hesitate to consistently and directly address these kinds of issues of social justice in her classroom. She had school and community support for teaching and acting for social justice, and valued these ideals in her teaching. However, she recognized that she felt this level of security and empowerment because of the school context.

Mara was able to act for social justice in this school; however, she consistently stated that she did not feel she could be successful in teaching or addressing issues of social justice in other contexts, specifically in inner-city schools. She said, "I will not teach in a setting very different from [this school]. I just think I have too much to learn" (Interview 2). Mara was able to take a critical stance, as well as question and take action in a school that provided familiar challenges to social justice; however, she would not consider teaching in a context where inequities were an ever-present fact of daily life.

Considering Mara

Several elements in Mara's story affected her ability to develop an inquiry stance. Among the elements that supported an inquiry stance were certain beliefs and dispositions that Mara brought to teaching, including teacher capacity and a commitment to lifelong learning. She also chose learning and teaching environments that supported her expectations and values in education. Her school system provided exceptional support for her as a new teacher and maintained expectations of professional development and social justice that were consistent with her own academic experiences as a student and teacher candidate. These conditions moved her closer to an inquiry stance through the professional and political dimensions of practitioner research. However, in the personal dimension of practitioner inquiry, Mara was unable to systematically and intentionally examine pupil learning or reflect on her own learning due to the demands of developing curriculum in the first year in the classroom. Furthermore, Mara

continued to associate inquiry, with the narrow idea of a formal project, which contributed to a limited inquiry stance in all dimensions during this period. The way in which she conducted inquiry in her pre-service program deeply embedded the notion of inquiry as a short-term, formal assessment of practice that ended with public dissemination of a publishable paper. Mara did not make connections to inquiry as a way of viewing practice, of thoughtfully and consistently examining pupil work to guide future practice, or as a professional development tool to adapt to the changing context of the classroom and individual pupil needs. In seeing inquiry as project, Mara rejected the study of the puzzles of practice that she experienced in the daily life of a teacher.

CHAPTER 6: INQUIRY UNDEVELOPED

Analysis #3 is made up of two longitudinal case studies of learning to teach through practitioner inquiry. The first case reported in the previous chapter documents the experience of Mara Howard, and this chapter develops the case of Craig Woods. As in the previous case, the case of Craig Woods is analyzed using a framework that combines Noffke and Zeichner's notion of the personal, professional, and political dimensions of practitioner research (Noffke, 1997; Zeichner & Noffke, 2001) with Cochran-Smith and Lytle's notion of inquiry as stance (1993, 2009). Like Mara, Craig did not undertake practitioner research in his first two years in the classroom. His experience, however, was very different in many respects, especially because he did not demonstrate an evolving inquiry stance.

Craig Woods: Background

Craig entered the program with a different view of teaching and learning. He never found value in the inquiry project because of a relatively narrow view of research and inquiry. Furthermore, the school context that Craig experienced during his first two years in the classroom did not value inquiring into classroom practice or examining issues of social justice, nor did it provide the same kind of support that Mara experienced in her district. Craig struggled with classroom management, planning, and instruction in his first two years in the classroom. He did not demonstrate an inquiry stance, and, over the period, gradually lowered his expectations and standards in the classroom, searching for ways to cope with daily challenges.

This chapter begins with a discussion of Craig's background and examines his practicum experiences and inquiry project. The chapter then explores his first two years in the classroom through the personal, professional, and political dimensions of practitioner research and connections to the concept of inquiry as stance. This chapter concludes with a look across the

cases of Mara Howard and Craig Woods comparing their experiences in learning to teach through inquiry.

Craig was a career-changer in his mid-forties who entered the HU School of Education to earn certification in secondary science (biology) with the intention of applying for an additional combined certification in middle school math/science, which is what he hoped to teach. Craig was a non-traditional candidate in several respects: he was older than most career-changers, male, and his community and family were upper-middle class (Zumwalt & Craig, 2005). Soft-spoken, reserved, and meticulously organized, this non-traditional teacher candidate had been a computer programmer in medical applications prior to entering the pre-service program. Like many career-changers Craig chose to pursue teaching out of increasing dissatisfaction with his job (Johnson & Kardos, 2008), coupled with a desire to be more available for his teenage daughters. He made a point of acknowledging that the dramatic change in his income was not a critical issue because of his wife's position as a business executive. Craig was motivated to teach by years spent as a coach for his daughters' soccer league, which he felt gave him some sense of what teaching would be like, as well as skills to plan curriculum and motivate adolescents. In college, working as a part-time tutor, he had considered teaching as a career. He later returned to the idea as a family-friendly second career.

Craig referred to his own academic background as ancient history. These memories did not seem to influence his understanding of teaching and schools so much as his more recent experiences as a parent of school-aged children in an affluent community with highly competitive and well-resourced schools. Craig's K-12 years included moves from the east coast to the southwest and back again. Craig spent several years in New Mexico from third through eighth grade, experiencing much diversity in these schools. New England schools he attended

were in suburban, middle to upper-middle class communities with little diversity. Throughout his academic career, Craig was an outstanding student, often working independently in math to move ahead of his peers. He was also a good athlete throughout his high school years. He intended to play college football, but left the team when he found he did not enjoy the highly competitive and taxing demands of college athletics. Craig attended an Ivy League college for his undergraduate work, majoring in molecular biophysics and chemistry. Upon graduation, he entered the field of computer science and stayed on this career track for the next twenty-two years.

Craig was an extraordinarily highly qualified teacher candidate by the usual measures of standardized test scores on the Graduate Record Exams, his outstanding grade point average, perfect state teacher certification exam scores in biology, deep content background from elite schools, and excellent English language ability (Lipcon, 2008; Johnson, Zumwalt, & Craig, 2005, 2008). If teacher quality could be adequately measured in subject matter knowledge and scores, Craig would have been a highly qualified candidate and exemplary teacher. Craig's case demonstrates, however, that preparation for teaching is much more multifaceted and complex.

Craig applied to HU because of the program's reputation, one-year course of study, and convenient location. During multiple interviews over a three year period Craig had very little to say about his expectations for the pre-service program. For example, in his first interview he stated, "Expectations. Well...I haven't been in classes at all for 20 years. So I wasn't sure how much things had changed. There's a lot more discussion groups than I remember. I haven't had a single test yet. That may be in part the classes I've been taking" (Interview 1). Rather than focusing on what he felt he needed to learn or how the program might prepare him to teach, he focused on the structure of classes and how he was assessed. He did want to refresh his content

knowledge and to develop strategies and pedagogy to take into the classroom. He expected that the practicum experience would be critical in preparation for taking over his own classroom.

It was his understanding that the program did not focus primarily on preparing teachers for urban schools, which was important to him, as he did not intend to teach in this kind of setting. From the beginning, Craig resisted ideas of preparing to teach in urban areas where learning to teach would be more challenging. He noted, “I considered [another program] but decided that they...seemed to have too much of a focus on urban education for my taste...I’m not sure [urban schools are] where I want to go. And I think it’s a little bit more challenging with everything. With all the other challenges I’m going to be facing...I didn’t want to [teach there.]” (Interview 1).

He stated in his first interview, “I expect to look for a spot in a suburban middle school...I don’t want a high SES, but suburban” (Interview 1). Craig felt that this setting would strike a balance between what he saw as the challenges of inner-city schools with few resources and greater diversity in learners, and schools in communities with high socioeconomic status, which might be characterized by aggressive parents and pressure about grades and standardized test scores in preparation for college.

Craig completed his fall pre-practicum in a small Catholic high school in his hometown. He started the practicum a few weeks late because he was unintentionally assigned to his daughter’s high school biology classroom. Over the next few weeks Craig explored the possibility of other placements that were acceptable to the practicum office before being assigned to the classroom of a third-year teacher, a young woman with no previous mentoring experience. Craig spent three days in the classroom each week, over the next several weeks, rather than the usual two days, to make up the missing classroom time. Based on interviews and

observations in the pre-practicum, it seemed Craig had a slower start as a result of this situation. He taught an occasional class to meet the requirements of the practicum, but spent much of his time at the back of the room observing the class, by his own choice. Each class that he taught was based on his CT's lesson, which he first observed and then modified, often adding a PowerPoint presentation or links to internet sites to supplement the lesson. He preferred using technology to relying on the lecture format of his cooperating teacher. Craig criticized this class for having few hands-on activities, all of which he deemed "confirmative studies," meaning that pupils knew the expected outcomes and did not approach the activity as a genuine scientific exploration. He said, "It's just disappointing...the disappointment on...not doing real laboratory work, which I think would engage them more" (Interview 2). He looked forward to undertaking a genuine inquiry-oriented approach to teaching science in his own classroom. Overall, Craig seemed hesitant to take on the responsibilities of teaching during his pre-practicum. In the end, he had a limited experience because of his own reluctance to begin planning and teaching his own lessons.

Craig's full practicum experience also proved to be a challenging placement. He was assigned to an urban high school in a small city with a large working class and Latino population. This was a system he had targeted early on as a district in which he might want to work. Craig had two CT's during his practicum. The first CT was reluctant to allow Craig access to her upper level AP and honors courses. She did not feel that a student teacher should be given these groups due to candidates' inexperience. There were additional tensions around this placement because this veteran teacher had recently applied for head of the department and was passed over in favor of a younger male teacher. School policy deemed that the department head placed student teachers, so, unbeknownst to the HU practicum office, Craig was assigned

by the new department head to this teacher without first consulting her. This was likely an unintentional mistake; Craig did not feel that his CT was retaliatory, although it was an uncomfortable situation. Aware of these circumstances, Craig's ST immediately intervened and found a second CT for him. This teacher agreed to the unusual arrangement with some reluctance, but followed through with genuine effort and concern for Craig's learning experience. Thus, Craig had two veteran science teachers with sterling reputations as his mentors. Craig had a good working relationship with both CTs and interviews indicated that they worked to build on Craig's strengths in content knowledge and technology, as well as to address his reserved and hesitant delivery in their classes. However, it was significant that Craig did not advocate for himself in this instance and depended on his supervising teacher to intervene. These sorts of negotiations among teachers, administrators, or supervisors are not unusual in schools and it was disappointing that Craig would not directly address the problem. This would turn out to be a pattern over the years that placed him at a disadvantage in school settings. This contrasts with Mara's assertive approach to finding the best placement and CT for her placement.

Craig did not get the benefit of the collaborative practicum experience intended by the HU program. Working between two CT's, Craig was never assigned, nor did he ask for, his own work space in a classroom; instead, he moved around through the day, spending a good bit of time in the science department work room. Craig also failed to meet regularly with other HU teacher candidates as a community of learners, which was an important part of the program. He did work occasionally with another student teacher from a nearby university. As a result, he was somewhat removed from his CTs and teacher candidate peers in the school. The HU program intentionally fostered collegial learning by grouping student teachers in school sites and

providing time for them to work together on problems of practice in an effort to alleviate traditional experiences of isolation in schools and increase professional dialogue to improve practice (Westheimer, 2008). Craig's tendency to remain aloof, as well as taking a relatively accepting and passive approach to work conditions, did not serve him well during this period, or when he became a teacher. The literature is clear that this kind of isolation is especially problematic for new teachers (Feiman-Nemser, 2001). Teacher education has increasingly emphasized the social and interdependent aspects of teacher learning and communities of learning have been recognized as an important means of professional growth in schools (Sizer, 1992; Westheimer, 2008).

In working between two cooperating teachers, who highly regarded him for his content knowledge and assumed that as an older candidate he would be a responsible student teacher, capable of making his needs known, As a result of this assumption, he did not get the collegial support that was precisely what he needed. At the end of the year, his ST noted that she, too, misjudged Craig. She said: "Craig is 40 some odd years old. So I'm not really pushing him...I felt silly saying, 'Well, can I see what you have, Craig?'" (Supervisor Interview). In fact, she found Craig was her only student teacher in that term that did not complete his work on time. The assumptions that were made about Craig, based on his age and expertise in his subject knowledge, were a disservice to him.

Craig did finish the program in one year, although he struggled to finish major projects in the spring term when the inquiry assignment, student teaching portfolio, and papers for other classes were due within a few weeks time. After graduating, in the final two months of the school year, Craig took a job as a long-term substitute sixth grade teacher in the same district

where he completed his student teaching. In August he was hired for the fulltime middle school science position which he had filled as a substitute teacher.

Pre-service Practitioner Inquiry

During the pre-service program, Craig was introduced to practitioner inquiry. Like Mara, Craig was not familiar with the concept and was initially confused by the purpose and requirements, comparing inquiry to his own understanding of research in physical science:

I'm not convinced that, that the whole idea of the teacher research is, well, maybe this is because I'm coming from a science background. As I think of research in one way, and it's obviously a little bit different than what the teacher research is intended to do. And maybe I'm just having trouble with adjusting to that. But I guess we went through all these articles in the readings in the inquiry seminar on teachers doing research and developing these questions and all, and pretty much every teacher I've talked [to] is actually out in the field [and] doesn't even do lesson plans, much less any type of formalized research. Now, maybe that's just the ones I've been talking to, but they sound like they're very busy actually teaching the students. (Interview 2)

Craig was dismissive of the idea of practitioner research from the start, noting that inquiry lacked rigor and focus, comparing practitioner research with a relatively narrow view of scientific research that had been part of his work experience. He was consistent in his responses to questions about inquiry. Using almost the same words two months later he said:

Well, I'm, I'm a little hesitant about the whole inquiry process. I'm not sure how much we went into this last time. But maybe that's partly coming from a science

background and, and that research in science is different than research in education. (Interview 3)

He was reluctant to give credence to inquiry that encouraged adjustments in practice in the midst of an intervention, or relied largely on qualitative data from classroom observations and journal writing. Craig's view of practitioner research was consistent with that of Huberman (1996), who questioned whether inquiry is really a legitimate form of research and knowing. Furthermore, Craig saw the inquiry assignment as something completely unconnected to the "real" work of teaching, rather than as a powerful tool for guiding practice.

Craig completed an inquiry project addressing the question: *How can I use non-traditional reading materials and strategies to affect student learning and motivation in my Biology classes?* He used the book *Genome* (Ridley, 1999) as the basis for his intervention. Each of the twelve pupils in the seminar was required to read a self-selected chapter from the book, which covered a wide variety of topics connected to the 23 chromosomes in the human genome. The readings complemented a genetics unit covered in some senior biology classrooms, which spurred Craig's interest in testing this pedagogical strategy. Pupils completed a worksheet on their chapter intended to clarify and deepen understanding of vocabulary and content, and then took part in a series of small group discussions (2-3 people) designed so that pupils would have exposure to information from several chapters. At the conclusion of each group discussion, pupils recorded one or two sentences about what they had learned from other pupils. Finally, all pupils completed a survey about the project. Data came from observations of pupils during discussion, the worksheets, and surveys. Craig also noted interviewing classroom teachers to gain information about pupils' past and current performance in biology as a reflection of whether the reading made any impact on their responses in the biology classroom. The goal

here was to engage and motivate pupils with new and different resources than was generally used in high school science classes. Craig wrote, “I plan to select material that matches the students’ interests and background. Hopefully, this will enhance the students’ motivation to improve learning in the subject area” (Inquiry paper, p. 7).

Like papers in the lower scoring ranges in the content analysis, Craig’s question came from outside his classroom. As with many teacher candidates, he used the inquiry assignment as an opportunity to see whether an interesting strategy, in this case the use of nontraditional texts, could be used to motivate pupils and supplement textbook reading, moving beyond the “memorization of vocabulary and basic concepts” (p. 3). His choice of topics was not driven by a problem he perceived in his own practice, or really driven by these particular pupils, however. The idea of using popular nonfiction books in science classrooms came from a suggestion in a methods class. Additionally, Craig found this book, *Genome*, to be an interesting connection to the study of genetics that was underway in some of his science classes. Furthermore, the intervention conveniently fit into the science seminar class, which provided him with easy access to pupils without disrupting his CTs’ plans. .

The class that Craig conducted his research in was referred to as a science seminar, used for “a combination of laboratory activities, worksheet review, and homework time” (Craig, Inquiry paper. p.6). Craig reported that the period was viewed by pupils as a study hall or time for make-up work, and they resented occasional academic activities that intruded on this time. Pupils came together from four senior biology courses in the AP and honors tracks in this period, and Craig had no real contact with the students outside of the seminar. Since this was not critical teaching time for Craig’s CT, she was willing to allow him time to complete his inquiry project here. Thus, Craig was using this class out of convenience, rather than any concern for local

knowledge of practice (Cochran-Smith & Lytle, 1999, 2009). That is, while this was a class that Craig could easily access, he was not acting out of the need to address a problem of practice or concern for improving these pupils' learning outcomes.

Additionally, Craig's literature sources were not altogether supportive of this technique. All three of the articles he reviewed related that pupil responses vary widely to use of nontraditional texts for supplemental readings, indicating that some pupils would likely be motivated, while many would not be engaged. Altogether, this was a shaky foundation upon which to build an inquiry: a topic that was not well grounded in issues of daily practice, a classroom with reluctant participants, and a weak theoretical vision.

Zumwalt (1989) warned that teachers require curricular vision to manage decisions in the classroom. This means raising questions that integrate problems of practice with theories and research, rather than reducing inquiry to find "what works." The point of inquiry is to reinvent or transform practice, not to simply practice strategies unconnected to the needs and interests of the pupils, as Craig was doing.

In the end, Craig's findings were very general and largely focused on survey responses about the how pupils felt about the activities, rather than what they might have learned. For example, he reported:

Three of the students listed the discussions as their favorite part of the course, although one listed it as her least favorite. Other aspects that students enjoyed included a deeper understanding of genetic variety and the chance to choose their chapter topic. The general consensus on least favorite aspect of the project was the tediousness of the in-class reading. (Inquiry paper, p. 19)

Craig was really attending to how his pupils felt about the project, rather than what they learned, and pupils did not report that they were particularly impressed with the use of this nontraditional text. Craig observed “there was not a lot of energy in the group” (Craig, Inquiry paper, p. 15).

The majority of pupils (seven of twelve) reported that the readings were boring or slow, and pupils coming from two biology honors classes reported that the readings had not been supported by information from their science class. The reading and small group discussions extended across three weeks. Craig noted, “By the final period, I sensed that the students were losing interest in this project, and wrapped it up quickly with the survey” (Craig, Inquiry paper, p. 15).

It was apparent that the project was not as successful as Craig had hoped, particularly in motivating pupils. Despite indications through the three week period that many pupils found the readings tedious, the readings were not connected to or supported by pupils’ work in other classes, and worksheets were seen by pupils as low-level “busy” work, Craig did not make adjustments to the intervention. Here again, like a number of his peers in this study and inquiries conducted in the previous year (Cochran-Smith, Barnatt, Friedman, & Pine, Baroz, 2007) he didn’t work from the understanding of inquiry as being a recursive activity. Craig tended toward a linear approach to teaching and inquiry. He planned a lesson, carried it out in class, and then considered whether it was successful. He did not approach teaching or inquiry expecting to make constant adjustments necessary for effective practice, using a more cyclical approach to planning, assessing, adapting, and so forth. Additionally, it seemed that Craig’s familiarity with and confidence in research that does not make these kinds of changes reinforced his inflexibility in conducting practitioner research. This stands in contrast to the notion of practitioner inquiry as responsive and adaptable to pupil learning in the course of inquiring into practice with the goal of improving pupil outcomes.

Craig addressed issues of social justice by offering a brief paragraph of how his inquiry might generally be connected to issues of social justice, like Mara and many of his peers that scored in this range of the rubric. He noted:

Many of the topics in this reading material will touch on social justice issues. Discussions may cover biotechnology, genetic testing, and even the history of eugenics. There are many ethical questions within this material, and the discussion format will allow the students to apply their scientific knowledge to real-world issues. From a broader perspective, this will provide the students with a deeper understanding of the role of science and its relationship to society. This should stimulate some students to a greater appreciation of the application of science to real-life issues. (Craig, Inquiry paper, p. 10)

The connection to social justice that Craig made here was the only reference to social justice in the paper. He suggested that ethical issues of scientific research and making connections to real-life issues were key issues in his inquiry. In fact, the inquiry paper never indicated whether pupils read about these kinds of issues or discussed them in this light. As with other papers analyzed in Analysis #2, Craig seemed to have included this paragraph largely to meet the requirements of the assignment, rather than to describe how issues of social justice were a central concern of the research as was intended.

This calls to mind what Cochran-Smith & Lytle (1999b) referred to as the “ends critique” of practitioner research, discussed in Chapter 2. A number of researchers (e.g., Anderson, Herr, & Nihlen, 2007; Cochran-Smith, 1999b; Noffke, 1997; Zeichner, 1994) have questioned practitioner inquiry goals that lack a clear connection to larger social issues. Research that does

not explicitly consider the transformative power of inquiry diminishes the underlying democratic purposes of teaching and practitioner research.

Craig earned a 74 total score for his inquiry, which, like Mara, was very close to the cohort mean of 75.74. He turned his inquiry paper in late – pressed for time because of the multiple assignments due during this period. By his admission, the project and the paper were not best efforts. Despite expectations on the part of faculty that candidates would respond to this assignment as a high-stakes culminating assignment, Mara and Craig indicated that the inquiry project was much less of a priority than had been expected by faculty. This would explain the relatively few papers that were scored as exemplary on the rubric. As with other studies of pre-service practitioner inquiry, time constraints and multiple program expectations compromised the quality of the inquiries (Chant, Heafner, & Bennett, 2004; Gore & Zeichner, 1991; Price, 2001; Smith & Sela, 2005; Sugishita, 2003).

In comparing Mara and Craig's papers, it was obvious that Craig's effort in developing, implementing, and reporting his inquiry was significantly weaker than Mara's, despite a mere one point difference in their total scores. This may have been a function of limitations of the rubric. For example, in considering the item "Collecting and Reporting Data," Mara scored a 4, described as a "notable effort," while Craig scored a 3, a "passing effort." Both candidates collected multiple forms of data, though Mara reported on the data in more detail. Certainly, these scores were appropriate to the descriptions of collecting and reporting data in each of the papers. Mara did not demonstrate an "exemplary" (5) effort on this item, as she offered little support of qualitative findings with quotations from sources. Craig did meet passing standards, though the level of reporting was much less in-depth and detailed. However, the difference of a single point on this item actually represented a great deal in terms differences in quality between

the two papers. This calls into question the validity of the rubric, both in terms of whether it adequately represented the critical elements of practitioner research and if it usefully differentiated between weaker or stronger inquiries

First, this one item, “Collecting and Reporting Data,” actually encompassed two important criteria, collecting data and reporting data. Adding additional items to the rubric and separating out the criteria required in any item would have strengthened the rubric, but would also have made it far more cumbersome for grading papers. Additionally, a wider scoring range, 1-10 rather than 1-5, for example, might have helped in differentiating responses on each item, though inter-rater reliability may have been compromised with so many members of the faculty scoring papers. Looking more closely through content analysis at these two papers revealed that there is more difference between their inquiries than might have been assumed by looking at the rubric scores. This would suggest that the rubric may also need additional revision.

In an interview conducted just after the inquiry project was completed Craig was asked to describe his project. He reported, “Okay. I’m trying to remember because that’s, that’s yet another thing that I’ve kind of sealed off. And put away” (Interview 5). This suggested that the assignment was finished and no longer worthy of consideration. He acknowledged that he had not been able to collect and analyze data as he first intended, and that the findings were “Nothing major. I don’t know that I had any grand expectations.” He also admitted that the connections to social justice were shallow, noting “I didn’t have, really, time to develop that further.” He said that while his outcomes indicated that pupils had mixed reactions to the intervention, he would try it again in the future because reading skills were important to academic success. Craig’s inquiry project seemed to have little impact on his original impression that practitioner research was not a useful experience. This outcome would have been a disappointment to his instructors.

The idea of conducting inquiry was immediately discarded when it was finished, in this case because Craig did not understand the value of practitioner research as a tool for addressing problems of practice and ongoing professional development.

Craig did not conduct any formal practitioner research in the next two years of teaching. Unlike Mara, Craig never found value in the inquiry seminar or the inquiry project. The broad frame of personal, professional, and political dimensions was used to consider whether and how Craig attended to his learning in practice, his pupils and their learning, whether he had opportunities and support for professional development, and what position he took on issues of social justice. These are critical aspects of inquiry as stance (Cochran-Smith & Lytle 1999a, 2009) that would reflect a shift in his view of teaching as inquiry, and also reveal obstacles to development of an inquiry stance.

Personal Dimension of Practitioner Research

The personal dimension, focused on the intentional examination of pupils and their learning, as well as teacher learning through inquiry (Noffke, 1997; Zeichner & Noffke, 2001) is related to the development of an inquiry stance as a way of continuously questioning practice, collecting and analyzing data, and responding to pupil data through adjustment in practice (Cochran-Smith & Lytle, 1999, 2009). Far from systematically or intentionally examining the outcomes of practice, Craig was distracted from inquiring into practice by preparing daily lessons and problems with behavior management.

Like Mara, Craig was expected to generate curriculum. He was given a binder that was made up of unit plans, lessons, and a detailed outline of topics to be covered during the school year, which all sixth grade science teachers in the district were to use in teaching. The binder, which had been compiled by teachers as part of a summer curriculum review, was not complete,

however. Not all units had been fully developed, which meant that Craig's first priority was in planning and generating daily lessons. Veteran teachers did help Craig by providing additional lessons and ideas; nonetheless, preparation of curriculum posed a challenge. He also had a textbook, but he believed that pupils should be doing hands-on, small group projects that were more engaging and provided deeper understanding of concepts. Additionally, expectations in the school were that he would supplement the text with lessons from the binder. Craig spent a great deal of time in preparing daily lessons making organizers and guided question sheets for project work. In November of his first year in the classroom, Craig noted:

I...always feel rushed, never ahead of what I want to do on the curriculum.

Always just...I feel like I'm treading water or always afraid. When I worked at the medical lab they said "we're clinging to the leading edge by bare fingernails."

That's not quite accurate for the school, but that kind of sense of just barely hanging on, I think. (Interview 7)

In developing and modifying lessons from his binder, Craig was in a constant state of trepidation about being prepared. Craig's supervising teacher had noted that he seemed to spend an unusual amount of time in preparing every lesson during student teaching. It was not surprising then, that he would find this overwhelming.

Craig preferred to use small group activities and liked to include technology on a regular basis, using PowerPoint presentations and taking his pupils to the computer lab to work on websites or do research. Observations and pupil work that were discussed in interviews revealed that the curriculum he developed, however, was not in response to some need he saw in the classroom or his specifically generated for his pupils. Craig built lessons around ideas or pedagogies that addressed school and state frameworks, and came from general theories of what

he thought pupils should know, including content material, technology, research skills, and basic study skills. The motivation for the lessons, which were not always successful with his pupils, came from outside of the classroom.

One assignment Craig brought to an interview for discussion, for example, entailed making what Craig called “trading cards” (similar to baseball cards, though there was no aspect of trading involved in the assignment) for elements of the solar system. Craig devised a template for the cards so that pupils could add required factual information and a visual using computers. His goals were to have pupils research and type in the information, generate the cards using technology, and use them as a study guide for the unit test. The assignment was confined to low level information that could be cut and pasted from the bookmarked websites that Craig provided. Not all pupils completed the project in the week allotted, and he found that the pupils were not motivated to use them as a study tool. Craig noted, “It took a couple of days for them to figure out what they were supposed to do.”

Developing the project was time intensive and the results had limited success as measured against Craig’s goals. Pupils did not really practice research skills, since the information was largely provided by Craig. Writing skills used in the project were limited, with responses copied from the website and limited to a sentence or two. Finally, pupils did not use the cards as a study strategy as intended and it is unlikely that this sort of study tool would be duplicated by pupils as a strategy for the future. The trading cards assignment was an example of a project that was time consuming for Craig to develop, and while it appeared to be a creative and engaging, actually produced disappointing results and worked with very low level information. This lesson revealed gaps in his knowledge of pupils, appropriate resources, and pedagogy to make lessons engaging, meaningful, and effective. Samples of work that Craig

brought to interviews over the two teaching years showed that content was grade appropriate, but Craig did not require critical thinking of his pupils for the most part and pupils did not always finish the projects.

It is clear that Craig's deep content knowledge, which made him a "highly qualified teacher," according to NCLB legislation was not sufficient to make him a high quality teacher. Darling-Hammond & Bransford (2005) have noted that effective teachers have a wide variety of approaches and styles, but all effective teachers need knowledge of learners and their development, particularly in learning, human development and language; knowledge of teaching in subject matter, diverse learners, assessment, and classroom management; and knowledge of subject matter and curriculum goals. Craig had solid subject matter knowledge, but he did not have knowledge of his pupils as learners, pedagogical content knowledge, or good classroom management skills. Craig was not yet able to judge appropriate materials and approaches for planning, and he was not certain of what he should expect from the pupils. This was exacerbated by his failure to respond to or adapt his lessons in the act of teaching when it was apparent that he was not being effective. In devising lessons and being repeatedly frustrated by the outcomes, Craig gradually became more reliant on lessons from the binder and the textbook. Though Craig's small group assignments were not rich and challenging, the move to worksheets and text represented lower standards as he relinquished his dedication to projects.

Another factor had been at work from the moment he came into the school, which undermined pupil productivity and all teacher efforts. As Craig noted early in his first year, "Behavior management is a significant challenge" (Interview 7). The following excerpt comes from an observation at the end of his first year in the classroom, serving to represent Craig's

efforts to teach. Here he attempted to have pupils review a homework worksheet about the characteristics of living things, but was constantly interrupted by misbehaving pupils.

Craig: “Number six—living things grow and develop - please read,
Rebecca. Daniel!”

Rebecca begins to read, though I can't hear her from my seat at the back of the room and this is likely true for most pupils. Pupils are chatting as she reads.

Craig is standing by Rebecca so he can hear her.

Craig: “Living things grow and develop. Some of you had some of these, but not DNA. Not too many people were specific about what they have in the cells. These six things, if you don't have them, you need to get them. Daniel. Stop, Daniel. If you don't have all six go back in book in the red headings and find them. It's going to be on the quiz, so you need to know these.

Craig begins to pass worksheets out to pupils.

Craig: “I'm going to explain it in a second. Look at the back. At the word search. Anna! Anna! Anna! Stop talking. Daniel!”

Even when Craig is angry or annoyed, he doesn't raise his voice significantly, and doesn't really sound intimidating – it is not terribly effective, and he continues despite constant interruptions, maintaining a persistent tolerance and calm. (Observation 7)

Classroom management did not improve over time. My last observation of Craig took place in a computer lab. Pupils were completing a worksheet using information about parts of cells from a website. During this class two additional adults were in the room at different points

in the period trying to keep pupils quiet and focused on the simulation activity. One pupil was removed in the first ten minutes, while several pupils took turns sliding shoes across the room, on and off through the class. One girl spent twenty minutes out of the room with a bathroom pass. Amazingly, most pupils did complete their worksheet of guided questions with constant redirection. Craig noted on several occasions that he felt inadequate and frustrated in maintaining order in his classes. He also noted that he would walk by another classroom and see the same children quietly working.

A few factors contributed to this problem. First, Craig had a relatively quiet, reserved presence in the classroom, which changed little in the most chaotic moments. As a result, pupils did not respond to him as an authority figure. However, some of the difficulty also came from the make-up of the classes. One class, which was uncharacteristically large for this school, was made up of thirty children, including ten pupils from a special education class who were mainstreamed into science and social studies classes. They arrived with one aide who generally attended to pupils who demonstrated behavior issues, rather than supporting pupils who needed academic guidance. In one observation, this group was so chaotic that a vice principal and department chair came in as a result of the noise level, to quiet the children. Through this, Craig simply marched on with the lesson despite the chaos. Although it seemed that he paid less attention to these behaviors over time, in interviews he shared his deep concerns about not being able to control the class. He was especially worried that pupils weren't learning in his classes. He did not know how to improve the situation and did not seem to be getting effective support from school personnel in addressing his problems with behavior management.

These difficulties continued through the second year, and Craig's growing frustration led to less investment in planning lessons, as noted earlier. Pupil work and projects were more often

incomplete or poorly done. Craig's response was consistent with a study from McNeil (2000) whose work in four high schools suggests that when teachers "teach defensively" they alter their presentation, simplify content and assessment, and lower expectations to achieve order in the classroom and some compliance on assignments.

Despite the fact Craig had classroom management problems he did continue to include some small group activities. However, he did not follow through in seeing if pupils made connections, understood the purpose of these activities, or were really learning. For example, in one engineering activity, pupils worked in small groups to build a tape and straw structure to hold up a tennis ball. The task was to construct the tallest structure that would hold the weight of the tennis ball, with a limited amount of materials. All groups completed the task though the classroom was very chaotic, with several pupils constantly moving from table to table rather than working with their own group. Craig stood at a cart in the middle of the room dispensing materials and then moved about to watch pupil progress. He then called the class back together for this brief discussion:

Craig: "I want to hear if someone wants to talk about what they did."

Maria: "It was like not winning. Just getting it to work."

Ryan: "It's not that easy."

Amy: "Tennis balls are heavier than I thought, and straws are stronger than I thought."

Craig: (nodding) "Okay. Get your stuff together. Make sure there's no trash around."

This was a minimal effort to assess knowledge, address misconceptions, or extend the activity. The worksheet used for the activity asked for low level responses and pupils answered the

questions with a few words or a short sentence. While Craig purposefully included a discussion at the end of the period, pupils did not offer substantive reflection on the activity, nor did Craig probe for understanding. Since he was occupied with dispensing materials and addressing behavior, Craig had limited opportunity to monitor group interactions. At no point in the activity was there any indication of an inquiry stance which would have required close observation, analysis of pupil behavior, conversations, and worksheets. Like many new teachers, Craig's focus was still on preparation and execution of the lesson, and not on the pupils or the outcomes (Hammerness et al., 2005; Nuthall, 2004).

These circumstances did not change through the first two years of teaching. Craig was not able to appreciably improve classroom behavior during this time. He became less invested in curriculum development, and did not carefully monitor pupil outcomes.

Along these lines, Berliner (1992) related three aspects of knowing pupils that are characteristics of expert teachers: knowing the cognitive abilities of pupils being taught to determine the level at which to plan and teach; knowing the pupils as individuals, allowing for personal rather than bureaucratic and mechanical responses in teaching; and a reputation as experts in their content and as instructors. While there was no expectation that Craig, or any other teacher, would be regarded as expert after two years, these three areas were precisely where Craig struggled. He continued to misjudge the appropriateness of content (difficult readings, but low-level questions, for example). He did not develop lessons in response to his particular pupils and their needs, including the pupils with special needs and bilingual learners. He also developed a reputation as a teacher with content knowledge, but no classroom management skills. Craig did not move toward teacher expertise in these first two years.

Because Craig did not see the value in practitioner inquiry, he did not use inquiry as a tool to address his problems of practice as the pre-service program had intended.

At the end of the second year, Craig decided to look for another position. He attributed his problems to the school environment, saying “I’ve come to the conclusion that [this school] is a small, urban environment. Which is fine, but that wasn’t my goal. I wasn’t out to save the world” (Interview 11). He stated that he expected less diversity, motivated pupils, and involved parents in the next school, which was in a smaller community with an upper-middle class population and overall high scores on mandated tests. He also expected that the school would be more supportive in scheduling, providing curriculum, and offering opportunities for collegial professional development. Craig hoped to solve his challenges in teaching by changing his pupils and the school, but he did not offer how he might reconsider his own practice. In fact, the school culture and limited professional support provided by the school where Craig worked in his first two years as a teacher, also contributed to his difficulties.

Professional Dimension of Practitioner Research

As noted earlier, the professional dimension of practitioner practice is concerned with support for learning to teach through the career, and contributions to the field from practitioner inquiry (Noffke, 1997; Zeichner & Noffke, 2001). These purposes coincide with the aspects of inquiry as stance that address communities that support inquiring into practice and dissemination of knowledge from practice in local and global contexts (Cochran-Smith & Lytle, 2009). Unlike Mara, for whom teacher capacity and school support were factors in pushing her toward an inquiry stance, Craig was pushed away from inquiring into practice by limited teacher capacity and school support, as revealed in the following sections.

Teacher Capacity

Teacher capacity, or teachers' ability and openness to considering and accepting new ways of understanding teaching, learning, and pupils, is dependent on three broad categories of knowledge, according to McDiarmid & Clevenger-Bright (2005). These consist of knowledge of teaching in many forms; craft skills that include planning and behavior management; and dispositions in the form of beliefs, attitudes, and values. Craig had an extraordinary knowledge base in terms of content, but lacked pedagogical content knowledge and knowledge of curriculum, as well as planning skills and behavior management, all of which compromised his teaching. In terms of dispositions, Craig, like most new teachers, was also resistant to change in his beliefs and attitudes (Lortie, 1975; Olsen, 2008; Wideen, Mayer-Smith, & Moon, 1998).

Craig tended to politely ignore advice that was inconsistent with his beliefs and opinions. This was first brought up by Craig's ST, who was very impressed with his content knowledge and technology skills, but also concerned with his limited engagement with pupils and his generally reserved nature. She claimed to have been "very frank" with him, but noted, "I felt that he certainly considered what I said, but... I think he's pretty strong minded as well" (Craig, ST Interview). Craig dismissed advice from his ST about setting up effective classroom routines, noting that she hadn't taught in a classroom for "years." Craig would not, or could not, enact the changes that were suggested by his supervisors that might have made a difference in his effectiveness as a teacher. This was true in the case of addressing classroom management.

Craig's problems with pupil behavior were anticipated by each of his CTs, and his ST who advised him to be more vigilant in monitoring pupils' talking during class and suggested that he follow their classroom strategies. He said:

I sometimes let, get the kids a little bit too much free rein, like yesterday. As I was explaining they were in discussion, in the group activity. Whereas if it had gotten like that in [one CT's] classroom she would have them scattered around the room sitting by themselves within a few minutes. And [the other CT] has a different way to handle that. I guess this isn't really teaching philosophy. This is more behavior management. When they're talking too much in that class, then she gives them a little lecture about it and gets upset with them. I can't see myself doing that either because I, I just can't, I can't come across as angry to the kid. (Interview 4).

Despite his difficulties with classroom management over the next two years, Craig never used either strategy to address pupil behavior, continuing to repeat pupils' names without raising his voice as his usual method of addressing problems. Again, Craig was resistant to changing his own behavior, even when it was apparent that his tactics were ineffective.

Certainly, Craig was very resistant to undertaking practitioner inquiry. He consistently referred to it in interviews as an "ivory tower idea" from academics. Craig noted that he would prefer if someone would give him directions on how to develop lessons saying, "I guess I wanted more of, 'these are the steps to get things done'" (Interview 3), reflecting a transmission notion of knowledge. The emphasis on inquiry and social justice in each of his classes seemed redundant to him. He was anxious to "get to curriculum and instruction" (Interview 3). In the same way, once he was in his own classroom, he was frustrated that the school didn't provide him with a complete binder of materials providing him with daily lessons. In Craig's eyes this one-size-fits-all course of study would have been the solution to knowing what was appropriate, as well as to reducing planning time. Even if Craig had been more open to change, however, his

school environment did not support inquiring into practice or provide genuine opportunities for professional growth.

School context and inquiry development

The literature points to school context as a critical element in the professional development of teachers (Feiman-Nemser, 2008; Weinbaum et al., 2004). The intent of pre-service practitioner research in the HU program was to provide the tools for ongoing professional development through the examination of practice. This might be supported in the school through team level, content level, or school level learning communities, committee work on curriculum and instruction, workshops, or support for external courses, as was the case with Mara, for example. For a new teacher, mentoring, administrative or faculty oversight and review of curriculum, resources, and pupil work could also provide a model for systematically and intentionally examining elements of practice. These sorts of support were not consistent in Craig's school.

Craig did have a mentor, a social studies teacher who was helpful for logistical details of where to get supplies, or how to fill out forms. However, she was not in his content field—she did not have the pedagogical content knowledge that he needed. Additionally, she could not watch him teaching in his classroom because of conflicting teaching schedules. There was a district-wide mentoring program, though Craig was a reluctant participation preferring to spend his time planning than attending the meetings. Craig reported that his mentor and the induction program had a limited impact on his teaching. It is hard to determine how open Craig was to this support, or to assess the quality of the program that was in place. Mentoring and induction programs are considered critical to supporting and retaining new teachers (Darling-Hammond, 2003; Feiman-Nemser et al., 2004; Katz & Feiman-Nemser, 2004; Smith & Ingersoll, 2004);

however, the quality and effectiveness of programs vary greatly given that there is no clear agreement on training and compensation for mentors, purposes and goals of these program, or duration and structure of support (Feiman-Nemser, 1990; Hawkey, 1997; Ingersoll & Kralik, 2004; Little, 1990).

In addition to the formal mentoring program, various administrators regularly came into Craig's classes to help with pupil behavior and observe his teaching. He met several times with the science coordinator. Craig reported that these sorts of collegial support systems were not as helpful as informally talking with teachers in neighboring rooms to discuss problems of practice or management issues. Craig did have several layers of support, though it was not clear how effective they were, or if Craig's unwillingness to attend meetings and consider new ways of teaching and learning hindered efforts to support him.

Professional development was offered as district-wide in-service programs that broadly addressed curriculum and instruction through half-day presentations and summer curriculum work. Craig reported that tasks went unfinished and implementation tended to be an individual undertaking. His incomplete science curriculum was an example of this problem. For Craig, professional development efforts in this school were seen as short-term projects that were poorly planned, infrequently completed or implemented, and did not target his specific needs as a teacher. Craig's particular teaching position made any kind of collegial interactions or professional development difficult.

Craig's job, teaching middle school science, was spread across two schools in the same district. Each day he traveled between the schools to teach. In one school he had to move between classrooms, as well. For this reason he never fully developed a sense of belonging in either setting. His schedule did not permit meetings with grade level teams on a regular basis,

and he was not part of the curriculum development that served as the basis for his instruction.

Craig described his situation:

So, on the faculty level, I have my mentor here at McCarthy and the cluster that I work with. At King I kind of know who the other cluster teachers are, but I can't meet with them on any regular basis.... we turned in grades last week and I wanted to pass mine by the other teachers to make sure I wasn't completely off base, so I grabbed one of them while she was in the middle of class. She was doing something else. But I said, could you just take a quick look at these because I have to get them in. She glanced through and said, yes, that looks fine. But I would've preferred to be in a cluster meeting and have figured out what these kids are doing in other classes. I have no idea. (Interview 7)

Split across two schools, Craig was at a disadvantage in knowing his pupils and communicating with other teachers.

It is not surprising that Craig chose to look for another job after two years working under these circumstances. Johnson & Kardos (2005) noted that in order to hire and retain high quality teachers, schools must provide teachers with appropriate and fair teaching assignments, as well as effective mentoring and induction, collegial relationships with peers, adequate facilities and resources, and effective school organization and leadership. Craig was disadvantaged by the way his job was split across schools, he resented administrative decisions about how classes were populated and schedules constructed, and viewed mentoring and professional development as ineffective. The general culture of the school was not supportive of learning to teach, despite programs that were in place.

Craig's school communities were not what Westheimer (2008) referred to as "teacher professional learning communities" (p. 759) that fostered active reflective, collaboration, and professional growth through the examination of the perplexities of teaching and learning (Mitchell & Sackney, 2000). Professional development and the mentoring program did not seem to be highly valued programs in the school so much as programs arranged to meet state requirements or handle general issues. Craig found that informal interactions provided more specific guidance in solving problems than the school-wide programs that were unconnected to his classroom issues, but these were not consistent or planned conversations about problems of practice. Craig's school supervisors and mentor were not able to provide him with strategies to cope with classroom management. The overall culture of the school did not support and improve practice through ongoing, systematic, and intentional review of practice or institutional frameworks.

There was one additional element of school culture tied to schedules that marginalized Craig's ability to engage pupils. Science was considered a "special" in this district, a class that held less importance than language arts and math. State mandated test results were a driving force in the emphasis placed on language arts and math and diminished the importance of science, which was not a required element for meeting Annual Yearly Progress (AYP) as outlined by the state and NCLB requirements. Math and language arts were part of the daily schedule, and reading was added for additional support. The school was under pressure to meet AYP goals in math. Additionally, a key demographic of the school population was that about 30% of all pupils were bilingual, with Spanish as their home language; thus, reading and language arts were considered critical areas for maintaining these test scores. Science was offered four days a week and, along with world language and art, was often disrupted for

mandated testing, field trips, or grade-wide presentations. Craig noted that in one school, “the science teachers weren’t even officially part of the cluster...So the science teachers were just specialists or something like that” (Interview 9). This further undermined Craig as a disconnected, part-time teacher in a subject that was undervalued. It also meant losing opportunities for collegial support that he needed.

By the end of the second year, the only professional development that Craig had undertaken was in-service workshops required by the school. He noted that the school would have supported him financially if he had found workshops, seminars, or courses that addressed gaps in practice. However, this was not required or encouraged and Craig did not reflect interest in additional professional development. He seemed at a loss in addressing his difficulties, saying at the end of his second year, “How much is me? And how much is them? How much is the school? (Shaking head) Everything.” (Interview 11) Unlike the situation in Mara’s school, in Craig’s schools, support was ineffective, scheduling and class arrangements had a devastating impact on his ability to teach effectively, and the school culture negatively affected his ability to develop as a teacher.

Political Dimension of Practitioner Research

The political dimension of practitioner research recognizes the aspects of inquiry that affirm a social justice agenda (Noffke, 1997; Zeichner & Noffke, 2001). Similarly, democratic purposes and social justice ends in the concept of inquiry as stance “[surround] and [encompass]” (Cochran-Smith & Lytle, 2009, p. 145) the other aspects of knowledge, practice, and communities, as discussed earlier. Issues of social justice, a driving force in a number of practitioner research genres, were also emphasized in the inquiry project at HU. It was important, then, to examine whether and how Craig embraced these ideals and brought them to

his teaching. In fact, Craig took a largely passive and silent stance on issues of social justice in his first years of teaching. Examining how Craig addressed and responded to issues of social justice in his classroom through curriculum and the classroom environment, as well as by examining the school community's stance on teaching for social justice, explains this disappointing outcome.

Learning to Teach for Social Justice

For Craig, issues of social justice were peripheral concerns that, in many ways, he wanted to avoid as a teacher. He entered the program with the notion that an urban setting was not a desirable environment. The school Craig taught in for two years was an urban school with considerable diversity in the school population, but was not an inner-city school. Craig originally thought of it as a suburban school. At the end of two years he changed schools, looking for a district with a higher socioeconomic demographic, which he equated with motivated pupils focused on learning, along with parents and schools that had high expectations and resources to support pupil learning. While it went unsaid, Craig was avoiding issues of poverty, race, language differences, diverse learners and children with backgrounds different than his own. Craig really did not change over time in his understanding or commitment to teaching for social justice. This speaks to Craig's ability (or inability) and openness (or reticence) to understand teaching and learning in new ways, including how inequities in schools and society impacted his pupils and their learning, or how teaching could be a transformative political force for teachers, pupils, schools, and society.

Over the years, when Craig was asked about issues of social justice, he often connected the idea to gender, particularly as he saw it as the parent of two daughters. Surprisingly, he felt that gender bias in schools was an issue of the past, one that society still perceived as a problem,

but had actually been largely resolved. He suggested that “public perception does not necessarily match what’s going on. And I think that’s true elsewhere as well” (Interview 1). He followed by noting that while issues of race and socioeconomic status did exist in some schools, this was a local issue that should not be applied as a generalization to all schools in urban areas, for example. He chafed at the amount of time each HU faculty gave to talking about how issues of social justice affected pupil learning, schools, and preparing teacher candidates for the challenges of these settings. He said, “It’s important, but it’s not curriculum and instruction” (Int. 3), indicating that the focus on social justice was overemphasized to the detriment of the central issues of teaching.

In Craig’s first year in the classroom, when behavior management issues compromised his teaching he connected social justice to access to the curriculum for all pupils. In this interview excerpt Craig begins rather vaguely discussing social justice and then connects it to the class of thirty mentioned earlier, who posed so many challenges.

Researcher: Now you’re completing your first year of teaching, what do you think of the idea of teaching for social justice? Is it actually important in your daily work and do you consider yourself to be teaching for social justice?

Craig: I think it’s important. I think it’s, it’s hard to quantify or to, to, you know, get fairly specific on. At least as far as I’m concerned. I know we went through the class and talked about certain things but it’s hard to actually say this is social justice, once you’re in the classroom. Part of what I do, trying to teach, is treat everybody, all the students, fairly. Trying to focus on all of them. Being responsible and things. I guess..., and fairly

doesn't necessarily mean treating them all the same because they obviously have different needs and I think most of them recognize that. (Long pause) And certainly the ones that, that struggle more in school— How do I want to put this? I guess there was one class that had, this was my class of 30 that had 19 or 20 students with general Ed and 10 students that came in from the resource room, usually with an aide, and when the resource room kids weren't there the class was wonderful and everybody would go through their work and they'd ask nice questions and when the other kids were there it's really, really hard to get people to stop talking, including the general Ed kids, because once it gets started... you know, not only to stop talking but to get started on work, to actually sit down and put the pencil down, start doing things when you're supposed to. And I certainly got frustrated with it at times and, and I think the social justice there goes both ways. I think the kids from the resource room certainly need a good education, but the other students also deserve to be in an environment where they can learn, and there were some days where they weren't.

Researcher: Is that something that you anticipated coming into the school year? It's not certainly anything that you mentioned as part of your student teaching.

Craig: Yeah. No, I didn't know what to expect going into the school year.

This was one of the lengthiest reflections about issues of social justice that Craig ever provided. While he had noted that both groups of children, from special education and general education,

should be provided a good education, in word and tone he emphasized that it was the general education pupils who were being shortchanged. This was the most emotional interview that Craig offered in the three year period. He seemed both frustrated that he was not providing the right environment for pupils and angry that the classes were structured so that all pupils did not learn when the groups were together. It is notable, however, that the connection that he made here did not seem to be something he had explicitly connected to issues of social justice before the question was posed, so much as something that occurred to him as he was answering.

Generally, Craig seemed mildly annoyed at having to return to the topic in of social justice in each interview. In the middle of his second year in the classroom, he said:

I feel a little bit uncomfortable with emphasizing teaching for social justice because, from my point of view, social justice should be just part of the society, and to say that it's the teacher's job to do social justice almost emphasizes that it's not somebody else's. I'd rather it just be a pervasive thing rather than a point of emphasis. But I understand it may need to be a point of emphasis in order to get, to become a pervasive concept. So that's just [why] I hesitate whenever I'm answering questions about teaching for social justice, I guess. (Interview 10)

Craig described himself as aware of and concerned with issues of social justice, but he avoided addressing these problems in his classroom or through the curriculum. There was no indication that he gave social justice much thought or reflection in regards to his classroom or practice.

When asked if he included issues of social justice in his curriculum Craig mentioned that he included women and some racial diversity in the lists of scientists he asked pupils to research for poster presentations. This single example was repeated several times in interviews over two years. In reality, this did not seem to be something he considered in developing curriculum. In

his final interview of the second year, when asked if he was teaching for social justice, Craig said:

Well, I don't have any explicit lesson plans that say social justice and science today. But I think I always do a few things that try to teach for social justice. I try to treat everybody equally. I try to make sure that they all treat each other with respect. So I try to model it. I try to get them to follow it correctly when we're talking about things. Like scientists. I make a point of bringing up women or minority scientists' achievements. I try. And the expectations of the students. I try to set their expectations, and if anybody says things about you know 'woman can't do this' we have discussions about that. Generally I don't find it's an issue for that sort of thing. But there are some groups or cliques that have social things, but I think that's part of you're going to have groups in middle school anyhow, and sometimes they're identified along some groups that would be either racial or gender or something. (Interview 11)

Craig recognized that issues of social justice affected the classroom in some way, and that as a teacher he should be a good model, treating pupils with respect and providing equal opportunities. He did not attempt to explicitly make this a part of his curriculum and did not expect that this should be at the heart of his practice. Interviews, observations, and pupil assignments showed that Craig was not explicit in developing curriculum that challenged or gave voice to issues of social justice in the classroom.

Developing a Socially Just Classroom Environment

Since behavior management was consistently a problem, a socially just classroom environment, a place where all pupils were given equal access to the curriculum, and where they

felt safe and respected, was impossible to create. Regardless of whether Craig modeled respect, tolerance, and patience (which he did) his pupils were often not paying attention to him. As he became increasingly frustrated by pupil conduct, he ignored more negative behavior and simply plowed ahead amidst the chaos to finish lessons. On a few occasions, when pupil behavior was particularly troubling, Craig was unaware of, or perhaps ignored, comments that included racial slurs, derogatory references about pupils with special needs, and the use of the word “gay” as a pejorative among peers. This passive stance was in contrast to occasions in his student teaching class when he and his cooperating teacher reprimanded pupils for these sorts of comments. For example, during one observation in April of his second year of teaching, he was handing out worksheets to pupils as they came in and sat down. A boy standing at his elbow made these sorts of remarks in full voice.

Craig hands out papers to the students who are still settling in.

Craig: “Everyone should be working on this. ‘It’s Alive.’ Put your name on it.

Thinking of something that’s living; something that’s not living.”

FB: (Table 4) “That’s so gay! That’s so gay!”

Craig is right there and doesn’t respond or interject. This is particularly interesting, because this is exactly the kind of comment that he chose to address, and used as an example of teaching for social justice, when he was in his practicum. I have seen a few such incidences now; I would have to say Craig is choosing to ignore these behaviors as the teacher of record.

Additionally, Craig ignored the fact that almost a third of his pupils were bilingual learners. He never identified strategies or modifications to curriculum and instruction that would support understanding of content material for these pupils or his pupils with special needs. This

was contrary to the pre-service program that highlighted ways to support bilingual and ELL pupils across courses. In contrast to an inquiry stance, which values questioning and modifying practice based on pupil outcomes, Craig simply developed a one-size-fits-all program of study. The fact that many of his pupils chose to chat in Spanish to one another did not prompt him to consider whether content vocabulary in science, for example, would require additional attention and support.

Thus, in terms of factors that Bickmore (2008) cited as promoting or impeding social justice in schools, Craig's attention to processes, or the providing of opportunities for broaching issues of social justice in the curriculum, and substantive equity, or modeling practices of fairness, were very limited. Institutional governance frameworks, the official systems in the school that might support social justice, also discouraged Craig from considering these issues.

Social Justice in the School

Craig was blunt in stating that teaching for social justice was not a clear objective in the mission of his middle school:

The school also doesn't try to teach [social justice] explicitly and I know that [my daughters' school] does. And all the way through [my daughters' schools] have 'understanding differences' or an 'active anti-racist'...There's a few buzz phrases that I've heard all the way along, and I'm not sure what they call the program or if it's multiple programs for stuff. As far as I can tell, there's nothing like that here.

(Interview 11)

Craig recognized that his district had no clear commitment to social justice. Coincidentally, the school his daughters attended, which did have an explicit focus on issues of social justice, was the system in which Mara taught.

Craig's assessment of his school's disinterest in social justice was confirmed in an interview with one of his principals. He said,

I would say that outside of certain teachers in the building, I would say that [teaching for social justice] does not happen, I think. And that's primarily due to the amount of curriculum that these teachers have to cover in a very short timeframe. Science is one of those subjects that currently is only taught four days a week. So it's very difficult for these teachers to cover their curriculum and then, and then be expected to go above and beyond and teach, and teach kids skills of citizenship as well. (Administrator Interview)

It was clear that Craig was not going to receive support or encouragement for teaching for social justice in this school.

Considering Craig

It would be inaccurate to say that Craig was simply unconcerned with his inability to manage his classroom, or that his problems in becoming an effective teacher didn't matter to him. He was genuinely distressed, but did not know how to change the situation. Outside of the classroom, he spent a great deal of time reflecting on his lack of success. Despite his outstanding subject matter knowledge, he continued to struggle producing effective lessons and managing his classroom through the second year. His capacity to change and adapt, based on suggestions from others, and his unwillingness to participate in collegial programs, were problematic. He also had inconsistent and ineffective support from his school. The structure of his position, insufficient mentoring program, and inadequate professional development made change unlikely. Finally, the culture of the school discouraged teaching for social justice. Everything in this situation worked against developing an inquiry stance. Craig Woods is a case of inquiry undeveloped.

Looking Across Cases

The experiences of these two teachers were very different in a number of ways, with different outcomes in whether and how they demonstrated movement toward an inquiry stance. Important factors in this experience included teacher capacity, their views on practitioner inquiry, and the importance they placed on issues of social justice and democratic ends. Additionally, their experiences in the practicum and school settings influenced their movement towards or away from an inquiry stance. There are a few key points that stand out in looking across these cases, including understanding pre-service as a starting point for inquiry, misconceptions about practitioner research held by these teachers, and the role of schools in developing an inquiry stance.

First, it is important to acknowledge again that neither of these candidates developed an inquiry stance, though this remains a possibility for Mara Howard. Craig Woods demonstrated no inclination to move in this direction. Both teachers were intelligent, caring individuals who wanted to improve their teaching to better serve their pupils.

Their experiences highlight the fact that learning to teach is not a process that can be accomplished in the pre-service program. Teacher development is a life-long undertaking. Along the same lines, while practitioner inquiry can be introduced, modeled, and developed in pre-service, inquiry as stance must continue to be valued and encouraged through continuous professional growth in schools. There was little expectation on the part of faculty at HU that teacher candidates would step into their first classrooms with plans to conduct an inquiry project similar to their inquiry assignment. What was intended was a way of looking at daily life in the classroom, a means of reinventing practice and pedagogy as a response to particular children and classrooms, an understanding and appreciation for collaborative work in a learning community,

professional development through the teaching career, and a critical stance for democratic ends. However, these cases indicated that unintended consequences came from the inquiry seminar.

In examining these two cases, it is apparent that each candidate came away from his or her pre-service experience with a very different understanding of practitioner research. Neither view was consistent with faculty intentions. Mara developed a persistent view of practitioner inquiry as a project that required journaling, quantitative analysis of pupil outcomes, and a culminating paper. Even when pressed to recognize that questioning her own teaching and learning, analyzing pupil work, and adjusting practice in response to pupil outcomes was inquiring into practice, Mara resisted the idea that this was connected to what she had done in her inquiry seminar. Ironically, inquiry as stance is intended to stand in contrast to short-term projects and time-bounded activities (Cochran-Smith & Lytle, 1999a, 2004, 2009). Mara's notion of inquiry as project seemed to be driven by the way in which inquiry was approached in the pre-service program. While inquiry was a central theme, the inquiry seminar stood as a separate class with one time-bounded project as a major requirement to complete the program. Furthermore, in the seminar, candidates addressed segments of what would be their final paper (in questions from practice, biography, literature review, school context, and so on). This emphasized inquiry as a linear process and project, rather than as a way of thinking and recursive action in the classroom.

Craig, on the other hand, did not accept practitioner inquiry as a credible form of research, comparing inquiry with research in physical sciences and finding the notion of adapting practice while researching outcomes a flawed and untenable process. Contrary to seeing practitioner research as a guide to practice and professional development, Craig dismissed it as an impractical theoretical concept of the academic world. The structure of the seminar seemed to

emphasize process over stance for Craig. He dutifully documented a research cycle, but never understood inquiry as a way of redefining, reworking, and renegotiating understandings of teaching and learning throughout the career. Ultimately, for both teachers, their misconceptions about inquiry kept them from inquiring into practice in their early years in the classroom.

Context matters in learning to teach and in learning about inquiry into practice. At the most basic level, new teachers need appropriate work assignments, adequate resources, and effective mentors in the first difficult years of learning to be a teacher (Feiman-Nemser, 2008). This support must come with a genuine commitment to addressing the needs of teachers as individuals who bring a unique profile of strengths and weaknesses to the school. This is particularly important given the persistence of entering beliefs and attitudes (Lortie, 1975), as well as in addressing widely differing teacher capacities. While it is clear that these are not new findings, some schools do not adhere to the wisdom of these practices, as in Craig's case. Additionally, school culture matters in how teachers come to see their roles in school communities and across the career. In Mara's school, teachers were expected to be intellectuals, critical friends, active members of learning communities, and participants in ongoing professional development for growth through the career. This included learning to teach for social justice through curriculum, developing a classroom environment, and working for democratic purposes and social equity. While Mara Howard did not express an understanding of the connections between these expectations and inquiry, she was pushed to develop a way of questioning, analyzing, and acting on practice and the institutional structures of school and society.

As I complete this dissertation, Mara and Craig are in their third year as classroom teachers. The individual trajectories reported in this study continue along the same lines for the

candidates. Mara stayed in the same school and continues to become increasingly active in the school community, raising new questions about its structure and organization. Observations and interviews in this year point to increased attention to pupil learning in the classroom and through their assignments. Significantly, in the early part of the school year, Mara announced that she was joining a community of learners group in her school. Several such groups meet weekly at the school, and teachers are strongly encouraged to join them as part of professional development and improvement of practice. Mara described the group's work:

The focus is, because it's a small one, we take turns and every day one of us comes with an assignment we're working on, an issue that's going on and we're like the presenters. So it's like, you know, today is all about Mara's problem.

Then everyone offers feedback. (Interview, 12)

Once again, Mara did not identify this kind of inquiry into practice as practitioner research. Interestingly, Mara signed up for this group based on her schedule rather than on the approach or focus of the group. In large part due to her school environment, Mara continues to develop an inquiry stance while maintaining the view that inquiry is project.

Craig, on the other hand, relocated to another school in an upper-middle class community, teaching math and science to sixth grade pupils. He described his pupils as more academically motivated, understanding "how" to learn and behave in the classroom. There is less diversity among pupils: no pupils with special needs, and an overwhelmingly Caucasian population. There are a few ELL pupils whose parents are visiting academics and scientists at nearby universities. Craig noted that their needs are met by ELL teachers, so he is not required to modify his lessons for them. Additionally, Craig commented that this class is generally well behaved and passive. He remarked that it is a nearly "perfect" group, though there are a few

“active” pupils whose behavior is sometimes frustrating (Interview 12). Craig does have a complete curriculum to follow in math and science, provided by the school. He can adjust lessons and he has altered some assignments in science to include lessons and projects he taught over the past two years. In math, his new subject area, he relies on a scripted curriculum, which he finds convenient and satisfactory. Craig noted, “It’s easier to just go through the book this year and the kids are doing pretty well” (Interview 12). Among the pupil assignments reviewed in this latest interview was a unit test from the math textbook, while the other was an assignment investigating information for one element on the periodic table. Both assignments required low-level responses and little critical thinking.

Craig does not plan on doing any additional professional development this year, even though this, along with significant collaboration with colleagues at the team level, is encouraged in this school. At the moment, then, Craig is not questioning curriculum, analyzing practice, or making adjustments in response to practice. He has moved no closer to inquiry as stance. However, the school environment is a dramatic change from the previous district and there are indications that he will be expected to collaborate and take part in professional development that may alter future practice.

CHAPTER 7:

INQUIRY ON INQUIRY: IMPLICATIONS

This dissertation set out to answer the question: What happens when teacher candidates engage in practitioner research in a pre-service program focused on inquiry with the goal of improving pupil learning? A key purpose of this investigation was to build on and extend the existing body of empirical literature on pre-service practitioner research, which includes few longitudinal studies that bridge pre-service and classroom teaching. Currently, many teacher education programs have some component of practitioner research as a part of the pre-service experience to help prepare reflective, analytic, and adaptive teachers for diverse and constantly changing classrooms. Few studies, however, have followed teacher candidates through the teacher education program and into their first years of teaching to investigate whether and how they develop an inquiry stance as teachers. Additionally, most investigations of pre-service practitioner inquiry are interpretative qualitative research, with few examples of mixed methods designs that provide a different lens on the role of inquiry in learning to teach.

This study considered the complex process of learning to teach through practitioner inquiry via the use of a sequential mixed methods design providing a detailed view of learning to teach through inquiry. The study included three analyses, beginning with a quantitative analysis of rubric scores of 92 inquiry papers over two cohorts and refined in content analysis of 12 papers from across the range of scores in the first analysis, finishing with two case studies over a

three year period. This chapter looks across the findings of the three analyses as a means of synthesizing the experience of conducting practitioner inquiry in a pre-service program focused on inquiry with the goal of improving pupil learning. Implications for research, practice, and policy are also considered.

Learning from Inquiry: Looking Across Analyses

This study addressed one overarching question and several sub-questions through a sequential mixed methods design. This study design presented the best opportunities to address the complex issue of understanding learning to teach through inquiry. Findings were offered for each of the individual analyses presented in preceding chapters and connections were drawn to other phases of the study through successive analyses. In this section, findings are considered across analyses in more depth. Specifically, the challenges involved in expecting teacher candidates to conducting inquiry during the pre-service period are discussed, as are their misconceptions about inquiry and their understandings of the relationships between social justice and inquiry. In addition, I consider aspects of school context that either support or impede the development of an inquiry stance and what role inquiry plays in the preparation of highly qualified teachers.

Challenges in Conducting Pre-Service Inquiry

In the pilot and exploratory studies described in Analysis #1, rubric scores on teacher candidates' inquiry papers were surprisingly disappointing. While virtually all candidates earned scores that were adequate to meet the minimum requirements, there were few exceptional papers. This was puzzling as candidates were academically savvy students completing a high-stakes assignment for graduation from a highly competitive university. In looking across the content

analysis and case studies, however, it became increasingly clear that these scores reflected a lower level of attention and investment to the project than faculty expected.

In a rigorous and demanding program completed in one calendar year, candidates were required to conduct and write about their inquiries while juggling an array of other academic and personal responsibilities. The problem of having adequate time to carry out meaningful inquiry is consistently cited in the literature as a factor that challenges teachers. For the candidates in this study, the inquiry assignment was one of several pressing projects in the final semester. In addition, a fieldwork portfolio comprised of pupil work samples, lesson plans, supervisors observations, and other evidence of effective teaching was required by state mandates in approved licensing programs as HU. The portfolio was constructed at the same time the inquiry projects were conducted. Candidates were also required to “take over” in the classroom—that is, they were expected to plan, execute, and assess all lessons and, in the case of elementary teachers, all curricular areas, in their student teaching classrooms for a minimum of two weeks, a period during which they were closely monitored by their supervising and cooperating teacher. While the intent of the inquiry assignment was to bring together theory and practice and to link coursework and classroom experiences, in actuality, the competing demands of the program made it extremely challenging to complete a thorough, meaningful, and focused inquiry.

Both the content analysis of papers in Analysis #2 and the case studies in Analysis #3 highlight these problems as significant obstacles to conducting and writing about inquiry. This created a situation within which the academically astute teacher candidates in the program had to figure out how to juggle the requirements of various assignments and responsibilities, giving less time and attention to the inquiry project because of other competing demands. As Craig once pointed out in an interview, the inquiry assignment was essentially a pass or fail project, since

the bottom line of the rubric assessment was whether papers failed to meet standards or passed standards (with a very small number of inquiries deemed “pass with distinction”). Both Mara and Craig made a decision to do what was necessary to receive a passing grade without attempting to achieve exemplary distinction. This helps to explain why, in general, many candidates performed below faculty expectations on the inquiry paper. Practitioner inquiry was viewed by many teacher candidates as one among many assignments, rather than as a way of looking at practice, because it was one of several critical projects completed at the end of the program. This is one misconception of inquiry that was held by candidates.

Looking across the analyses revealed other misconceptions that had an impact on how candidates approached and conducted their inquiry projects and how they viewed inquiry as teachers. First, as argued earlier, the structure and form of the inquiry seminar, the inquiry project, and the inquiry rubric all supported the notion of inquiry as project rather than inquiry as stance. The seminar was conducted as a separate course, which was intended to support the inquiry project; this promoted the idea of practitioner research as something apart from what was taught in courses or experienced in daily practice. The focus of the seminar was in fact developing and undertaking a single project that acted as a capstone experience, posing the inquiry assignment as a single, time-bounded project. This stands in clear contradiction to the development of inquiry as stance as a way of positioning oneself to continuously question and analyze classroom life to improve practice and pupil learning (Cochran-Smith & Lytle, 1999a, 2009). The high stakes nature of the project, complete with a detailed and explicit rubric, emphasized inquiry as a form of performance assessment, rather than as a stance that would carry into the teaching career. Thus, the way that inquiry was presented and conducted reinforced a false notion of inquiry as project.

The way the seminar was constructed compounded this problem. The seminar addressed separate parts of the inquiry project through the year: considering how to develop questions, writing an educational biography to uncover biases and beliefs, generating a short literature review on a topic likely to be related to the inquiry, developing an intervention, considering analysis of data, and so on. The idea was that candidates would learn about the elements of practitioner research and be able to bring the parts together for their inquiry paper. This encouraged the notion of knowledge-*for*-practice or knowledge-*in*-practice, assuming expertise from academics, research, literature, or master teachers, for example, rather than generating their own knowledge as experts in classrooms, in keeping with the idea of knowledge-*of*-practice (Cochran-Smith & Lytle 1999a, 2009). That is, candidates began by developing parts of their inquiries based on the research of others, rather than by building their inquiries around their own problems of practice for improving teaching and learning in their classrooms, while being informed by the theory and research of others.

Additionally, given the high-stakes nature of the inquiry paper, it was unlikely that candidates would divulge their genuine questions or their frustrations and misgivings about practitioner research to their instructors. While Mara and Craig were willing to share their frustrations in interviews, they did not address them in the inquiry seminar where uncertainty and misconceptions should have been openly addressed. The irony here of course is that it is these very tensions and struggles that are part of the process that generally leads to understanding, clarity, and valuing inquiry as a means of improving practice and solving problems in the classroom. This suggests that a class dedicated to completing a high-stakes assessment may not encourage candidates to struggle openly with questions of practice and develop an inquiry stance.

A second misconception about inquiry was revealed in the content analysis of inquiry papers as well as in comments consistently made by Craig during interviews for the case study. The content analysis revealed that many candidates understood practitioner inquiry as an inflexible process rather than as research that requires recursive practice, adapting and changing practice in the cyclical and evolving process of inquiry. Craig's multiple comments about inquiry's lack of scientific rigor and its irrelevance for classroom teaching seemed to have been connected to his science background and to his rather inflexible notion of research. Rather than understanding inquiry as a way of learning from teaching in an ongoing way, his comments suggested that he thought that any changes made to his teaching practice during the unit that was the focus of his inquiry would weaken the scientific integrity of the research project.

Craig, and candidates like him, did not change practice based on what pupils seemed to be learning during the unit that was the focus of the inquiry study. In some cases, candidates planned and carried out teaching interventions that were not particularly successful. They noted the problems, but did not adjust their teaching to address the evolving issues. In many cases, candidates conducted their inquiries and reflected on them only after the intervention had been completed, data had been collected, and the paper was due. As classroom teachers, both Mara and Craig struggled to plan and develop curriculum. This tendency persisted into the classroom for case study participants. When they graded pupils' assignments, they initially seemed to use pupils' performance on the assignments as a means of generating grades, rather than as information for planning and adjusting practice. As her case study shows, Mara moved toward recursive practice only once she was able to manage other aspects of teaching. Craig did not move toward an inquiry stance because of a number of obstacles to inquiry.

The candidates in this study conducted one inquiry during the pre-service program. Some candidates did not understand the recursive nature of practitioner inquiry and did not analyze and respond to practice while conducting inquiry. Smaller efforts of shorter duration, and several inquiries conducted through the pre-service program would have allowed for instructors to emphasize and encourage recursive practice, and establish the value of responding to outcomes during inquiry for candidates.

Linking Inquiry and Social Justice

A number of candidates described their inquiries within the context of social justice and democratic purposes integrating these purposes with the problems of practice, their classrooms and schools. For these candidates, issues of social justice were intimately connected to children in their classrooms, access to the curriculum, and pupils' life opportunities in deeply personal ways. These candidates took a critical view of education, schools, teaching and learning; they viewed inquiry as transformative practice to change pupils' lives and improve schools and society. There were outstanding examples among the higher scoring papers from Analysis #2 that served as models of addressing issues of social justice, including the inquiry papers from Mikayla and Amelia, which were discussed in Chapter 4. However, in some cases, social justice was an afterthought, a mere requirement that needed to be addressed for the inquiry assignment. Again, the idea of inquiry as project diminished the potential of inquiry as stance, promoting the project as a collection of actions and ideas that must be reported in the paper rather than as a way of thinking and acting.

Learning to teach for social justice is a complicated, highly personal and ongoing process that challenges deeply engrained assumptions about personal identity, equity, opportunity, and our way of understanding society and education. Requiring that candidates reflect and write

about issues of social justice does not guarantee that they will view inquiry as a means of teaching for social justice and forwarding democratic ends. Some teacher candidates from this study, including Mara and Craig, addressed issues of social justice as something removed or separate from practitioner research, rather than integrated in the act of teaching and the role of teacher. However, even for these candidates the inquiry seminar and paper were opportunities to reflect on and struggle with their ideas and beliefs about social justice, as one of many such opportunities in the program. For candidates like Mara who moved on to schools with an explicit and public mission to challenge issues of social justice, interrogating self and society continued. For Craig, and likely many other candidates, their schools and their classrooms did not support continued reflection, questioning and challenging existing inequities as part of education and preparation for life in a democratic society. For these teachers, it is unlikely that the way in which they view and question practice will have at its foundation concerns of social justice, unless they are challenged by other forces and events in the future.

Influence of Context on the Development of Inquiry Stance

The case studies, and to some degree the papers analyzed through content analysis, suggested that developing an inquiry stance may be dependent on the school context and culture. Papers that were used for content analysis reflected a range of circumstances that impacted their inquiry projects tied to the school: inadequate time provided to conduct inquiry; inadequate access to pupils to implement interventions; schedule changes to accommodate mandated tests during interventions; high truancy rates; cooperating teachers who were not supportive of candidates inquiry projects; parents who were unresponsive to requests to include their child in inquiry projects. Some papers mentioned cooperating teachers or colleagues who were excited, supportive, and collaborative partners in developing and conducting inquiries. Others noted that

their school communities had established teacher learning communities which acknowledged practitioner inquiry as important and valuable work of teachers. These factors influenced the experience of candidates in conducting inquiry and likely biased the candidates in considering future practitioner research.

The case studies showed that school culture and expectations moved Mara towards an inquiry stance, while context and organization of the school were obstacles to professional growth for Craig. A wide range of contextual factors played a role in encouraging or hindering inquiring into practice for these teachers: mentoring; the kinds of administrative oversight that were given; opportunities to work in collegial groups to consider curriculum, pupils, and practice; schedules; class groupings; and meaningful professional development. The research on retention suggests that current forms of mentoring are not adequate to successfully address the demands of high-stakes exams, attending to the needs of diverse learners; course schedules, planning and developing curriculum, and managing classroom. Successful induction requires many forms of support from multiple sources (Feiman-Nemser, 1986; Ingersoll & Smith, 2004). Explicit expectations from administration for professional development and opportunities for collegial work, as well as participation in professional learning communities were also important in prompting Mara toward activities that were forms of inquiry.

Preparing Highly Qualified Teachers

As noted previously, what constitutes a highly qualified teacher is widely debated, and there is no clear consensus about what teacher quality means. The dominant view, at least in terms of NCLB legislation, which is still in force in states across the nation, is that highly qualified teachers are defined in terms of subject matter preparation or GRE scores (Zumwalt & Craig, 2008). These are regarded as rather clear-cut indicators of quality. This study raises

many questions along these lines. The study demonstrates that in fact, preparing effective teachers is not such a straightforward business and that subject matter knowledge is in no way sufficient to ensure effective classroom practice. This is not to suggest that deep content knowledge is not a significant factor in effective teaching, however. At HU, as in many colleges and schools of education, pre-service practitioner inquiry is intended to better prepare candidates in developing an inquiry stance as a means of questioning and adjusting practice for improved pupil outcomes. To act from an inquiry stance assumes subject matter knowledge, pedagogical content knowledge, knowledge of human development and language development, curriculum knowledge, knowledge of diverse learners, and so forth. Additionally, teachers must be able to use this knowledge in action, making decisions and adjustments in a complicated and constantly changing classroom environment (Kennedy, 1999), as related to the recursive nature of inquiry. Inquiry as stance challenges the teacher to intentionally and systematically examine practice in the act of teaching, in reflection on teaching, and in planning as recursive practice. This sort of recursive action demands metacognition—the ability to think about one’s own thinking and understand what it is that needs to be learned or understood, and to develop strategies for continued planning, analyzing, and learning (Hammerness et al., 2005).

All evidence in this study indicated that candidates had strong subject matter knowledge. By standard measures these candidates were highly qualified teachers. Using standards of test scores or coursework, Craig was perhaps the most qualified of candidates, yet observations and interviews indicated that he had not developed knowledge of curriculum, pedagogical content knowledge, knowledge of pupils or pupil learning. His first two years were marred by the inability to develop routines and management strategies. Ironically, developing an inquiry stance would have provided tools for addressing these problems of practice. Considering these gaps,

Craig was not a highly qualified teacher despite his outstanding content knowledge. This finding highlights the complex nature of learning to teach and all that this entails.

Finally, all teacher candidates arrived at HU with beliefs, attitudes and dispositions that influenced their capacity to embrace new ways of thinking about teaching, learning, and issues of social justice. Papers examined in the content analysis reflected a range of abilities to embrace inquiry as stance, rather than project, and to see issues of social justice at the heart of education. Mara had both the academic capacity and disposition to consider new strategies and concepts, including inquiring into practice as a way of improving teaching and learning. Craig's demeanor was reserved and slightly aloof, which prevented pupils from making personal connections with him. He also resisted changing his ideas about teaching, strategies for teaching, the role of social justice in schools and teaching, and whether inquiry was a legitimate and useful form of research. This resistance was an important factor in keeping him from using inquiry as a tool to address problems in daily life in the classroom and in becoming a more effective teacher.

Considering again what happens when teacher candidates engage in practitioner research in a pre-service program focused on inquiry with the goal of improving pupil learning, this study showed that many factors contribute to any individual's experience, and whether and how they use this experience in their own classrooms. Pre-service practitioner research does not guarantee that candidates will conduct inquiry in their classrooms. This does not diminish the importance or potential of practitioner inquiry, rather this emphasizes the need for increased opportunities to conduct inquiry on a regular basis in the pre-service program in order to develop inquiry as a habit of mind. No matter how good a teacher education program is, it can only begin to prepare teachers for the classroom. Schools that act as partners in supporting and engaging teachers in inquiry and professional learning communities continue the work of the pre-service program in

developing inquiry as stance to improve teaching and learning. Candidates in this study moved towards or away from an inquiry stance depending upon encouragement received to inquire into practice; the capacity and openness to consider new ways of understanding teaching and learning that they held; and their understanding of social justice as the underlying and larger purpose of inquiry as stance.

Implications

This study has implications for research, practice, and policy. In the pages that follow, I argue for research that includes more longitudinal studies that bridge the pre-service experience and classroom teaching and specifically include a focus on pupil learning. I also propose additional research that utilizes mixed methods designs to address the complexity of learning to teach through inquiry. In terms of practice, I suggest changes to pre-service and in-service teacher education programs that include practitioner inquiry and collaborative learning communities. I also recommend that state and national teacher licensure policies be aligned to include explicit standards that focus on the development of inquiry as stance to improve practice and encourage social justice ends.

As noted early in this dissertation, learning to teach through pre-service practitioner research is a process shaped by the entering characteristics of teacher candidates, the values and structure of the pre-service program, and the school environment in which the candidate eventually teaches. Because this process is multidimensional and complex, a sequential mixed methods design offers the best means of untangling the web of interrelationships of individual characteristics and learning in the pre-service program and schools. Most research on pre-service inquiry uses interpretive qualitative methods of limited numbers of cases or inquiry projects. Sequential, nested research, as conducted here provides a means of investigating

population samples of larger numbers of teacher candidates' inquiry projects than are generally considered, while qualitative methods highlight how and why candidates conduct practitioner research through interpretive analyses of papers and cases. These kinds of studies provide different sorts of understanding of the teacher candidate experience in conducting pre-service inquiry than have been offered in the past, as well as strengthen the validity and reliability of outcomes through design.

There are challenges in conducting mixed methods studies, however. Using mixed methods assumes that researchers are knowledgeable and competent in the use of the multiple methods and in bringing together appropriate designs. Secondly, there is significant tension in working between epistemological and methodological differences (Johnson & Onwuegbuzie, 2004) that must be overcome to conduct more effective research. These challenges are worth negotiating, however, to develop new ways of investigating learning to teach through practitioner inquiry. Using mixed methods design rests on an assumption that each way of knowing offers a "meaningful and legitimate" (Greene, 2007, p. 251.) view of the issue in question that provides a richer understanding of the whole. Greene suggests that working with the tensions of mixed methods, rather than expecting resolution of these tensions, forces the researcher to question more deeply and extend the boundaries of knowledge.

The focus of pre-service practitioner inquiry over the last decade or so has been on the impact of inquiry on the teacher candidate, including whether teachers are more reflective (Dawson, 2006; El-Dib, 2007; Freese, 2006; Smith & Sela, 2005; Zeichner & Liston, 1987), develop a critical stance (Hyland & Noffke, 2005; Lynn & Smith-Maddox, 2007; McIntyre, 1997; Schoorman, 2002) or become agents of change (Valli & Price, 2000; Price & Valli, 2005). Generally missing from the empirical literature are studies that explicitly utilize K-12 data in the

study of pre-service teacher candidates' research, as well as research that considers the impact of pre-service practitioner inquiry on pupil learning. While the classroom experience is the explicit context for developing questions, and improved pupil outcomes are the implicit goals of inquiry, the focus of research has been on experience and change in the teacher candidate.

The primary focus of this study remained on the experience of the teacher candidate, but provided insight on what happened when candidates' inquiries were focused on pupil learning. This study indicated that in shifting the focus to pupil learning all candidates attended to evidence of whether and how pupils were learning. The inquiry provided opportunities to analyze pupil work and their behaviors to understand if and when pupils were learning and how candidates' might act or adjust practice to improve pupil outcomes. This was an important undertaking given that the literature indicates that new teachers have difficulty in using pupil learning data (Boudett, City, & Murname, 2006; Darling-Hammond, 2005; Kennedy, 1999; Nuthall, 2004; Zientek, 2007) and that novice teachers focus on themselves and their teaching rather than concerns of pupil outcomes (Hammerness, et al., 2005; Fullan, 1969). On the other hand, requiring candidates to focus on pupil learning did not guarantee that once they were in the classroom they would address pupil learning in the same way. Mara did not consistently focus on pupil learning to adjust practice until her second year as a teacher, while Craig did not make pupil outcomes his focus after two years. Following candidates into the classroom that scored highest on the inquiry papers might present different cases of whether and how candidates were able to use pre-service inquiry as a novice teacher.

This study provides much need longitudinal research that bridges pre-service and in-service. The review of the literature presented in Chapter 2 revealed that very few studies (Schulz, 2005; Schulz & Mandzuk, 2005) span the period between pre-service and in-service,

following candidates into their classrooms to examine whether and how they would continue to conduct inquiry as teachers. This study contributes to the literature by providing in-depth evidence of whether and how teacher candidates use inquiry from their pre-service program into teaching. In doing so, this work emphasized the importance of school context in the development of an inquiry stance. As such, additional studies are needed that describe the experiences of teachers in a variety of contexts, particularly those with highly diverse populations: urban schools, schools with bilingual and ELL learners, schools with a high incidence of pupils with special needs, and so on. This is of special interest given the need to provide teacher candidates with tools to address and adapt to an increasingly diverse school population (Darling-Hammond, 2006; Darling-Hammond & Bransford, 2005).

Implications for practice that come from this study impact the local program, as well as proposals for teacher education in general. First, the findings in this study have implications for the design of the inquiry seminar, inquiry project, and inquiry scoring rubric in the school of education at HU. While inquiry at HU has been a central theme of the program, instituting a separate inquiry seminar seemed to encourage the idea that inquiry was addressed and conducted as an isolated topic, rather than throughout the courses and in the practicum. This diminished emphasis on inquiry as a way of consistently questioning practice, as discussed earlier in this chapter.

This study suggests that reinventing learning to teach through inquiry at HU should include embedding frequent and less formal inquiry opportunities throughout the program to model and emphasize the concept of inquiry as stance over inquiry as project. Multiple opportunities to conduct inquiry would also test misconceptions that develop in conducting inquiry in the current seminar structure and provide regular opportunities to analyze and report

all kinds of data. Furthermore, tying inquiry to methods classes would encourage connections between curriculum, pedagogy, pedagogical content knowledge and pupil outcomes, working against the tendency of novice teachers to attend to curriculum and instruction over pupil learning and inquiring into practice, as evidenced in this study.

Additionally, there are challenges to be addressed in the inquiry scoring rubric. The use of the inquiry scoring rubric was intended to provide an efficient and reliable means to assess numerous papers by faculty. The rubric developed by faculty did differentiate across papers in terms of overall quality, with good reliability. However, compromises made in generating this rubric as an efficient tool—using multiple criteria for a single item—also made it less effective in determining the source of differences. Challenges to validity were also noted in comparing the scores on inquiry papers written by Mara and Craig. Candidates may have restricted their responses on reflection of practice because this was not an explicit item on the rubric. Several issues require additional rubric revision and perhaps, re-envisioning how inquiry is assessed in the program.

Scoring the concept of social justice also posed difficulties. A rubric with a rating scale from poor (a stance opposing social justice) to exemplary (a truly extraordinary reflection of action and reflection on social justice) posed an especially difficult challenge for student teachers who have limited autonomy and authority in the cooperating teacher's classroom. Given real time constraints and limited autonomy to make decisions about curriculum and pedagogy, most teacher candidates had little actual opportunity to address issues of social justice except in individual lessons and units. Rather than diminishing the expectations, however, I would argue for providing genuine opportunities for questioning and inquiring into issues of social justice with supervising teachers who act as liaisons between university and practicum sites.

In using the rubric there is also danger of what Popham (1997) refers to as “equating the test of the skills with the skill itself” (p. 5). That is, while teacher candidates were able to successfully address the rubric items and categories as required by the assignment, no assumption should be made that these candidates understood inquiry as stance and would inquire into practice in their own classrooms. Since the real intent of including pre-service practitioner research in the program was to develop a way of thinking and acting in practice, additional forms of demonstrating and assessing inquiry as stance should be considered. For example, state mandates require a portfolio for certification in conjunction with the HU program. Currently the portfolio is assembled, reflected on, and presented as a separate project, competing with practitioner research for time and attention in the final weeks. Combining these efforts and documenting a consistent inquiry stance in the portfolio could be a means of emphasizing inquiring into practice across time and through the program. The rubric requires, at minimum, review, reform, and enhancement in light of the findings of this study.

Implications for teacher education programs beyond the local context run along similar lines. Introducing practitioner research as a single, high-stakes program requirement, as many programs are currently constructed, sets up tensions that position inquiry as a project, which may ultimately discourage inquiry in practice. Multiple informal and formal inquiries should be embedded across the pre-service program and as an explicit part of collaborative efforts in student teaching with cooperating and supervising teachers, to make questioning, collecting data, analyzing and adjusting practice habits of mind.

These kinds of programs would require changes in the relationships between teacher education and hosting schools. Such changes would require different roles for supervising and cooperating teachers, for example, in directly supporting and collaborating in pre-service

practitioner research with teacher candidates. Additionally, the university would be required to continue support for candidates as they enter school systems as teachers. Furthermore, such programs would require systemically altering professional development in schools to include practitioner research as a valued form of collaborative mentoring, professional growth, and critical examination of school and society. In light of the findings in this study, developing connections between university and schools for the induction period seem particularly critical.

As noted in Chapter 3, the TNE initiative at HU was grounded in three design principles, the third of which viewed teaching as a “clinically taught practice profession,” where universities are closely connected to schools with residency and/or induction programs extending at least two years after graduation. While HU has begun to develop connections with local schools to continue support and guidance through the induction period, practitioner research has not become an explicit part of those efforts. I suggest that inquiry should be used as a vehicle to address problems of practice and to continue the work of developing the concept of inquiry as stance.

Recent policy debates about the outcomes and consequences of teacher education have focused in part on teacher candidates and professional performance (Cochran-Smith, 2002). In question are the kinds of knowledge candidates should demonstrate, how they demonstrate competence, and how evaluators from teacher education institutions, departments of education or national accrediting agencies should assess what prospective teachers know and are able to do. There are various ways to review professional performances, including standards-based assessment, portfolio interview assessment, teacher work samples, and practitioner research. All of the ways of evaluating performance assume that an outcome of teacher education is the demonstration of effective practice linked to pupil learning. Additionally, it suggests that teacher

learning occurs from the analysis of their practice and pupil outcomes and that teacher education has to do with connecting teacher learning, professional practice, and pupil learning. At present, evaluative standards used by different agencies are more or less explicit about the importance of developing an inquiry stance as part of required professional performance.

For example, the Model Standards for Beginning Teacher Licensing, Assessment and Development created by Interstate New Teacher Assessment and Support Consortium (INTASC) (2007) Principle #9, Reflective Practice: Professional Development, states:

The teacher is a reflective practitioner who continually evaluates the effects of his or her choices and actions on others and who actively seeks out opportunities to grow professionally. (INTASC, 2007)

Key indicators for this standard include: 1) The teacher uses classroom observation, information about students and research as sources for evaluating the outcomes of teaching and learning and as a basis for experimenting with, reflecting on, and revising practice; 2) The teacher uses professional literature, colleagues, and other resources to support self-development as a learner and as a teacher; 3) The teacher consults with professional colleagues within the school and other professional arenas as support for reflection, problem-solving and new ideas, actively sharing experiences, and seeking and giving feedback. These standards, and those of the National Board for Professional Teaching Standards (NBPTS) and National Council for Accreditation of Teacher Education (NCATE), all of which are aligned, clearly indicate that inquiry is critical to effective teaching. Real authority for the implementation of state policy lies at the local level, however, where there is often far less commitment to inquiry as stance.

The Massachusetts Department of Education guidelines for Preservice Performance Assessment (PPA) (2005) include five standards: “Plans Curriculum and Instruction,” “Delivers

Effective Instruction,” “Manages Classroom Climate” and “Meets Professional Responsibilities,” and “Equity.” Of these, one standard, “Meets Professional Responsibilities,” contains indicators that include: 1) Understands his or her legal and moral responsibilities; 2) Conveys knowledge of and enthusiasm for his/her academic discipline to students; 3) Maintains interest in current theory, research, and developments in the academic discipline and exercises judgment in accepting implications of findings as valid for application in classroom practice; 4) Collaborates with colleagues to improve instruction, assessment, and student achievement; 5) Works actively to involve parents in their child’s academic activities and performance, and communicates clearly with them; 6) Reflects critically upon his or her teaching experience identifies areas for further professional development as part of a professional development plan that is linked to grade level, school, and district goals, and is receptive to suggestions for growth; 7) Understands legal and ethical issues as they apply to responsible and acceptable use of the Internet and other resources. (p. 12)

Items connected to inquiry such as understanding of research, collaboration and reflection are interspersed among a wide variety of professional responsibilities with little obvious connection to supporting or conducting inquiry. While all identifiers are important to effective teaching, these indicators are not presented in the way that INTASC standards explicitly support and identify practitioner research as a necessary outcome of teacher education.

This study indicates that there is a need for greater consistency in how pre-service programs and schools understand and approach inquiry. These kinds of standards bring far-reaching influence in supporting and connecting the ways preparation programs and schools include practitioner research in their settings. Based on the analyses in this study, then, I recommend detailed and explicit standards that highlight practitioner research and the

development of inquiry as stance. Specifically, these should be clearly stated and consistent with the current language of INTASC standards. The intended outcome would be consistency in committing to practitioner research as a means of improving practice and pupil learning, generating local knowledge, and advancing equity and democratic ends in pre-service programs and schools as sites of inquiry.

Conclusion

As noted in Chapter 1, preparing teachers for the challenges of today's increasingly diverse population is an area of primary concern for teacher educators. In the current context of accountability concerns, quality in education is often defined in the narrow measures of test outcomes for pupils, teachers, and schools. Practitioner research can broaden the indicators of teacher quality and alter the way in which teachers assess and adapt their practice.

This study has taken three views on the experience of conducting practitioner research in a program focused on inquiry with the goal of improving pupil outcomes. The findings have local implications for the program as well as general implications for teacher education. Developing teachers with an inquiry stance toward teaching is an important goal for pre-service education, and a complex undertaking. This study highlighted a number of ways that the program should be altered to develop an inquiry stance in classrooms.

At the same time this dissertation is completed, another cohort of teacher candidates at HU will finish conducting and presenting their inquiry projects. The inquiry experience at HU has been under revision for some time now, based on data from this and other studies in the TNE portfolio, which were designed to provide feedback to the faculty. As in the past, the intent of pre-service practitioner inquiry is to prepare candidates for the schools they will enter in the fall, as adaptive teachers, knowledge generators, with a commitment to improving the life chances

and opportunities for all pupils, by approaching teaching and learning through an inquiry stance. The ways in which this program approach practitioner research will continue to change based on faculty inquiry on inquiry to better prepare teacher candidates for classroom life, with an emphasis on the potential of practitioner inquiry and inquiry as stance as a way of knowing, as a way of positioning oneself for ongoing professional development, and as a transformative vehicle in social action.

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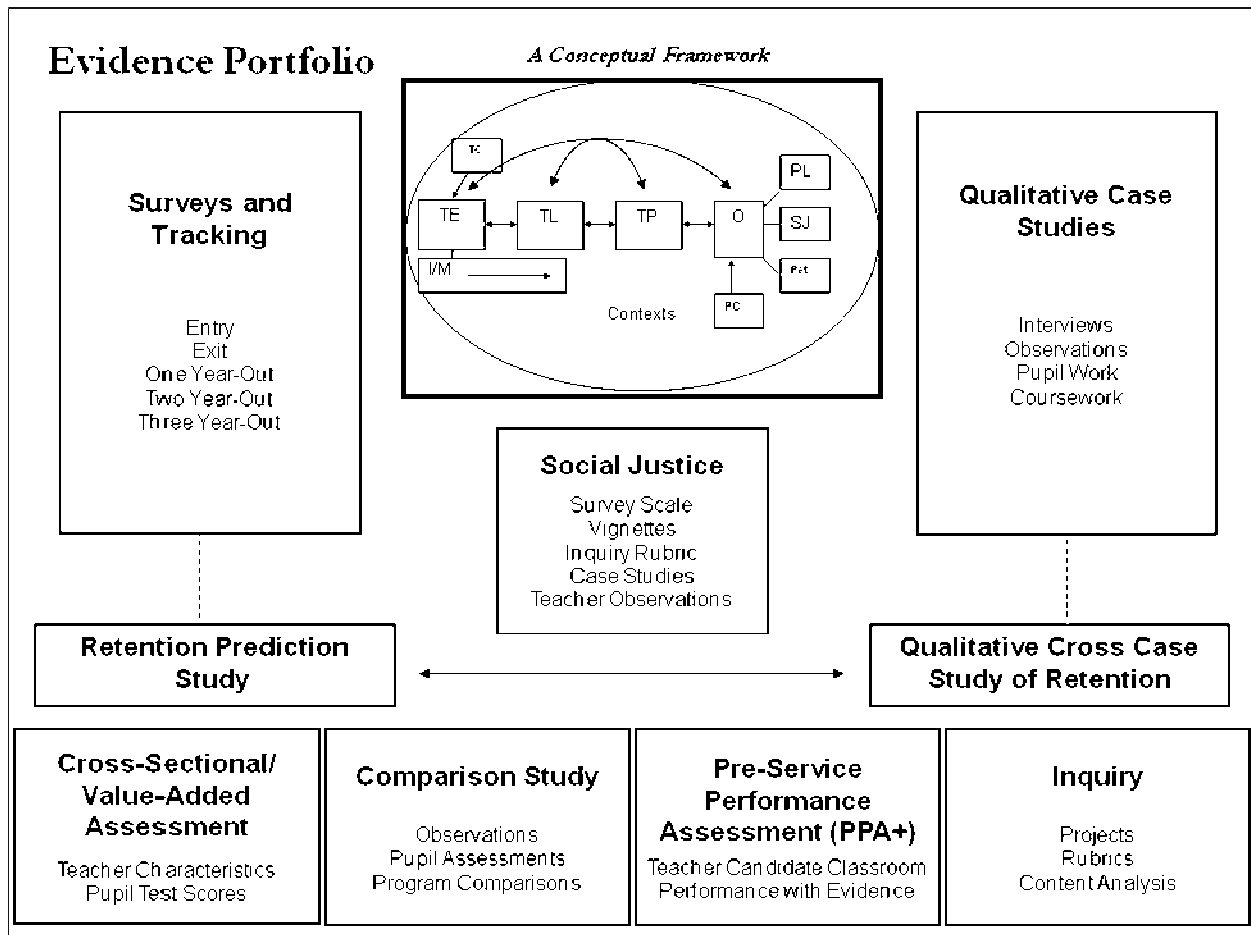
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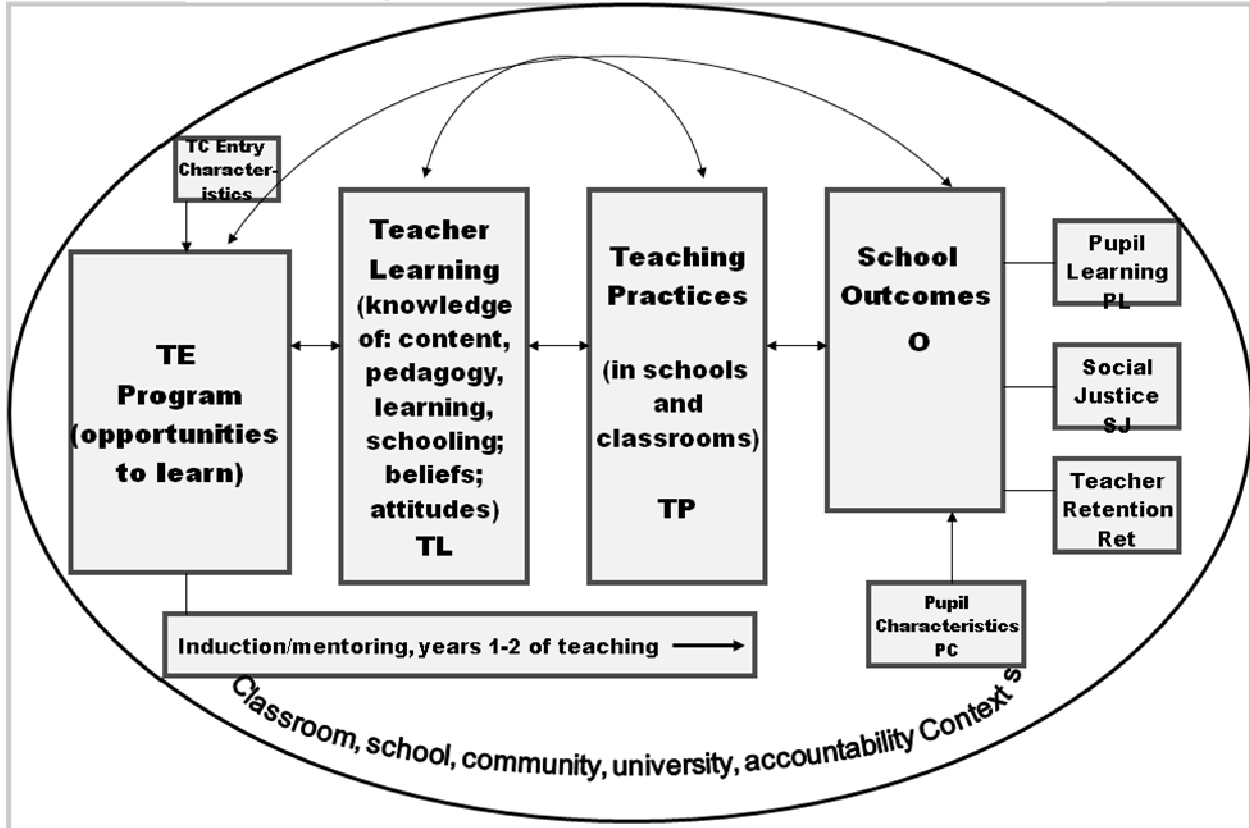
APPENDIX A



APPENDIX B



A Conceptual Framework for Teacher Education



APPENDIX C
INQUIRY SCORING RUBRIC

Table 2. Inquiry Scoring Rubric

A. Teacher as Researcher

| I. Using a Conceptual and Theoretical Framework | | | | |
|--|---|---|---|--|
| 1 Poor Performance | 2 Below Passing | 3 Passing Effort | 4 Notable Effort | 5 Exceptional |
| <p>Extensive errors, inaccuracies, or omissions which may include:</p> | <p>Serious errors or omissions compromising content and quality below passing standards, which may include inadequacies in the following areas:</p> | <p>An acceptable, though imperfect effort, with general weakness in one or more of the following areas:</p> | <p>A clear, logical and complete effort in all elements of the rubric category, though lacking the detail, clarity, and variety of data sources in the exemplar. Includes:</p> | <p>An exemplar in every element of the rubric category, including:</p> |
| <p>A question that is poorly connected to the classroom experience and uninformed by research and literature.</p> <p>Draws on prior knowledge and experience in a very limited way to construct a conceptual and theoretical framework for the research effort.</p> <p>A shallow, incomplete, or illogical framework that lacks integration of the candidate’s knowledge and beliefs.</p> <p>Demonstrates inaccurate or limited understanding of conceptual and empirical literature, and major ideas from theory with little or no connection to the research question.</p> | <p>A question that is minimally connected to the classroom experience and tenuously informed by research and literature.</p> <p>Inconsistently draws on prior experience, coursework, or knowledge to construct a conceptual and theoretical framework for the research effort.</p> <p>Demonstrates weak or inconsistent integration of knowledge, beliefs and understanding of conceptual and empirical literature, and major ideas from theory.</p> | <p>Poses a question that reflects a classroom issue that is generally informed by knowledge and literature.</p> <p>Draws on some prior academic, personal knowledge and experience, or coursework to construct a conceptual and theoretical framework for the research effort.</p> <p>Demonstrates basic integration of knowledge, beliefs and understanding of conceptual and empirical literature, and major ideas from theory.</p> | <p>A clearly stated question, grounded in a theoretical framework reflecting an important classroom issue, well informed by research and literature.</p> <p>Draws on prior academic and personal knowledge, coursework and experience to construct a conceptual and theoretical framework for the research effort.</p> <p>Demonstrates integration of knowledge, beliefs and understanding of conceptual and empirical literature, and major ideas from theory.</p> | <p>A clearly stated question explicitly grounded in a theoretical framework addressing an important classroom issue, thoughtfully informed by conceptual and empirical research.</p> <p>Draws on prior academic and personal knowledge, coursework, and experience to construct a framework that is explicitly and elegantly linked to the research question.</p> <p>Demonstrates thoughtful integration of knowledge, beliefs, understanding of conceptual and empirical literature, and major ideas from theory.</p> |

| II. Collecting and Reporting Data | | | | |
|--|--|--|--|--|
| 1 | 2 | 3 | 4 | 5 |
| Poor Performance | Below Passing | Passing Effort | Notable Effort | Exceptional |
| <p>Data collection and data sources that are irrelevant, inappropriate, limited or narrow.</p> <p>Documentation, organization, and/or displays of intervention outcomes in an incomplete, confusing, or disorganized manner.</p> <p>Method is illogical and/or presentation of measures is confusing, unclear or incomplete.</p> | <p>Questionable data collection and data sources are occasionally relevant but limited or inconsistent.</p> <p>Documents, organizes, and displays intervention outcomes inconsistently, and lacks organization. May include materials that are superfluous.</p> <p>Method fluctuates between logical and illogical and presentation of measures is sometimes confusing or unclear. Measures may be somewhat limited.</p> | <p>Data collection is outlined in an acceptable manner, describing data sources that incorporate relevant but limited measures of pupil outcomes (cognitive tasks, social and emotional outcomes).</p> <p>Documents, organizes, and displays intervention outcomes in an acceptable manner, though lacking occasional lapses in clarity or completeness</p> <p>Method is reasonable and presentation of measures is generally clear. Measures are generally complete and acceptable.</p> | <p>Clearly outlined data collection and description of data sources that incorporate relevant and appropriate measures of pupil outcomes (cognitive tasks, social and emotional outcomes).</p> <p>Documents, organizes, and displays intervention outcomes clearly and effectively.</p> <p>Method and presentation are clear, logical and offer a variety of data sources.</p> | <p>Clearly outlines data collection and describes data sources, incorporating multiple, relevant and appropriate measures of pupil outcomes (cognitive tasks, social and emotional outcomes).</p> <p>Documents, organizes, and displays intervention outcomes clearly and effectively using figures, graphs and illustrations that add to the understanding of the data.</p> <p>Method and presentation are thorough, complete, and logical, covering a full array of possibilities.</p> |

| III. Constructing and Modifying Curriculum and Instruction | | | | |
|--|--|--|--|---|
| 1 | 2 | 3 | 4 | 5 |
| Poor Performance | Below Passing | Passing Effort | Notable Effort | Exceptional |
| <p>Describes actions that lack clarity and logic, suggesting ineffective, misguided, very limited, or thoughtless planning and implementation.</p> <p>Makes instructional choices without reference to prior knowledge, experience or data analysis of pupil outcomes.</p> <p>Offers no modifications, or offers modifications that are inconsistent with or inappropriate to data analysis of pupil outcomes.</p> | <p>Describes actions that suggest inconsistent and less than thoughtful planning and implementation.</p> <p>Makes instructional choices with minimal regard to prior knowledge, experiences, literature in the field, or data analysis of pupil outcomes.</p> <p>If modifications offered may be plausible, there are no explicit and consistent connections to data analysis of pupil outcomes.</p> | <p>Describes actions that reflect generally reasonable planning; implementation may be inconsistent.</p> <p>Makes instructional choices that inconsistently draw on or are informed by prior knowledge, subject matter knowledge, and experience, empirical and conceptual literature.</p> <p>Loosely connects modifications of curriculum and instruction to general data analysis of pupil outcomes.</p> | <p>Describes actions that reflect effective planning and implementation, clearly and effectively.</p> <p>Makes instructional choices that draw on and are informed by prior knowledge, subject matter knowledge, and experience, empirical and conceptual literature.</p> <p>Connects ongoing modification of curriculum and instruction to systematic data analysis of pupil outcomes/measures.</p> | <p>Clearly describes actions that reflect careful, innovative, and comprehensive planning and implementation.</p> <p>Makes instructional choices that effectively draw on and are informed by prior knowledge, subject matter knowledge, and experience, empirical and conceptual literature.</p> <p>Explicitly connects ongoing modification of curriculum and instruction to a complete and systematic data analysis of pupil measures.</p> |

| IV. Analyzing and Interpreting Data | | | | |
|--|---|---|--|--|
| 1 Poor Performance | 2 Below Passing | 3 Passing Effort | 4 Notable Effort | 5 Exceptional |
| <p>Explains research results incompletely and offers interpretations that are not supported by data sources and/or are not linked to, or inconsistent with, literature, research, or course knowledge.</p> <p>May suggest irrelevant implications or recommendations for practice. May offer suggestions that are not logical, are incomplete or consistent with data.</p> <p>Omits implications or recommendations.</p> | <p>Explains research results superficially, offering interpretations that are not clearly or consistently supported by data sources. Interpretations are limited and/or are linked only partially to literature, research, or course knowledge.</p> <p>Suggests weakly justifiable implications &/or recommendations for practice.</p> <p>Recommendations may be missing or lacking true connection to research undertaken.</p> | <p>An explanation or interpretation of the research results that is generally supported by analysis of the bulk of the data, literature, research, and content and course knowledge.</p> <p>Identifies implications and/or recommendations for practice that are generally justifiable, based on analyses.</p> <p>Suggests limited steps for further inquiry.</p> | <p>A thoughtful explanation or interpretation of the research results that is supported by analysis of the data, literature, research, and content and course knowledge.</p> <p>Identifies implications and recommendations for practice that are reasonably justifiable, based on solid analyses.</p> <p>Suggests appropriate steps for further inquiry that are relevant and reasonable, based on the inquiry data and analysis.</p> | <p>A detailed and probing explanation/interpretation of research results, supported by analysis of data, literature, research, and content and course knowledge.</p> <p>Identifies implications for practice that are clearly justifiable, based on deep and thorough analyses. Implications speak to the specific classroom context and education as a whole.</p> <p>Recommendations for future research are relevant, reasonable and researchable with specific suggestions for appropriate steps for further inquiry.</p> |

| V. Quality of Writing | | | | |
|--|--|---|---|--|
| 1 Poor Performance | 2 Below Passing | 3 Passing Effort | 4 Notable Effort | 5 Exceptional |
| <p>Final paper lacks organization and clarity.</p> <p>Is replete with errors in writing and research conventions.</p> <p>May be missing several required elements.</p> <p>Follows no particular referencing format consistently.</p> | <p>Presents final paper whose organization is inconsistent and often confusing.</p> <p>Contains numerous errors in writing and research conventions.</p> <p>May be missing some required element(s).</p> <p>Numerous errors in reference format.</p> | <p>Presents final paper that is generally organized.</p> <p>May lack distinct narrative voice.</p> <p>Generally observes conventions of writing and research, with few errors.</p> <p>All required elements of the paper are included, though there may be some unevenness in clarity and organization.</p> <p>Generally follows APA format</p> | <p>Presents final paper that is well organized and has an identifiable narrative voice.</p> <p>Observes conventions of language and research, with few errors.</p> <p>All required elements of the paper are included (abstract, references, etc.).</p> <p>Follows APA format</p> | <p>A final paper that is cogent, organized, and has a compelling narrative voice.</p> <p>Observes mechanical conventions of writing with virtually no errors.</p> <p>Includes required elements of the paper (abstract, references, etc.) written with clarity and precision.</p> <p>Follows APA conventions</p> |

B. Content & Pedagogy

| I. Planning Instruction | | | | |
|--|--|---|---|--|
| 1 Poor Performance | 2 Below Passing | 3 Passing Effort | 4 Notable Effort | 5 Exceptional |
| <i>Extensive errors, inaccuracies, or omissions which may include:</i> | <i>Serious errors or omissions compromising content and quality below passing standards, which may include inadequacies in the following areas:</i> | <i>An acceptable, though imperfect effort, with general weakness in one or more of the following areas:</i> | <i>A solid effort in all elements of the rubric category, though lacking the exceptional depth, extensive knowledge and understanding of theory that warrants exemplary status.</i> <i>Includes:</i> | <i>An exemplar in every element of the rubric category, including:</i> |
| <p>Curriculum and instruction do not reflect key concepts and theories of the subject matter, and is inconsistent with frameworks,</p> <p>Social and/or emotional skills are ignored, undermined, or not included.</p> <p>Little or no attention is paid to best or appropriate practices, as represented in the literature.</p> | <p>Curriculum and instruction are minimally grounded in key concepts and theories of the subject matter or teaching area. There may be significant inconsistency frameworks.</p> <p>Social and/or emotional skills are superficially or minimally considered</p> <p>Curriculum and instruction are inconsistent with best and appropriate practices.</p> | <p>Curriculum and instruction are generally grounded in the theories and concepts central to the subject matter or teaching area (math, language arts, science, fine arts, social sciences, specialized curriculum areas)), and reasonably consistent with frameworks.</p> <p>Social and emotional skills and processes may be embedded in lessons, but in an inconsistent or limited way.</p> <p>Curriculum and instruction are minimally consistent with best and appropriate practices.</p> | <p>Curriculum and instruction are clearly grounded in the theories and concepts of central importance to the subject matter or teaching area (math, language arts, world languages, science, fine arts, social sciences, specialized areas of curriculum)), and consistent with frameworks.</p> <p>Considers academic, social, and emotional skills and processes as they help pupils grapple with content knowledge.</p> <p>Curriculum and instruction are consistent with best or appropriate practices.</p> | <p>Curriculum and instruction are carefully and explicitly grounded in the theories and concepts of central importance to the subject matter or teaching area (math, language arts, world languages, science, fine arts, social sciences, specialized areas of curriculum), and consistent with frameworks.</p> <p>Planning explicitly considers academic, social and affective skills and processes in innovative and thoughtful ways, as they help pupils grapple with content.</p> <p>Curriculum and instruction are explicitly connected to best and/or appropriate practices from the literature.</p> |

| II. Materials & Resources | | | | |
|---|---|--|--|---|
| 1 Poor Performance | 2 Below Passing | 3 Passing Effort | 4 Notable Effort | 5 Exceptional |
| <p>Does not identify materials, resources, and technology utilized in intervention or instruction.</p> <p>Uses materials, resources and technology that contain significant inaccuracies, are not developmentally appropriate, or are not adapted to provide access to the curriculum for all/most students.</p> <p>No mention of appropriate, but unavailable materials or resources is offered.</p> | <p>Does not clearly identify materials, resources and technology utilized in intervention or instruction.</p> <p>Materials may contain some inaccuracies, may not be developmentally appropriate, or may not be adapted to provide access to the curriculum for significant numbers of the classroom population.</p> <p>Little or no effort it made to identify or explain resources that would be more appropriate, but are unavailable.</p> | <p>Generally identifies materials, resources and technology utilized in intervention and instruction. May lack some clarity and specificity in describing materials and resources.</p> <p>Materials and resources are accurate, generally developmentally appropriate, and adapted to provide access to the curriculum for most, though not all, students.</p> <p>Although materials and resources are not available, candidate does not explicitly indicate so, or offer explanations and alternatives.</p> | <p>Clearly identifies materials, resources and technology that are utilized in intervention and instruction.</p> <p>Materials and resources are from sources that are accurate, developmentally appropriate, and adapted to provide access to the curriculum for almost all students.</p> <p>If materials and resources are not available, candidate notes the lack of preferred resources, explains what was used, and why.</p> | <p>Explicitly identifies and describes materials, resources and technology utilized in intervention and instruction.</p> <p>Materials and resources are from sources that are accurate, developmentally appropriate, and effectively adapted to provide access to the general curriculum for all students. Demonstrates innovation and creativity in use of materials and resources.</p> <p>If materials and resources are not available, candidate notes the lack of preferred resources, explains what was used, and why.</p> |

III. Content Knowledge

| 1 Poor Performance | 2 Below Passing | 3 Passing Effort | 4 Notable Effort | 5 Exceptional |
|---|--|---|---|---|
| <p>Presents content knowledge that is inaccurate, developmentally inappropriate, or inconsistent with curriculum frameworks. May show evidence of lack of knowledge in the field or lack of knowledge with frameworks.</p> <p>Does not identify content goals and objectives.</p> <p>Incorporates no logical scope and sequence.</p> <p>Ignores scaffolding, uses inconsistent or ineffective scaffolding. Does not include, or makes only passing connections to the real world.</p> | <p>Presents content knowledge that is inconsistently accurate or questionable and that attends minimally to developmental appropriateness, and is inconsistent with curriculum frameworks.</p> <p>May lack depth of knowledge in the field; lack of knowledge with frameworks.</p> <p>Identifies few content goals and objectives.</p> <p>Incorporates limited scope and sequence that includes limited scaffolding. May ignore, or have weak connections outside the classroom.</p> | <p>Presents content knowledge that is generally accurate, developmentally appropriate, in keeping with acceptable standards from the content field, and consistent with local curriculum frameworks. May lack depth of knowledge in the field, lack of knowledge with frameworks.</p> <p>Demonstrates candidate is competent in content area.</p> <p>Generally identifies the content goals and objectives.</p> <p>Incorporates a logical scope and sequence that integrates some scaffolding and some connections outside the classroom.</p> | <p>Presents content knowledge that is accurate, developmentally appropriate, and in keeping with high standards from the content field, and is consistent with local curriculum frameworks.</p> <p>Demonstrates candidate depth of knowledge in the content area.</p> <p>Clearly identifies major content goals and objectives.</p> <p>Incorporates a logical scope and sequence that integrates scaffolding and connections to the real world.</p> | <p>Presents content knowledge that is accurate, developmentally appropriate, and in keeping with high standards from the content field, and is consistent with local curriculum frameworks. Demonstrates candidate's depth of knowledge & facility in content area.</p> <p>Explicitly and clearly identifies all content goals and objectives.</p> <p>Incorporates a logical and developmentally appropriate scope and sequence, that details the integration of appropriate and effective scaffolding, with connections to the real world.</p> |

| IV. Pedagogy | | | | |
|--|---|---|---|---|
| 1 Poor Performance | 2 Below Passing | 3 Passing Effort | 4 Notable Effort | 5 Exceptional |
| <p>Instructional strategies are uni-modal, inappropriate, or in contradiction to best practices and limit access to the curriculum for portions of the classroom population.</p> <p>Curriculum or instruction ignores or demeans the cultural and linguistic background of students and community populations.</p> <p>Diversity is approached from a deficit perspective.</p> <p>Does not engage students critical thinking; does not engage students at an appropriate level.</p> | <p>Candidate demonstrates very limited ability to provide curriculum and instruction to meet the academic, cultural and linguistic needs of students.</p> <p>Candidate demonstrates few appropriate strategies consistent with best practices in the field.</p> <p>May be inconsistent in viewing diversity from an asset perspective.</p> <p>Engages students in limited levels of thinking; does not engage students at an appropriate level.</p> | <p>Acknowledges classroom context and student populations, with some evidence of adjusting curriculum and instruction to student population; addresses the cultural and linguistic background of students occasionally, generally as classroom opportunities are presented rather than through thoughtful planning.</p> <p>Demonstrates some appropriate strategies consistent with best practices in the field.</p> <p>Occasionally engages students in critical thinking, as appropriate.</p> | <p>Shows evidence of adapting pedagogical strategies to classroom context and students; curriculum and instruction address the academic, cultural and linguistic background of students from an asset perspective</p> <p>Demonstrates a variety of appropriate strategies consistent with best practices in the field, providing access to curriculum for all students.</p> <p>Engages students in critical thinking, as appropriate.</p> | <p>Clearly provides evidence of adapting pedagogical strategies to classroom context and students; curriculum and instruction explicitly address prior educational experience, cultural and linguistic background of students from an asset perspective</p> <p>Demonstrates a variety of innovative, appropriate strategies consistent with best practices in the field, providing access to curriculum for all students.</p> <p>Engages students in critical thinking frequently, and as appropriate to age and topic.</p> |

| V. Assessment | | | | |
|---|--|---|--|--|
| 1 Poor Performance | 2 Below Passing | 3 Passing Effort | 4 Notable Effort | 5 Exceptional |
| <p>Assessment is inconsistent, uni-modal, or limited to summative formats.</p> <p>Assessment strategies may be developmentally inappropriate, inconsistent with instruction, or confusing,</p> <p>There is little or no evidence that concepts are assessed for understanding and application</p> <p>Misconceptions are not identified, addressed in the course of instruction.</p> | <p>Assessment modes may be limited, questionably adapted for some populations, or lack consistent monitoring.</p> <p>There is limited formal and/or informal assessment.</p> <p>Assessments provide limited opportunities for many students to demonstrate that concepts are understood</p> <p>Misconceptions are not consistently identified and addressed.</p> | <p>Some diverse and appropriate assessments are utilized in formal and informal, formative and summative assessments of pupil learning.</p> <p>Assessments generally provide most students with the opportunity to demonstrate that concepts are understood.</p> <p>Misconceptions may be identified, addressed and clarified but not consistently.</p> | <p>Diverse, multiple, and appropriate assessments are utilized in formal and informal, formative and summative assessments of pupil learning.</p> <p>Assessments provide a variety of opportunities so that all students can demonstrate that concepts are understood and applied.</p> <p>Misconceptions are identified, addressed and clarified with general success.</p> | <p>Candidate provides detailed examples of diverse, multiple, and appropriate assessments in formal and informal, formative and summative assessments of pupil learning.</p> <p>Assessments provide a variety of opportunities so that all pupils can demonstrate that concepts are understood and applied by pupils.</p> <p>Areas of misconceptions are anticipated, effectively identified, addressed and clarified.</p> |

C. Pupils' Learning

| I. Learning Opportunities and Standards | | | | |
|---|--|--|--|--|
| 1 Poor Performance | 2 Below Passing | 3 Passing Effort | 4 Notable Effort | 5 Exceptional |
| <i>Extensive errors, inaccuracies, or omissions which may include:</i> | <i>Serious errors or omissions compromising content and quality below passing standards, which may include inadequacies in the following areas:</i> | <i>An acceptable, though imperfect effort, with general weakness in one or more of the following areas:</i> | <i>A solid effort in all elements of the rubric category, though lacking the exceptional depth, extensive knowledge and understanding of theory that warrants exemplary status. Includes:</i> | <i>An exemplar in every element of the rubric category, including:</i> |
| Curriculum and instruction provide narrow, limited, inappropriate, and/or low level learning opportunities, that assume low academic standards for pupils. Accommodations for ELL and pupils with special needs may be inappropriate or nonexistent. | Curriculum and instruction provide little variation and generally low level learning opportunities, that assume low academic standards Accommodations for ELL and pupils with special needs are limited and offered from a deficit model. | Curriculum and instruction provide some variation in learning opportunities. Academic standards may be inconsistent across student populations. Limited accommodations are reported for ELL and pupils with special needs. | Curriculum and instruction provide varied learning opportunities, high academic standards for all pupils, and accommodations for ELL and pupils with special needs. | Curriculum and instruction provide rich and varied learning opportunities, high academic standards for all pupils, and appropriate accommodations for ELL and pupils with special needs. |

| II. Instructional Decisions Based on Diverse and Multiple Indicators | | | | |
|---|--|---|--|---|
| 1 Poor Performance | 2 Below Passing | 3 Passing Effort | 4 Notable Effort | 5 Exceptional |
| Utilizes singular indicators of pupil learning to assess pupil outcomes and modify instruction. Or, ignores data in making instructional decisions. | Utilizes traditional, singular, and minimally appropriate indicators of pupil learning in order to make instructional decisions. Rarely uses data to make instructional decisions. | Utilizes occasional diverse and appropriate indicators of pupil learning. Occasionally uses data from indicators to make instructional decisions. | Utilizes effective, diverse, and appropriate indicators of pupil learning. Offers evidence that data from indicators are is to make instructional decisions. | Utilizes many effective, diverse, and appropriate indicators of pupil learning. Regularly and explicitly uses data from indicators to make appropriate instructional decisions. |

| III. Cognitive Tasks and Skills | | | | |
|--|--|---|--|--|
| 1 Poor Performance | 2 Below Passing | 3 Passing Effort | 4 Notable Effort | 5 Exceptional |
| Provides limited, tedious, and/or low level cognitive tasks and skills to pupils, Limited or no consideration of learning objectives or needs, talents and abilities of pupils. | Provides limited and often low level cognitive tasks and skills to pupils. Limited consideration of learning objectives, needs, talents, and abilities of some pupils | Provides a limited range of cognitive tasks and skills that are generally appropriate to learning objectives. Inconsistent in identifying and addressing needs, talents and abilities of pupils.* This may be a single student in a case study. | Provides a range of appropriate cognitive tasks and skills consistent with learning objectives. Identifies and makes efforts to address the needs, talents and abilities of all pupils.* This may be a single student in a case study. | Provides a variety of relevant, creative, and effective opportunities for a range of cognitive tasks and skills that are appropriate to learning objectives. Identifies and addresses the needs, talents and abilities of all pupils.* This may be a single student in a case study. |

| IV. Social and Emotional Outcomes | | | | |
|--|--|--|--|--|
| 1 Poor Performance | 2 Below Passing | 3 Passing Effort | 4 Notable Effort | 5 Exceptional |
| <p> Ignores social and emotional outcomes in assessment of pupil learning.</p> <p> Permits or ignores disrespectful or inappropriate social behavior among pupils.</p> | <p> Incorporates very few pupil outcomes that address social and emotional learning.</p> <p> Does not explicitly monitor or model social or emotional skills as valued pupil outcomes.</p> | <p> Social and emotional learning are addressed generally.</p> <p> Some elements such as social competence, participation, cooperation, exchange of ideas, tolerance for diversity of perspectives, and respect are noted.</p> | <p> Offers evidence of social and emotional learning such as social competence, participation, cooperation, exchange of ideas, tolerance for diversity of perspectives, and respect.</p> | <p> Explicitly addresses social and emotional learning as significant pupil outcomes, such as social competence, participation, cooperation, exchange of ideas, tolerance for diversity of perspectives, and respect.</p> <p> Provides learning opportunities and monitors elements such as social competence, participation, cooperation, exchange of ideas, affirmation of diverse of perspectives, and respect.</p> |

| V. Pupils' Progress | | | | |
|--|---|---|---|---|
| 1 Poor Performance | 2 Below Passing | 3 Passing Effort | 4 Notable Effort | 5 Exceptional |
| <p>Provides evidence that few, if any pupils are making acceptable progress.</p> <p>Diverse learners are not considered in pupil progress measures; diverse learners are not expected to make progress.</p> <p>Remediation or modification is not included or is inappropriate to address the needs of the students.</p> <p>No evidence of monitoring pupil progress is offered.</p> | <p>Learning expectations and goals are not offered for full population, or are inconsistent.</p> <p>Documentation of progress is incomplete or possibly inaccurate.</p> <p>Evidence suggests that diverse learners are not consistently making progress. Does not offer reasonable explanation for lack of progress.</p> <p>Offers little appropriate action for modification or remediation.</p> | <p>Learning expectations and goals are not clear for full population.</p> <p>Documentation of progress is limited; Offers limited evidence of student progress, including diverse learners.</p> <p>Does not thoroughly explain why progress was not made for particular students</p> <p>Provides minimally adequate suggestions to remediate or modify practice, to improve outcomes.</p> <p>Offers limited connections to conceptual and empirical literature.</p> | <p>Addresses learning expectations for all pupils (including all kinds of diverse learners). Sets reasonable goals in the targeted area.</p> <p>Documents progress made for all students.</p> <p>Indicates why inadequate progress was made with reasonable and appropriate suggestions for modification.</p> <p>Measures may be more limited than an exemplary (5) score; or suggestions for modification not as detailed, or not as clearly tied to current best practices as reflected in research literature.</p> | <p>Addresses learning expectations for all pupils (including all kinds of diverse learners). Sets reasonable goals in the targeted area.</p> <p>Documents clear and detailed account of progress made for all students.</p> <p>If progress is not made by all pupils, clearly explains why and offers detailed suggestions for modification, based on evidence found in conceptual and empirical literature and practice.</p> |

D. Teaching for Social Justice

| I. Identifying Personal Values, Biases and Beliefs | | | | |
|--|--|---|--|---|
| 1 Poor Performance <i>Extensive inaccuracies, or omissions</i> | 2 Below Passing <i>Serious errors or omissions compromising content and quality below passing standards, which may include inadequacies in the following areas:</i> | 3 Passing Effort <i>An acceptable, though imperfect effort, with general weakness in one or more of the following areas:</i> | 4 Notable Effort <i>A solid effort in all elements of the rubric category, though lacking the exceptional depth, and quality of response that warrants exemplary status. Includes:</i> | 5 Exceptional <i>An exemplar in every element of the rubric category, including:</i> |
| Does not identify or reflect on influences from background that may impact views on education, teaching and practice, or how they fulfill their roles in a school community. Does not integrate knowledge of personal influences in classroom role. | Identifies some influences from his/her own background and life experience that have an impact on views of education, teaching, and practice, but makes no effort to integrate this knowledge as he/she fulfills his/her role within a school community. | Identifies some influences from candidate's own background and life experience that have an impact on views of education, teaching, and practice. Makes some effort to integrate this knowledge as they fulfill their role within a school community. | Recognizes and identifies influences from candidate's own background and life experience that has an impact on views of education, teaching, and practice. Integrates this knowledge as they fulfill their role within a school community. | Recognizes and identifies influences from candidate's own background and life experience that has an impact on views of education, teaching, and practice. Thoughtfully and effectively integrates this knowledge as they fulfill their role within a school community. |

II. Understanding Context

| 1 Poor Performance | 2 Below Passing | 3 Passing Effort | 4 Notable Effort | 5 Exceptional |
|---|--|---|--|---|
| <p> Ignores school context, classroom, and community in planning, implementing, or modifying instruction.</p> <p> Provides instructional opportunities, that ignore or denigrate the knowledge, interests, cultural and linguistic resources, and prior experiences that pupils bring to the classroom.</p> | <p> Acknowledges in an inconsistent and/or extremely limited way the context and diversity of school, classroom, and community. Racial, ethnic, language, socio-economic, learning modalities, and cognitive abilities are rarely utilized in establishing effective teaching and learning practice.</p> <p> Occasionally includes student interests and background in curriculum as a serendipitous event, rather than as a purposeful element of curriculum and instruction.</p> | <p> Acknowledges some elements of context and diversity of school, classroom, and community that reflects racial, ethnic, language, socio-economic, learning modalities, and cognitive abilities in establishing effective teaching and learning practice.</p> <p> Integrates elements of student knowledge and interests, cultural and linguistic resources and prior experiences as a secondary priority in classroom experience.</p> | <p> Acknowledges the context and diversity of school, classroom, and community that reflects racial, ethnic, language, socio-economic, learning modalities, and cognitive abilities in establishing effective teaching and learning practice.</p> <p> Integrates and builds on the knowledge, interests, cultural and linguistic resources that students bring to school through curriculum and instruction.</p> | <p> Acknowledges the context and diversity of community, school, and classroom that reflects racial, ethnic, language, socio-economic, learning modalities, and cognitive abilities in establishing effective teaching and learning practice, and how this knowledge integrates with personal values and beliefs.</p> <p> Provides specific, detailed, and multiple examples of instructional experiences that build on the knowledge, interests, cultural, and linguistic resources, and experiences that pupils bring to the classroom as a central part of the education experience.</p> |

| III. Affirming Diversity as an Asset | | | | |
|--|---|--|--|---|
| 1 Poor Performance | 2 Below Passing | 3 Passing Effort | 4 Notable Effort | 5 Exceptional |
| <p>Ignores, denigrates or views diversity from a deficit perspective in reflections or instruction.</p> <p>Diversity includes racial, cultural, socioeconomic, linguistic, sexual orientation, ability, etc.</p> | <p>Views diversity in reflections or instruction ambiguously, inconsistently, or may be “color blind.”</p> <p>Diversity includes racial, cultural, socioeconomic, linguistic, sexual orientation, ability, etc.</p> | <p>Diversity may not be explicitly acknowledged as a positive or negative element of the learning experience, though it is considered in reflections.</p> <p>Diversity includes racial, cultural, socioeconomic, linguistic, sexual orientation, ability, etc.</p> | <p>Demonstrates through some examples that diversity is an asset, and offers limited examples of working with families and community in facilitating the learning experience.</p> <p>Diversity includes racial, cultural, socioeconomic, linguistic, sexual orientation, ability, etc.</p> | <p>Demonstrates through clear and effective examples that diversity is an asset (not a deficit) and involves families and community in facilitating the learning experience.</p> <p>Diversity includes racial, cultural, socioeconomic, linguistic, sexual orientation, ability, etc.</p> |

| IV. Creating Classroom Environment | | | | |
|---|---|--|---|---|
| 1 Poor Performance | 2 Below Passing | 3 Passing Effort | 4 Notable Effort | 5 Exceptional |
| <p>Demonstrates through examples and experiences a classroom that is not caring, supportive, or safe.</p> <p>Does not provide an environment that supports or encourages risk-taking.</p> <p>Intellectual rigor is ignored, devalued, or expectations differ across pupil population. Questioning and challenging are discouraged in classroom exchanges.</p> | <p>A safe and caring environment is implied through general or indirect description, rather than specific attention to creating classroom environment.</p> <p>Candidate does not offer evidence of knowing or understanding students. Building community is not addressed.</p> <p>Minimal evidence of valuing intellectual rigor. Questioning and challenging are discouraged in classroom exchanges.</p> | <p>Limited examples or description of an environment that supports a safe, caring, collaborative and respectful climate that encourages risk-taking in learning.</p> <p>Candidate offers limited evidence of knowing and understanding students. Building classroom community is given minimal attention.</p> <p>Suggests intellectual rigor is valued, though questioning may be limited.</p> | <p>Demonstrates through evidence, an environment that supports a safe, caring, collaborative and respectful climate that encourages risk-taking in learning.</p> <p>Candidate offers evidence of knowing and understanding students, the importance of building community and respect.</p> <p>Demonstrates intellectual rigor, the ability to question, and challenging ideas are valued.</p> | <p>Demonstrates through evidence, an environment that supports a caring, safe, collaborative, and respectful climate that encourages risk-taking in learning.</p> <p>Candidate offers specific examples that reflect knowledge and understanding of students, and the importance of building community and respect as part of the classroom experience.</p> <p>Explicitly demonstrates intellectual rigor, the ability to question, and challenging ideas are valued.</p> |

V. Acting for Social Justice

| 1 Poor Performance <i>Avoidance, indifference, or acceptance of inequity exists at this level</i> | 2 Below Passing <i>Lack of question/reflection; inconsistency or silence exists at this level</i> | 3 Passing Effort <i>Some questioning exists at this level</i> | 4 Notable Effort <i>Questioning and reflecting are key elements at this level</i> | 5 Exceptional <i>Activism is a key element at this level</i> |
|---|---|---|---|--|
| <p>Avoids controversial issues and questions related to diversity, equity, culture, and social justice as part of classroom instruction</p> <p>Is indifferent, silent, or supports issues of policy and practice that contribute to, or maintain the existence of inequity in education. Denies the existence of issues of inequity and injustice.</p> <p>Instruction or discussion of social justice is not appropriate to developmental level or context.</p> | <p>Demonstrates limited and superficial evidence that issues of diversity, equity, culture, and social justice are explicitly included in curriculum and/or classroom discussion.</p> <p>Does not believe that issues of social justice are appropriate for their curriculum area.</p> <p>Reflects inconsistent beliefs about issues of social justice; does not question policy or programs that contribute to inequity in education</p> | <p>Demonstrates that some issues of diversity, equity, culture and social justice are sometimes part of the curriculum and instruction at an appropriate level and context.</p> <p>Offers limited questions on policies and programs that contribute to, or maintain the existence of, inequity in education.</p> | <p>Offers evidence of addressing diversity, equity, culture, and social justice as a consistent part of curriculum and instruction, at an appropriate level and context for the classroom population.</p> <p>Questions through written reflections and through occasional actions, policies and programs that contribute to, or maintain the existence of, inequity in education.</p> | <p>Integrates activism, discussion, and learning experiences addressing issues of diversity, equity, culture, and social justice as an explicit part of curriculum and instruction, at an appropriate level and context for the classroom population, through multiple examples and experiences.</p> <p>Challenges and questions consistently, through written reflection and actions, policies and programs that contribute to, or maintain the existence of inequity in education.</p> |

APPENDIX D
QUALITATIVE CASE STUDY INTERVIEW PROTOCOLS

Interview 1 - Personal History and Education Experience

Background: Educational experience

Let's begin our conversation by talking about what brings you here to BC.

1. Why did you choose BC for graduate school? What do you hope to learn about teaching while you are here?

Probe: What are your expectations for the program and learning environment at BC? What do you think the program will offer?

Probe: How long has it been since you graduated from undergraduate college? What have you been doing since graduating?

2. Describe your college education? Where did you go? Why? What was your major in college? Why?

Probe: What incidents or experiences stand out during your college years? For example, were you active on student organizations or political activities on campus?

Probe: Did you work through college and/or did you have financial aid?

3. Describe your past school experiences.

A. Let's start with your secondary school experience.

Probe for context—was it a small or large school; an urban or suburban, parochial—single sex? Would you say it was diverse? If so, how?

Probe: What was the school like at the time you were there? For example, some people were in school during times of major change, such as during school integration, the merging of two high schools, or witnessing a shift in population in community, leading to increased diversity in the school, OR there were also some local changes such as a new teacher or administrator, a different tracking or grouping system, or a change in courses.

B. Now tell me about your elementary school experience.

Probe for context—was it a small or large school; an urban or suburban, parochial—single sex? Would you say it was diverse? If so, how?

Probe: Again, what was the school like at the time you were there?

4. How did you experience school as a student?

Probe for their experiences as learners-- So if an individual responds about the social aspects of schooling, ask them how they experienced school as learners?

Probe: What was your most memorable experience? Were you involved in extracurricular activities? If so, what type of activities were you involved in?

5. Now, I want to switch topics a bit to talk about what brings you to teaching. When did you first start thinking you might want to teach? Why are you interested in teaching?

Probe: Did you consider becoming a teacher while you were an undergrad? Why or why not?

Probe: for their intellectual interests and the perspective they hold as a student. For instance, many of the elementary candidates mention their love of reading and children. Try also to discover what the person especially enjoys about school or about learning.

6. You're planning to teach _____ (elementary or high school) is that right? When you think back to your own experience in _____ (elementary or high school), what stands out to you?

Probe: for specificity: What do you mean? Can you give me an example of that? Is there anything else you remember?

If the teacher candidate does not mention one of the following: You haven't mentioned (much about) _____. Do you remember anything in particular about that?"

- what you learned
- your teachers
- how you felt about different subjects

Probe (Elementary folks): How do you think an individual best learns to read or to write?

Probe (Secondary folks): How do you think an individual best learns _____ (history, English, science, math)?

Probe: Do you think you received a good education? Why or why not?

Background: Beliefs:

7. A part of our research focuses on individuals' ideas, beliefs and experience as they relate to teaching and learning. At BC, one of the stated purposes is to prepare individuals to teach for social justice. What does that mean to you?

Probe A: If teacher candidate says that he/she does not know what teaching for social justice is, move on to question 9.

Probe B: If teacher candidate gives an answer to the social justice question, ask: So, how do you think that plays out in _____ (reading or math: elementary folks) or (history, English, or science: high school folks)?

8. As you think about your future profession, what do you believe is/are the role(s) of the teacher?

Probe: Think of a teacher you have known. Are there things you admired about this teacher? Things you would like to have changed?

Probe: From your perspective, what are the top two or three challenges that teachers face today?

Background: Knowledge

9. Now, think about the content areas you will be teaching as an elementary or high school teacher. What do you think are your strengths and weaknesses in the content area(s) you might have to teach?

Probe: What are you hoping the BC program will provide in terms of your preparation?

(Note: This can focus on fears and concerns if it hasn't been covered OR it can be skipped if it was thoroughly discussed.)

Probe: Now think about the range of things a teacher does. What might be your strengths? What areas might you need support?

Background: Practice (Future plans)

10. What are you looking forward to in your Student Teaching Practicum? Is there anything you are concerned about? What challenges do you think you will face?

Probe: How will you prepare yourself for these challenges?

11. When you think about next year, where do you see yourself working? Where would you like to teach?

Probe: Talk to me about what you hope your classroom will be like? How will you teach? What will your relationships with students, faculty, and parents look like?

12. In conclusion, we'd like to get some information about your background, especially your demographics. (**Note:** Make references to prior responses to pull pieces together. Continue probing so we don't receive a mere list.)

Probe: For example: your age, race, ethnicity, cultural background, language, religion and political orientation?

Closing Remarks:

Is there anything else you'd like to share that we didn't cover?

(Thank the participant!)

Interview 2: Pre-practicum Experience

The focus of this interview is on your pre-practicum experience. We will meet again in January to talk more about your coursework at BC in the first semester. For this interview, I would like to learn about how your pre-practicum went, what you learned, what you struggled with, what impact the experience has had on your ideas about teaching, etc.

Practicum Experiences

1. Let's talk about your practicum. Describe a typical day at your practicum.

Probe: How have you found the structure of the pre-practicum?

Probe: What is your role in the classroom?

Probe: What is the school environment and community like?

Probe: Is the environment different from other places where you've been a student or volunteer/aide?

Probe: Do you observe teachers teaching in all subject areas (for elementary)?

2. Tell me about your Cooperating Teacher? (Age, Race, Ethnicity, years teaching, teaching style, etc.) What is the role of the cooperating teacher in shaping your practice and philosophy?

Probe: Would you describe a particular lesson you observed that was note worthy? Why?

Probe: How do you think your CT knows what to do next?

Probe: How do you think your CT knows if the kids are learning?

Probe: What types of classroom assessments does your CT use? Formative/summative? In what ways do assessments reflect the instruction?

Probe: Every teacher has strengths and weaknesses; can you tell me about those with regard to your Cooperating Teacher? Are there things you have observed and would do/wouldn't do? (specific content areas)

Probe: Do you and your Cooperating Teacher have similar teaching philosophies? Explain. (N.B. You want to understand what the teacher candidate's teaching philosophy is—skip if you have gotten at this in Question 2)

Probe: Do you think your Cooperating Teacher has the same ideas about teaching and learning as your BC Professors? Why or why not? Do you consider this a problem?

Probe: What advice have you gotten from your Cooperating Teacher? How has your Cooperating Teacher helped you in understanding teaching? How has he/she helped your understanding of pupil learning?

3. OK, let's move from your CT to your Supervisor; tell me about your Supervisor? (Age, Race, Ethnicity, years teaching, teaching style, etc.) What is the role of the Supervisor in shaping your practice and philosophy?

Probe: What advice have you gotten from your Supervisor? How has he/she helped you in understanding teaching? How has he/she helped your understanding of pupil learning?

Probe: What would you say are your Supervisor's strengths and weaknesses?

Probe: Do you and your Supervisor have similar teaching philosophies? Explain.

Probe: Do you think your Supervisor has similar ideas about teaching and learning as your BC Professors? Why or why not? Do you consider this a problem?

Probe: So, I understand that all of the pre-pracs in this school meet together with the supervisor at the school once a week? How's that been?

4. So we've talked about all the grown-ups...the other important people here are the kids. Tell me about the Students in the classroom?

Probe: What is their role in shaping your practice and philosophy? (Ask about the child study pupil if relevant)

Probe: Diversity (ELLs, SPED, SES, Ethnicity)? How would you describe their experience in school? Do they enjoy it? Why or why not?

If elementary: How is the weekly read aloud going with your ELL pupil?

Probe: Tell me about the lessons you taught. How did they go? What did you learn? (Insert here a question about something you observed in a classroom. For example, a unique method, approach, visual aide).

Probe: Some people say the most important thing about any lesson is whether the kids are learning. What do you think they learned? How do you know?

Probe: What are you learning about how children learn? How does this influence your perspective on the role of a teacher?

Probe: Can you describe a particular learning moment you observed that was note worthy? Why?

Probe: What advice have you gotten from your pupils? How have the pupils helped you in understanding teaching? How have they helped your understanding of pupil learning?

Overall Questions

5. Have you observed examples of teaching for social justice in your pre-practicum experience? Please describe them.
6. Are you making connections between what you're learning at BC and what you're experiencing in your practicum?
7. Based on your pre-prac experience, what would you say are the most important skills and knowledge for teaching?
8. How have your practicum experiences thus far influenced your ideas about teaching?

Probe: Based on the practicum, have you changed your plans on where and how you'd like to teach? Explain.

Interview 3
2005 Summer & Fall Courses

Please fill table before interview.

| Methods Courses | Foundations Courses | Content Courses |
|-----------------|---------------------|-----------------|
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |

Last time we met we focused on your pre-practicum experience. Today's topic is your coursework so far at BC.

General Course Experiences

1. Generally, how have your courses gone so far?

Probe: What have you enjoyed about these courses so far? Have there been any surprises?"

Probe: Can you give me some examples of anything that has been particularly interesting or helpful?

2. Foundations courses are generally used to give people the broad overviews of learning and schooling: broader contexts of children, schooling, and curriculum. Did you find the courses to be valuable in terms of providing that? In what ways? (**Specify what courses we are referring to**)

Probe: Do you think the foundations courses helped you understand the realities of schools today?

3. Methods courses are intended to prepare you to gain strategies to teach specific subjects. What skills and knowledge did you acquire from your methods courses? (Examples?)

Probe: Did they meet your expectations? If not, how might they have better met your expectations?

Probe: Some people say the most important thing to learn is classroom management. Do you agree?

Probe: How did the methods courses help your knowledge of the content?

Probe: Often a lesson in a methods class will demonstrate a teaching strategy which also includes content material. Did these "model lessons" increase your understanding about

the content (e.g., looked at content from new perspective, etc)? Were they equally helpful for both strategy and content?

Elementary—How did the methods courses relate to each other? (e.g. math, science, literacy, and social studies)

Secondary—Have you taken any courses in Arts & Science? Was the course valuable to you in terms of pedagogy, broadening content knowledge, curriculum, and assessment?

Probe: What have you learned about bilingual students? Students with special needs?

4. Now let's talk about the teaching in the methods course? How would you characterize your methods professors' approaches to teaching?

Probe Do you think they modeled the kind of teaching they advocated (practiced what they preached)?

Probe: Do you think the faculty structured their courses around the realities of schools today?

Probe: Did the methods faculty explicitly address issues of social justice? If so, how?

Probe: What did you learn about pupil learning? (ways of learning, etc...)

Probe: What did you learn about assessment? (ongoing/formative & high-stakes; pupil learning)

5. You said you were hoping to learn about _____, has that been the case? Are there any gaps that remain in your coursework?

Overall Questions

6. Are you making connections between what you're learning at BC (methods, & foundation courses) and what you experienced in your pre-practicum? How? Examples?

7. When we first talked in the summer, I asked you a question about your definition of teaching for social justice. How do you see it now?

Has your definition changed? If so, why?

Kevin- hoped to learn- how I am supposed to run my classroom, teaching theories and not sure what else

Kevin – social justice- I feel that it means that you have to not only have to teach to all students and all cultures, but you need to prepare them for a world that they can effectively deal with each other so that you are not creating a society where the students are against each other.- females in physics

Elizabeth- hoped to learn- I'm going to have students of all **different abilities in my classroom and all different levels**. And I think the biggest challenge for me or what I for see as being the biggest challenge is how to challenge all the students and **keep them engaged** but also be wary that some students might be at different levels than others so I really hope that BC will give me a good sense of how to **balance the diversity** within the classroom. And how to be an effective teacher that way; to make students really want to be there and enjoy learning.

Elizabeth- social justice- I think it means giving an individual the means to make their life better or make their life the way they want it or envision it, giving them to tools to be able to do with it what they want to do and I think that is really easy for me to say because I have always been given the tools to do what I wanted to do.

Mark- hoped to learn- there is methodology that can be used to effectively transmit information to people who do not already understand that information

Mark- social justice- But there are other ways to make the world a better place and I feel like education is sorta the one area where someone can go into and actually affect some change in society. Social justice is such an umbrella term for so many different things that To me it just means trying to enact positive change in your own community.

Interview 4 with Participants: Full-Practicum Experience

1. Let's talk about your practicum.

Probe: What's the school environment and community like?

Probe: What pressures and issues do teachers face in the school? What pressures do students face? (e.g. test scores, safety, race issues, etc.)

Probe: How are student teachers viewed? What's your relationship to other colleagues in the school?

Probe: How have things changed from your pre-practicum? (if relevant)

2. What's your role in the classroom?

Probe: How much teaching have you done so far? What have you been teaching? What haven't you been teaching?

Probe: Do you have any other responsibilities? How much freedom have you had in what and how you teach?

Probe: How are you approaching planning? Are you co-planning?

Only if the participant has a new CT:

3. Tell me about your cooperating teacher? (race, age, ethnicity, years teaching, teaching style, etc.)

Probe: What are you learning from her/him?

Probe: How do you think your cooperating teacher knows students are learning?

Probe: What types of assessments does your cooperating teacher use (formative, summative?)?

Probe: In what ways do assessments reflect the instruction?

Probe: Do you and your CT have similar teaching philosophies?

Probe: Do you think your CT has the same ideas about teaching and learning as your BC professors? Why/why not? Do you consider this a problem?

Probe: Has your CT helped you improve social justice and/or equity in your teaching?

4. Tell me about your clinical faculty supervisor? Is s/he different from the person you had for your pre-practicum (race, age, ethnicity, years teaching, teaching style, etc.)?

Probe: What role is your supervisor playing in your practicum experience? (mediator, moral support, academic advice and content support)

Probe: What does your supervisor focus on in her observations and feedback? (*if nothing, remember to ask about classroom management?*)

Probe: Has s/he helped you provide strong academic content?

Probe: How has s/he helped you help pupils to learn?

Probe: Has your supervisor helped you improve social justice and/or equity in your teaching?

Probe: Do you and your supervisor have the same approach to teaching practices?

Probe: Do you think your supervisor has the same ideas about teaching and learning as your BC professors? Why/why not? Do you consider this a problem?

Probe: I understand that the BC full practicum students in this school meet as a group with the supervisor once a week. How has that gone? What kinds of issues have you discussed?

Probe: What are the other ways that you and your supervisor communicate about the classroom teaching experience? (*ask this if it's not touched on earlier in the interview*)

5. We've talked about the adults; the other important people are the kids. Tell me about the students in your classroom(s).

Probe: What are you learning from the students about being a teacher?

Probe: What is the diversity in the classroom? (ELLs, SpEd, Ethnicity?) What's that have to do with what and how you teach?

Probe: How do you think the kids in your classroom would describe their experience in the school?

Probe: How has your relationship changed with the kids over the course of the year?

Probe: In general, do you think the kids in the classroom are learning? What evidence do you have that they're learning?

Probe: Now, let's talk about your teaching in relation to the students. I noticed that you.... (Insert something here that you noticed from their classroom: about a particular student, a group of students, a unique method, etc.)

6. In your own classroom and in the school, either in what you are doing or what the teachers are doing, do you see examples of teaching for social justice? In your own teaching, how are you addressing issues of equity and justice?

Interview 5: Pupil Learning

NOTE: Teacher Candidate needs to bring three sets of pupil work: a full class set of a cumulative assignment and two examples of tasks that led up to it. TCs also need to pick out one high, one medium, and one low example of pupil performance for the cumulative assignment. Finally, have the teacher candidate bring any rubrics she or he used to score these assignments, as well as any assignment description that the TC gave to the pupils.

The purpose of this interview is to see what you are thinking about pupil learning and how it relates to your own instruction. First, I will ask you a series of general questions about the assignments you brought, then we'll get into the specific student examples you have selected as high, medium, and low. Finally, I'll ask you talk about your inquiry project.

1. First, let's take a look at the assignments you brought. As a way to walk me through this work, it might be helpful for you to start at the end with the cumulative project and work backwards. Or you might want to start with the first task and move chronologically to the end, the cumulative task.

Probe: How does it fit into a larger unit?

Probe: Was this something you devised yourself?

Probe: Was any part of this lesson from a preexisting lesson that you adapted?

Probe: Why did you decide this lesson/assignment/assessment would be appropriate? How much autonomy did you have in creating the lesson or assignment?

2. What did you want students to get out of this activity? How do you know whether or not students accomplished what you wanted them to get out of this activity/lesson/unit?

Probe: How did you evaluate these assignments (rubric, scoring, etc.)?

3. Is there anything you would change about this lesson or assignment or unit? What? Why?

4. Let's now look at your examples of a high, a medium, and a low-level response? Why did you choose these three examples? Tell me about the students who did this work (ELL, Special Ed, anything else?).

Probe: How do these samples compare to the overall class? (Is this work representative of the class? Is this what you expected?)

General Pupil Learning Ideas

5. What do you do to address the range of abilities in your classroom?
6. How do you know if your pupils are learning? What counts as evidence for learning?
7. Of course, teachers are not just interested in their pupils' academic learning; they are also very interested in their social and emotional development. Do you see your students making progress socially and emotionally? Like what?

Probe: How do you know if pupils are making this kind of progress?

8. Are you able maintain high expectations when the pupils have a variety of learning styles and needs? If so, how? If not, why?

The Inquiry Project

10. What was your Inquiry Question? What did you collect as data for your question?
11. What important insights did you get from your inquiry project concerning pupil learning?

Probe: While doing your inquiry project, what surprised you about students' learning?

Probe: How will the results of your inquiry project influence your practice as a teacher?

12. What would you categorize as social justice insights? Why?

Probe: How will you incorporate these insights into your own teaching?

13. While it is unlikely you would jump right into an inquiry project as you start your first year of teaching, what inquiry skills do you imagine using in your classroom practice?

Probe: Do you see yourself doing a formal inquiry project again in the future?

Interview 6 – End of Teacher Education

This is our last interview for the year, so it will include an overview of what you have learned through the year and the influences that have been most significant. We will also talk about your future plans and then, at the end of the interview, give you an opportunity to provide us with some feedback about the program.

First, we'll talk about the learning overview: Specifically, we'll be looking for information about how you may have changed personally and professionally, your understanding of the role of a teacher, about teaching and learning, and social justice – and the most important influences that have shaped this experience.

I. Learning

I'd like to start with a set of questions about what you learned during this year in your teacher education program...

1. You've been in schools for almost a year and have finished your full-time student teaching, Some people say they ended up learning as much about themselves as they did about students or teaching methods teaching during this period. What would you say you have you learned about yourself?

- As a Teacher?
- As a Learner?

2. What did you learn about teaching/the activity of teaching? What's the hardest thing? What's the easiest? What most surprised you?

3. What has had the greatest impact on this learning?

(Probe: What about—depending on their answer—your practicum experience, teacher education courses, A&S courses, your peers?

We're going to shift the focus a bit here and talk about some of the themes and concepts that pervade the program:

Let's start with the idea of pupil learning.

4. What's the most important thing you'd say you've learned about teaching reading/mathematics (for elementary)? _____ (specific subject) for secondary)(be specific for secondary)?

- **How/Where/From whom did you learn that? What was the biggest influence on your learning? Who or what played the biggest role? What role did the courses play?**
- **What have you learned about teaching about literacy in the elementary school? Math?**

- What have you learned about teaching bilingual students/ELLs?
How/Where/From whom did you learn that?
- Which content areas do you feel the most/least prepared to teach?

All through BC's teacher education program, there's been a lot of talk about social justice. We asked you about this in the first interview, as you might remember...

5. As you complete your teacher education experience, what do you make of this idea of Teaching for Social Justice?

- Has your definition changed?
- What impact did your practicum experiences have on your understanding of TSJ?

6. Did you have any strong models of teachers for social justice (either at BC or at your school site)?

- What made them good models?

7. How do you see yourself teaching for social justice in your own classroom?

8. Can you talk a bit about what you understand is the purpose of schooling? Where has that been highlighted in your program?

II. Moving Forward/Your future:

Okay, let's look ahead, now. In this section we'd like to talk about your future...

- What are you planning on doing next year (for benefit of the interview transcript)?
- Do you plan on teaching in the future?
- How has your experience in the past year impacted your career choice?

9. First, how is your job search going?

Will you be around this summer? Do I need to update contact information?
Are you planning on taking part in BC's mentoring program?

10. When you imagine yourself teaching next year, what do you see?

- What will your classroom be like?
- What will be the biggest challenges?
- What do you expect to be most prepared for?
- How do you think MCAS and NCLB will influence your teaching?
- Professional goals as a teacher?

11. Do you think about teaching as a career? What do you see yourself doing in the next five years?

- Ten years?

III. Program Feedback

Finally, we'll give you the opportunity to tell us more specifically what you think about the BC program....

- 12. If you could change three things about the program, what would they be?
Was there anything irrelevant in the program?**

- 13. What three things would you keep, that you found especially valuable in the program?**

Interview 7 – November of first-year of teaching

Introduction:

Now that you've been in the classroom for a few months we're going to ask you some questions that brings us up to date on your school setting and students, how you've settled into teaching, return to a few familiar themes in our research, and then ask just a bit about the future.

We'll start with some general questions about your school and schedule.

Let's start with a look at the school itself, your students, and the people you work with:

1. Tell me about your school...how would you describe it?

Probes:

- What kind of resources do they have? Or lack?
- What are the population demographics?
- Are parents involved in the school?
- What kind of goals does the school promote? Is there a mission statement? If so, do both faculty and students buy into it?
- Is there anything major that has happened at the school (AYP problems, new principal, new curriculum they have to use, construction)
- Is this a very different setting from your prac experience(s)?

2. Let's shift to your students for a bit. I'd like you to describe them to me. Can you start with some general demographics that describe the pupils in your class(es)?

Probes:

- Age, ethnicity, language backgrounds, SES
- SPED
- ELL
- Range of abilities across the group(s)
- Did you get some of this information from teachers who had these students previously? Did you have prior experience with any of these pupils?
- How would you describe classroom dynamics? Do you have difficulty with certain students or a particular class?
- What is the biggest challenge you have faced so far this year?

3. "At this point in the school year, are you able to identify goals for your students?"

Probes:

- What do you want them to learn? (consider academic, social, and emotional possibilities, here)

I'd like to return to a question that has been a theme throughout the interviews:

4. We talked about learning to teach for social justice many times last year. We are interested in the realities of how this plays out in practice.

Probes:

- Do you think about issues of social justice in your classroom?
- In your planning?
- Do feel that teaching for social justice is an explicit part of your classroom experience at the moment?
- How might this be particular to the context of your school? Classroom?
- How practical is the BC emphasis on social justice for a novice teacher?
- Has your view on teaching for social justice changed over the first few months of fulltime teaching? If so, how and why?

5. We've talked about this before, but now that you're fully responsible for classes, I'd like to have you think about it again: How do you know your pupils are learning? Be specific about the way you get this kind of information ...

Probe:

- Has this changed in anyway since your prac? If so, why?
- Has the inquiry played a role in how you look at your classes?

6. How about the other adults in the school. What kind of relationships have you been able to develop with school faculty & staff?

Probes:

- Principal, department head, fellow teachers
- Is there a lot of interaction among faculty?
- Do you have the opportunity to co-plan or co-teach?

7. Do you have an assigned mentor or participate in an induction program? If so, has this been a successful match?

Probes:

- Are there other people that might be seen as informal mentors or part of your network of support – including friends and family outside of school?
- Did you attend Summer Start? Why or Why not? Describe your experience. Was it valuable? How would you change the program?

Let's spend a few minutes talking about your immersion into fulltime teaching.

8. In general, how do you feel things have gone in the past few months?

9. What is your workload like?

Probes:

- What is your schedule? When do you get in to school? What time do you leave?
- For secondary – number of preps?
- For elementary – breaks?
- Additional school duties (ex: study hall, cafeteria duty, extra-curricular activities?)

10. Tell me about planning...when do you get to do this? How do you decide what to use? What to teach?

Probes:

- What resources do you have? Use? Where are they from?
- Are you focusing on day-to-day planning or do you have a long-term plan to work from?
- What strategies/resources have you utilized from your master's program?

11. How did you plan for this topic that you assessed here (look at the pupil work that the teacher brings to the interview)?

- Why did you choose to assess your students using this assignment?
- How would you change it if you were to do it again?

12. Do you see yourself as having a great deal of autonomy in your classroom?

(If teacher asks what you mean by 'autonomy' can say 'when some people talk about autonomy they refer to the role of standards, district mandated curriculum or exams, whether you feel you have a voice in deciding what is taught in your classroom')

Probes:

Why/why not?

In what area do you have most/least autonomy?

Who or what influences your decisions in the classroom?

Is MCAS a driving force in what you do?

Let's look at how well prepared you feel and what you attribute to the BC experience:

13. What did you feel prepared for? Not prepared for?

Probes:

- Is there anything that you feel BC did not prepare you for?
- Is there any one thing that you feel especially well prepared for by the BC program?
- Does your school provide support through PD for what you might not feel prepared for?
- Where might you turn for additional support/knowledge?
- Do you feel prepared to work with the population of students in your classroom? (ELL, SED, etc)

14. Is teaching what you expected it to be? Have your aspirations for a career in teaching changed?

- Do you think you'll teach next year?
- In this school? For how long?

15. Is there anything that we haven't touched on that you feel is especially important to include in this conversation?

Interview 8 – February-March of first year of teaching

NOTE: Teacher needs to bring three sets of pupil work: a full class set of a cumulative assignment and two examples of tasks that led up to it, all from same student. Teacher also needs to pick out one high, one medium, and one low example of pupil performance for the cumulative assignment. Finally, have the teacher bring any rubrics she or he used to score these assignments, as well as any assignment description that the TC gave to the pupils.

The purpose of this interview is to see what you are thinking about pupil learning and how it relates to your own instruction. First, I will ask you a series of general questions about the assignments you brought, then we'll get into the specific student examples you have selected as high, medium, and low. Finally, I'll ask you talk about your inquiry project.

1. First, last time you were struggling with ... (fill in here with something specific to your teacher; e.g. students not completing their homework; the discipline protocol at the school, etc.). How's it going now?

2. OK, let's take a look at the assignments you brought. As a way to walk me through this work, it might be helpful for you to start at the end with the cumulative project and work backwards. Or you might want to start with the first task and move chronologically to the end, the cumulative task.

Probe: How does it fit into a larger unit?

Probe: Was this something you devised yourself?

Probe: Was any part of this lesson from a preexisting lesson that you adapted?

Probe: Why did you decide this lesson/assignment/assessment would be appropriate?
How much autonomy did you have in creating the lesson or assignment?

3. What did you want students to get out of this activity? How do you know whether or not students accomplished what you wanted them to get out of this activity/lesson/unit?

Probe: How did you evaluate these assignments (rubric, scoring, etc.)?

4. Is there anything you would change about this lesson or assignment or unit? What? Why?

5. Let's now look at your examples of a high, a medium, and a low-level response? Why did you choose these three examples? Tell me about the students who did this work (ELL, Special Ed, anything else?).

Probe: How do these samples compare to the overall class? (Is this work representative of the class? Is this what you expected?)

General Pupil Learning Ideas

6. What do you do to address the range of abilities in your classroom?

7. You have already talked about how you looked for pupil learning in your cumulative assignment. How in general do you know if your pupils are learning? What counts as evidence for learning? (Connect to question two or it may sound repetitive)

Probe: Has this changed in anyway since your practicum? If so, why?

Probe: Has the inquiry project played a role in how you look at your classes/students?

8. What kind of grading or evaluating system do you use? Are you happy with it?

Probe: To what extent do you have autonomy in this? Are there school or department guidelines about grades?

9. What kind of pupil data does your school district use in developing curriculum & instruction that might impact your class?

Probe: This might include MCAS scores; other standardized test scores; testing coming from, or contributing to IEPs and 504s; Student Success Plans (these are required for students w/o IEP or 504 that don't meet standards on other tests); portfolio or exhibit projects, district benchmark/tests, other?

Probe: Do you have access to this data on an individual or aggregate level to make plans for your classes/pupils?

Probe: Would you be part of the data analysis?

Probe: Do you feel BC has prepared you to be able to use pupil data, both formal, informal, standardized and teacher-developed to make decisions in your classroom? Do you do this?

10. Of course, teachers are not just interested in their pupils' academic learning, they are also very interested in their social and emotional development. Do you see your students making progress socially and emotionally? Like what? (*Note: levels of confidence, enjoyment of learning, engagement in learning, independence in learning, cooperative group work, classroom behavior, interpersonal interactions*)

Probe: How do you know if pupils are making this kind of progress? What evidence do you look for to determine social and emotional growth?

11. What kind of expectations do you have for students? Are you able maintain these expectations when the pupils have a variety of learning styles and needs? If so, how? If not, why?

12. How do you help students develop language abilities? (ELL, SpEd, Writing, Reading)

Probe: Would you call your classroom language-rich? Why or why not?

Experience in Classroom/School

Now let's touch base on how the year is going, now that you are about half-way through it.

13. What kinds of changes, if any, have you made based on your experience in the first half of the year?

Probe: For example, grading, classroom management, differentiated instruction?

Probe: Are there disciplinary or management expectations school-wide? In your teaching team?

Probe: Do you find yourself using any techniques gained from BC? From your practicum?

14. How have you handled classroom management so far?

15. How is the larger school context/culture playing a role in your classroom?

Probe: What contact have you had with the Principal/Dean/Mentor/Coach/etc.? Are you satisfied with the amount and nature of your interactions?

Probe: Have you been observed and evaluated? By whom? What kind of feedback have you received?

Probe: What contact have you had with parents? What role do they play in the school?

16. Are you participating in mentoring/induction? If so, what kind? Is it helping you professionally or personally?

Probe: Are there other people who might be seen as informal mentors or part of your network of support – including friends and family outside of school?

Probe: Are you attending any programs sponsored by BC? Are they valuable? How would you change them?

17. Some people say the first year of teaching is the hardest and find it difficult to find balance. How has your “quality of life” as first year teacher been so far? (Do you have a life?)

18. Do you see yourself working at the same school/in the same job next year?

Probe: If not, ask why. What would it take for you to stay?

Probe: If yes, ask what it is that is keeping them in the position.

INTERVIEW 9 – COHORT 2 – End of first-year of teaching

This is our last interview, so it will include an overview of what you have learned, the influences that have been most significant, your thoughts on teaching, and your future plans. We will also talk about pupil work.

Remember to print out various charts, etc. before conducting the interview.

Pupil Learning

1. What's the most important thing you'd say you've learned about teaching reading/mathematics (for elementary)? _____ (specific subject for secondary) over the last year?

Probe: How/Where/From whom did you learn that? What was the biggest influence on your learning? Who or what played the biggest role?

Probe: What have you learned about teaching about literacy in the elementary school? Math?

Probe: Which content areas do you feel the most/least prepared to teach? How does this affect your teaching?

Probe: What's the most important thing you'd say you've learned about teaching diverse populations? (ELL, SPED, SES, etc.) – How/Where/From whom did you learn that?

2. OK, let's take a look at the assignments you brought. As a way to walk me through this work, it might be helpful for you to start at the end with the cumulative project and work backwards. Or you might want to start with the first task and move chronologically to the end, the cumulative task.

Probe: How does it fit into a larger unit?

Probe: Was this something you devised yourself?

Probe: Was any part of this lesson from a preexisting lesson that you adapted?

Probe: Why did you decide this lesson/assignment/assessment would be appropriate? How much autonomy did you have in creating the lesson or assignment?

3. What did you want students to get out of this activity? How do you know whether or not students accomplished what you wanted them to get out of this activity/lesson/unit?

Probe: How did you evaluate these assignments (rubric, scoring, etc.)?

4. Is there anything you would change about this lesson or assignment or unit? What? Why?

5. How do you feel your pupils did overall? Do you feel like they gained skills over the year? What? Were you satisfied/disappointed?

6. Let's now look at your examples of a high, a medium, and a low-level response. How do these samples compare to the overall class?

Probe: Is this work representative of the class? Is this what you expected?

7. Did the students who completed these examples meet your expectations? Why or why not?

Probe: What might you do differently in the future for each of these students?

8. Why did you choose these?

Probe: Tell me about these three students (SPED, ELL, Bilingual).

9. Our research group looked carefully at responses from last year's interviews that had to do with pupils' work and your assessments of their learning. We came up with graphic to try to explain what we found. The first box is supposed to represent teacher candidates' experiences during coursework, and the second what happened during student teaching. Overall we found that student teachers created great assessments that showed they had high expectations for pupils and focused on higher-order thinking. (refer to figure) We thought about this as "ownership" —student teachers actively changing strategies, questioning practices, and generally looking for better ways to improve learning in the classroom.

Does that sound to you like what was going on for you during student teaching? How about now, during your first year of teaching?

10. Another thing we found during the interviews when we asked teachers to talk about high-, medium-, and low-, pupil performance on the assessments, was that sometimes there was a kind of distancing. For example, if a pupil performed poorly on a test or a project, sometimes the student teacher attribute this to the pupil's lack of effort or his or her failure to pay attention and follow directions. This made us think a lot about how teachers make sense of it when pupils don't meet their expectations. Can you talk about this a little bit?

11. Do you think teachers should expect to meet the learning needs of every pupil in the class?

Social Justice

12. All through BC's teacher education program, there's been a lot of talk about social justice. We asked you about this in the first interview, as you might remember...As you are now completing your first year of teaching, what do you make of this idea of

Teaching for Social Justice? Is it important to you in your daily work? Do you consider yourself to be teaching for social justice?

13. Show them the 4 categories/28 codes for Social Justice (see end of interview for chart) and ask: We looked at all the responses of participants from the pre-service year and earlier this year about what it means to teach for social justice. Here is the way we grouped responses. What strikes you from this list? What's missing, if anything?

14. Some of the people who define TSJ say it's teaching that improves students' learning and enhances their life chances. They say that part of this is teachers trying to work with others to actively address inequities in the system. We didn't find much talk about activism or addressing inequities in our interviews. Any thoughts on this?

School Context/Teacher Roles

Now we're going to switch gears and talk about your school.

15. What opportunities has the school provided you in terms of what and how you teach?

Probe: Have you experienced any constraints? Are there things you've felt you couldn't do this year but wanted to?

Probe: In terms of what you brought with you from the BC program, are there things that were particularly helpful? Were there things that you didn't have an opportunity to implement?

16. What personal factors have made a difference in your teaching (background, education, personal experiences)? (i.e. knowing a second language having an impact on teaching ELLs)?

17. How would you describe the role you played in the school this year (e.g. with pupils, clubs, committees, with other faculty)? Do you see that changing next year?

18. What role have others in the school (colleagues, mentors, etc.) played in your life this year?

Inquiry

19. One of the goals at BC is to develop inquiry as stance – a way of thinking about and questioning what happens in your classroom, collecting data – through pupil work – and making decisions about practice based on that information. Can you give me an example of how you see this occurring in your classroom this year? Is this an important element of your practice?

20. Have you used the strategies you used in your BC inquiry project this year? Why? Why not?

Future Plans

Dependent on their plans for next year:

21. Why did you decide to stay at the school?

OR

Why did you decide to leave? What were you looking for in your new school?

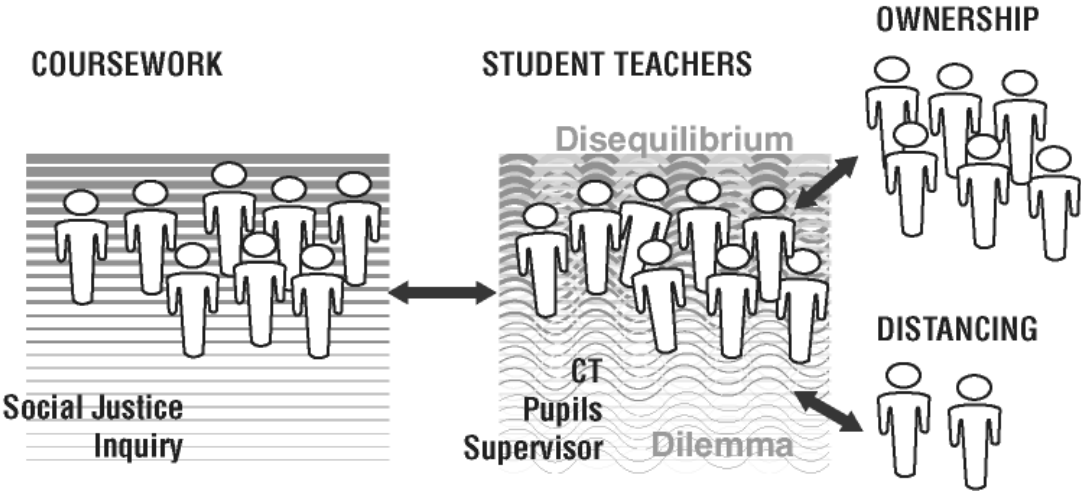
AND

What aspects of this first year of teaching encouraged you to stay (or leave)?

22. Do you have any specific goals for next year? Have you thought about what you might keep the same and what you might change in your teaching, your classroom, and in your role in the school?

23. Do you think about teaching as your career? What do you see yourself doing in the next five years? Ten years?

LYNCH SCHOOL OF EDUCATION



| Theme | Codes | Description (<i>Emphasizes...</i>) |
|----------------------------|---|--|
| Pupil Learning | 6 - Curriculum applicable | Teacher as making curriculum relevant and applicable to the pupils |
| | 9 - Accommodate/Differentiate | Idea of accommodating different learners and differentiating instruction |
| | 10 - Everybody learns | Teacher responsible for making sure pupils learn |
| | 11 - Promote engagement | Importance of engaging pupils |
| | 13 - Multiple viewpoints | Importance of exposing pupils to multiple viewpoints; encouraging them to consider other perspectives, and expanding ideas and opportunities |
| | 14 - Critical thinking | Critical thinking and deep questioning |
| | 18 - Prepare future | Preparing pupils for a successful future |
| | 19 - Basic skills | Importance of teaching basic skills |
| | 22 - Social/cultural contexts | Knowing and understanding pupils' social and cultural contexts |
| | 23 - High expectations | Holding pupils to high expectations and pushing kids to meet those goals |
| Relationships and Respect | 24 - Same expectations | Holding same expectations for all pupils |
| | 12 - Be Fair | Being fair to all pupils in the classroom; not showing favorites |
| | 20 - Relationships pupils | Building relationships with the pupils |
| | 21 - Parents | Respecting and working with parents |
| | 25 - Culture of respect | Promoting a culture of respect among pupils and between pupil and teacher |
| Teacher as Activist | 27 - Care | Knowing and caring for pupils |
| | 1 - Collaborations/Coalitions | Importance of participating in collaborations/coalitions to support pupils and improve schools |
| | 2 - Advocate for pupils | Role of the teacher in serving as an advocate for pupils |
| | 3 - Activism | Idea that the teacher should participate in activism |
| Recognizing Inequities | 4 - Community work | Role of the teacher in doing community work/volunteering or getting pupils engaged in such activities |
| | 5 - Change agent | Teacher as a change agent, making a difference in society |
| | 7 - Challenge canon | Challenging the canon or altering the standard curriculum |
| | 8 - Gender | The role gender plays in the classroom |
| | 15 - Class/race struggle in Curriculum | How teachers might highlight class/race struggle and social inequities as part of the curriculum |
| | 16 - Connections to oppression | Ways to connect curriculum to real world examples of oppression and exploitation |
| | 17 - Break down barriers | Breaking down racial or SES barriers for pupils |
| 26 - Challenge stereotypes | Challenging pupils' stereotypes or biases related to race, class, gender, or sexual orientation | |

INTERVIEW 10

Questions 1 and 2 only if it's a new school context:

A. Tell me about your school...how would you describe it?

Probes:

- What kind of resources do they have? Or lack?
- What are the population demographics?
- Are parents involved in the school?
- What kind of goals does the school promote? Is there a mission statement? If so, do both faculty and students buy into it?
- Is there anything major that has happened at the school (AYP problems, new principal, new curriculum they have to use, construction)?
- Is this a very different setting from your last teaching experience?

B. Let's shift to your students for a bit. I'd like you to describe them to me. Can you start with some general demographics that describe the pupils in your class(es)?

Probes:

- Age, ethnicity, language backgrounds, SES (*How does this compare to last year?*)
- SPED
- ELL
- Range of abilities across the group(s)
- Did you get some of this information from teachers who had these students previously? Did you have prior experience with any of these pupils?
- How would you describe classroom dynamics? Do you have difficulty with certain students or a particular class?
- What is the biggest challenge you have faced so far this year?

C. If the teacher is in the same school start with:

- *Is there anything major that has happened at the school (AYP problems, new principal, new curriculum they have to use, construction) since last June?*
- *Is there any significant difference in your teaching assignment this year?*

Then all interviews continue:

1. In general, how do you feel things have gone in the past few months? How are things in comparison to last year?

2. What kinds of changes, if any, have you made based on your experience in the first half of the year or from last year?

Probe: For example, grading, classroom management, differentiated instruction?

3. At this point in the school year, are you able to identify goals for your students?

Probes:

What do you want them to learn? (consider academic, social, and emotional possibilities, here)

4. How do you know your pupils are learning?

Probe:

- Has this changed in anyway since last year? If so, why?
- Has the inquiry played a role in how you look at your classes?

5. Of course, teachers are not just interested in their pupils' academic learning, they are also very interested in their social and emotional development. Do you see your students making progress socially and emotionally? Like what? (*Note: levels of confidence, enjoyment of learning, engagement in learning, independence in learning, cooperative group work, classroom behavior, interpersonal interactions*)

6. What is your workload like?

Probes:

- What is your schedule? When do you get in to school? What time do you leave?
- For secondary – number of preps?
- For elementary – breaks?
- Additional school duties (ex: study hall, cafeteria duty, extra-curricular activities?)

7. Tell me about planning...when do you get to do this? How do you decide what to use?

What to teach? How is it different from last year?

Probes:

- What resources do you have? Use? Where are they from?
- Are you focusing on day-to-day planning or do you have a long-term plan to work from?
- What strategies/resources have you utilized from your master's program?

8. Do you see yourself as having a great deal of autonomy in your classroom?

(If teacher asks what you mean by 'autonomy' can say 'when some people talk about autonomy they refer to the role of standards, district mandated curriculum or exams, whether you feel you have a voice in deciding what is taught in your classroom)

Probes:

Why/why not?

In what area do you have most/least autonomy? *Has this changed since last year?*

Who or what influences your decisions in the classroom?

Is MCAS a driving force in what you do?

9. What kind of relationships have you been able to develop with school faculty & staff?

Probes:

- Principal, department head, fellow teachers?
- Is there a lot of interaction among faculty?

- Do you have the opportunity to co-plan or co-teach?

Let's look at how well prepared you feel and what you attribute to the BC experience:

10. After over a year as a full-time teacher, what do you feel BC best prepared you for? In what ways do you feel least prepared?

Probes:

- Pedagogy? Content-knowledge?
- Does your school provide support through PD for what you might not feel prepared for?
- Where might you turn for additional support/knowledge?
- Do you feel prepared to work with the population of students in your classroom? (ELL, SED, etc)

Now, I'd like to return to some questions that have been themes throughout the interviews, namely—pupil learning, social justice, and inquiry:

11. We've talked about learning to teach for social justice during other interviews. As you know, we're interested in the realities of how teaching for social justice is playing out in practice.

Probes:

- Do you think about issues of social justice in your classroom?
- In your planning?
- Do feel that teaching for social justice is an explicit part of your classroom experience at the moment?
- How might this be particular to the context of your school? Classroom?
- How practical is the BC emphasis on social justice for a novice teacher?
- Has your view on teaching for social justice changed *over the last year*?

Looking at Pupil Work

OK, let's take a look at the assignments you brought. As a way to walk me through this work, it might be helpful for you to start at the end with the cumulative project and work backwards. Or you might want to start with the first task and move chronologically to the end, the cumulative task.

12. How do these assignments fit into a larger unit?

Probe:

- Was this something you devised yourself?
- Was any part of this lesson from a preexisting lesson that you adapted?
- Why did you decide this lesson/assignment/assessment would be appropriate? How much autonomy did you have in creating the lesson or assignment?

13. What did you want students to get out of this activity? How do you know whether or not students accomplished what you wanted them to get out of this activity/lesson/unit?

Probe:

- How did you evaluate these assignments (rubric, scoring, etc.)?

14. Is there anything you would change about this lesson or assignment or unit? What? Why?

15. Let's now look at your examples of a high, a medium, and a low-level response? Why did you choose these three examples? Tell me about the students who did this work (ELL, Special Ed, anything else?).

Probe:

- How do these samples compare to the overall class?
- Is this work representative of the class? Is this what you expected?

General Pupil Learning Ideas

16. Has your grading system changed from last year? If yes, describe how it has changed.

Ask this question if teachers is in new school context - What kind of grading or evaluating system do you use? Are you happy with it?

Probe:

- To what extent do you have autonomy in this? Are there school or department guidelines about grades?

17. Is your school doing anything differently with pupil data (MCAS, District exam scores) compared with last year?

Ask this question if teachers is in new school context - What kind of pupil data does your school district use in developing curriculum & instruction that might impact your class?

Probe:

- This might include MCAS scores; other standardized test scores; testing coming from, or contributing to IEPs and 504s; Student Success Plans (these are required for students w/o IEP or 504 that don't meet standards on other tests); portfolio or exhibit projects, district benchmark/tests, other?

18. Do you use data for classroom inquiry?

Probe:

- Has inquiry played a role in how you look at your classes/students or pupil data?
- Have you used the strategies you used in your BC inquiry project this year? Why? Why not?

19. Some people say the first year of teaching is the hardest and find it difficult to find balance. Would you say your "quality of life" has changed since the first year? (Do you have a life?)

20. Is there anything that we haven't touched on that you feel is especially important to include in this conversation?

INTERVIEW 11 (End of second year of teaching)

Introduction - This interview has some familiar pieces, and one new section. There will be three parts: first questions about “big picture” issues in teaching; second, a look at student work; and third we’d like you to show us how you feel you’ve changed as a teacher over the past few years. So, let’s begin with the questions.

PART I. Big Picture Questions

1. Now that you’ve been teaching for two years, what would you say are the key characteristics of a very good teacher?

Probe: In interview one you talked about teachers you admired and specifically mentioned.... (e.g. FOR LOLA, “YOU’RE A.P. BIO TEACHER WHO REALLY SHOWED HER PASSION FOR THE SUBJECT AND MADE THE STUDENTS IN HER CLASS REALLY LOVE IT TOO...)

Probe: Are these still qualities that you would say are important after being in the classroom as a teacher? If not, how and why have your ideas changed?

2. Massachusetts requires that novice teachers in public schools are provided mentoring/induction, but the reality is that that is very different from school to school. In your case, you’ve had... (e.g. FOR LOLA, LOTS OF SUPPORT IN YOUR FIRST YEAR AND VERY LITTLE MENTORING AND SUPPORT IN YOUR SECOND YEAR) How important has this been to you?

Probes: Was it an effective program of support?
 What elements were most helpful to you?
 Were outside factors (people/resources) more helpful?
 Any suggestions for change?

Probe: What ongoing support or professional development would be important to you in your third year in the classroom? At one time you talked about expanding your knowledge of... (e.g. FOR ELSIE, KNOWLEDGE OF AMERICAN LITERATURE)

3. CONTEXT– The school you’re in, the student population you teach, the larger community in which you work (that this happens in) – are often mentioned as important to learning to teach. Can you talk about how these different elements (in your context) influence your learning in the profession, and your students’ learning? In the past, for example you’ve mentioned

(Possible suggestions)

Impact of SES

Impact of nature of student population (bilingual pupils, SPED, etc.)

Impact of high-takes testing

Impact of administration

Impact of support

Impact of expectations

Impact of parents

Probe: What do you think is working in your school? Why?

Probe: What, in your opinion, is keeping the school from being a place that supports teacher and student growth?

4. Of course, as we've discussed, it is complex and sometimes challenging, but would you say at this point in your career you are teaching for social justice? If yes, in what ways? If not, in what ways not?

Probe: Early on you mentioned (e.g. FOR ELSIE, EXPOSING PUPILS TO DIFFERENT POINTS OF VIEW)...**and in later interviews you also mentioned...** (CARING FOR STUDENTS AND SHOWING THEM THAT YOU WERE INTERESTED IN THEIR LIVES OUTSIDE THE CLASSROOM), **some people might add ideas like improving academic learning, focusing on critical thinking, developing social and emotional learning, or enhancing students' life chances** (only list ideas that the teacher did not already talk about in past interviews)- **Do these ideas play a role in your teaching? If so, how? If not, why?**

5. You've been in the classroom for two years now, and it's clear that you know (the context of) your school. If you were in charge, what would you change?

Probes: Are there things you have already been working on? Are there things you think you might be able to work on in the future? What things do you think will be most difficult to change? Why?

(THESE ARE EXAMPLES OF THINGS THAT COULD BE ACTED ON IF THEY NEED A NUDGE – COULD SHOW THE LIST TO PROVIDE TOPICS CHOICES)

Expectations (for teachers and students)

Opportunities

Curriculum

Availability of resources

Tracking

Emphasis on certain outcomes

6. As you begin to think about next year, what are your big picture goals for your students?

Probe: What is it you want your students to know and be able to do in (math, ELA, history, science, etc.)

Probe: Is this different from last year, or the year before? (this also relates to whether they're teaching the same kids...)

Probe: Will you adjust practice to achieve these goals? How? Why?

7. Some, but of course not all, of the big challenges of learning to teach include successful classroom management, planning curriculum, developing pedagogy for teaching, meeting the needs of diverse learners, and assessment. Where do you see your strengths after two years? Are there areas that still need attention?

Probes:

How do you expect to grow as a teacher in the next few years?

How will you achieve these goals?

What, if any, of these factors have changed the most in the last few years?

How and Why?

8. In early interviews, a number of our participants talked about teaching as a career. There are great rewards in influencing lives, sharing content that you are passionate about...and there are real drawbacks – pay, relative lack of respect for the profession, limited or no opportunities for advancement. How do you feel about teaching as a career at this point? What do you see as your career trajectory at this point?

Probes:

Has this changed?

Do you plan to stay in teaching?

Are you more or less enthusiastic about teaching as a career choice than when you started?

Probe:

Do you plan to stay at this school next year? If not, where will you go? If yes, will it be the same position?

Probe:

Considering that teacher retention is such a big problem, from your experience, what do you think drives teachers from the profession?

Part II- TAPL – Teacher Assessment / Pupil Learning

9. OK, let's take a look at the assignment you brought. Although we only have one assignment, it would be helpful if you could walk me through the larger unit it draws from. You could work backwards and describe the larger unit or you might want to move chronologically through the unit and describe the pieces that led up to this final assessment.

Probe: How does it fit into a larger unit?

Probe: Was this something you devised yourself?

Probe: Was any part of this lesson from a preexisting lesson that you adapted?

Probe: Why did you decide this lesson/assignment/assessment would be appropriate? How much autonomy did you have in creating the lesson or assignment?

10. What did you want students to get out of this activity? How do you know whether or not students accomplished what you wanted them to get out of this activity/lesson/unit?

Probe: How did you evaluate these assignments (rubric, scoring, etc.)?

11. Let's now look at your examples of a high, a medium, and a low-level response. How do these samples compare to the overall class?

Probe: Is this work representative of the class? Is this what you expected?

12. Did the students who completed these examples meet your expectations? Why or why not?

Probe: What might you do differently in the future for each of these students?

13. Why did you choose these?

Probe: Tell me about these three students (SPED, ELL, Bilingual).

Part III. Teacher Development Chart

14. Now we are going to move to a different part of the interview that provides you with an opportunity to talk about how your view your development as a teacher.

So if you look at this chart and the horizontal axis represents time from prior to being in a teacher education program through the end of the second year of teaching and the vertical axis represents development as a teacher, how would you chart your own development in a general way?

Probe – If teacher asks ‘What does development mean?’ respond by turning it back to the individual ‘We want to understand how you would interpret development.’

Probe – If the first probe is not needed, ask the teacher to explaining their understanding of development after they've completed their line.

15. Okay now imagine we take your development and think about it in terms of 3 aspects: --

-

Content knowledge (Red)

Pedagogy & practice (Blue)

Understanding the role of the teacher (Green)

Would you have three different lines? If so, how would you draw them? (provide 3 different color markers (RED, BLUE, and GREEN) for drawing each line- be sure to reference the key on the blank development chart or the list above for the colors that correspond to the three aspects)

16. Describe your lines on each chart.

Probe: Why does the line drop here?

Probe: Why is there such a sharp increase in development at this point?

17. How would you project the continuation of your line in the future?

Probe: 5 years into teaching, 10, 25?

18. Can you talk about your development toward becoming the best teacher you can be?

Probe: What, or who, has helped you along the way? What circumstances might have held you back?

(Here we could specify based on knowing them, i.e. with Craig the going between two schools, with Lola the weak leadership at her latest school? Or, on the positive side, the strong support in the first school where she taught? I could ask her how much that support helped her in the first year and how she managed without it in the second year?)

Teacher Development Chart

General Development as a Teacher

| | | | | |
|---|--|------------------|----------------------------|----------------------------|
| | | | | |
| Before BC Teacher Ed Program | Teacher Ed coursework/ pre-prac | Full Prac | 1st Year | 2nd Year |

Teacher Development Chart

General Development as a Teacher

| | | | | |
|---|--|------------------|----------------------------|----------------------------|
| | | | | |
| Before BC Teacher Ed Program | Teacher Ed coursework/ pre-prac | Full Prac | 1st Year | 2nd Year |

Red = Content Knowledge; Blue = Pedagogy and Practice; Green = Understanding the Role of the Teacher



APPENDIX E

QUALITATIVE CASE STUDY OBSERVATION PROTOCOL

Observer: _____

Participant: _____

Date: _____

QCS Observation Protocol

| | | | | | | |
|---|--|------------------------|---|---|---|---|
| Teacher: _____ | | Time & Date: _____ | | | | |
| Observer: _____ | | Grade & Subject: _____ | | | | |
| Arrangement of Room: _____ Pupils have assigned seats _____ Seating appears to be random _____ Tables used, not desks Add Additional Notes Below: _____ Pupils work on walls Comments: _____ Visuals on walls Comments: | Diagram of Classroom: (t = teacher; a = aide; designate pupil by race/gender and assigned a number. AF1 = pupil [Asian, female 1] | | | | | |
| F = Female M = Male A = Asian B = Black H = Hispanic W = White O = Other | | A | B | H | W | O |
| | F | | | | | |
| | M | | | | | |
| | Total | | | | | |
| Classroom Climate: | | | | | | |
| Additional Pre-Lesson/Class Observations (including information about host teacher/classroom, if relevant) | | | | | | |

Contextual Information on School:

Name:

School Setting

| | | | | |
|----------|--|---------|--|----------------|
| Urban | | Public | | Enrollment: |
| Suburban | | Charter | | Male: |
| Private | | Pilot | | Female: |
| Catholic | | Magnet | | Grades Served: |

(200__ - 200__)

Race/Ethnicity

Selected Populations

Indicators

| | % of School | | % of School | | School |
|------------------|-------------|----------------------------|-------------|---------------------------|--------|
| African American | | First Language not English | | Grade 9-12 Drop-out | |
| Asian | | Limited English Proficient | | Attendance Rate | |
| Hispanic | | Low-income | | Average # of days absent | |
| Native American | | Special Education | | In-School Suspension Rate | |
| White | | | | Retention Rate | |
| Other | | | | Exclusions rate per 1000 | |

Teacher Data

School

Pupil Expenditures

School

| | | | |
|--|--|----------------------------|--|
| Total # of Teachers | | Regular Education | |
| % of Teachers Licensed in Teaching Assignment | | Special Education | |
| Total # of Teachers in Core Academic Areas | | Bilingual Education | |
| % of Core Academic Teachers Identified as Highly Qualified | | Occupational Day Education | |
| Student/Teacher Ratio | | All Day Programs | |
| Average Salary | | | |

| MCAS 200__ | % Advanced | % Proficient | % Needs Improvement | % Warning/Failing | Students Included |
|-------------------|------------|--------------|---------------------|-------------------|-------------------|
| Grade __ Reading | | | | | |
| Grade __ ELA | | | | | |
| Grade __ Math | | | | | |
| Grade __ Sci/Tech | | | | | |

| AYP 200__: | ELA Aggr | ELA Sub | Math Aggr | Math Sub |
|------------|----------|---------|-----------|----------|
| | | | | |

Condition of Classroom:

| | | | | |
|--|----------|--------------|----------|---------------|
| 1 = Inadequate Limits opportunities for learning | 2 = Poor | 3 = Adequate | 4 = Good | 5 = Excellent |
|--|----------|--------------|----------|---------------|

I. Resources

- a. Technology works 1 2 3 4 5
- b. Texts available 1 2 3 4 5
- c. Usable furnishings (desks and chairs) 1 2 3 4 5
- d. Erase/chalk boards 1 2 3 4 5
- e. Teaching materials 1 2 3 4 5

Overall Resource Rating 1 2 3 4 5

Final Condition of Classroom Rating: 1 2 3 4 5

II. Environment

- a. Cleanliness 1 2 3 4 5
- b. Climate (temperature) 1 2 3 4 5
- c. Lighting 1 2 3 4 5
- d. Adequate Space/storage 1 2 3 4 5
- e. Noise 1 2 3 4 5
- f. Postings 1 2 3 4 5

Overall Classroom Environment Rating 1 2 3 4 5

Summary Notes:

Condition of School:

| | | | | |
|--|----------|--------------|----------|---------------|
| 1 = Inadequate Limits opportunities for learning | 2 = Poor | 3 = Adequate | 4 = Good | 5 = Excellent |
|--|----------|--------------|----------|---------------|

I. Resources

- a. Library/Media Center 1 2 3 4 5
- b. Gymnasium 1 2 3 4 5
- c. Computer Center 1 2 3 4 5
- d. Auditorium 1 2 3 4 5
- e. Playground 1 2 3 4 5
- f. Cafeteria 1 2 3 4 5
- g. Bathrooms and Water fountains 1 2 3 4 5
- h. Teacher's Lounge 1 2 3 4 5

Overall Resource Rating 1 2 3 4 5

Final Condition of Classroom Rating: 1 2 3 4 5

II. Environment

- a. Building and Grounds 1 2 3 4 5
- b. Cleanliness 1 2 3 4 5
- c. Appropriate Wall Coverings 1 2 3 4 5
- d. Clear Directions Posted 1 2 3 4 5

Overall Classroom Environment Rating 1 2 3 4 5

Summary Notes:

| Chronology of Events | | | | |
|-----------------------------|------------------------|----------------|---------------------|------------------|
| Time | Activity/Format | Setting | Participants | Materials |
| | 1. | | | |
| | 2. | | | |
| | 3. | | | |
| | 4. | | | |
| | 5. | | | |
| | 6. | | | |
| | 7. | | | |

Observation Script

| |
|--|
| <p>Activity Field Notes (Fonts: standard for description; quote what is said; italicize commentary)</p> <p>Activity One:</p> <p>Time:</p> |
| <p>Activity Field Notes (Fonts: standard for description; quote what is said; italicize commentary)</p> <p>Activity Two:</p> <p>Time:</p> |
| <p>Activity Field Notes (Fonts: standard for description; quote what is said; italicize commentary)</p> <p>Activity Three:</p> <p>Time:</p> |
| <p>Activity Field Notes (Fonts: standard for description; quote what is said; italicize commentary)</p> <p>Activity Four:</p> <p>Time:</p> |
| <p>Activity Field Notes (Fonts: standard for description; quote what is said; italicize commentary)</p> <p>Activity Five:</p> <p>Time:</p> |
| <p>Activity Field Notes (Fonts: standard for description; quote what is said; italicize commentary)</p> <p>Activity Six:</p> <p>Time:</p> |
| <p>Activity Field Notes (Fonts: standard for description; quote what is said; italicize commentary)</p> <p>Activity Seven:</p> <p>Time:</p> |

TEACHING PRACTICES / PUPIL LEARNING / SOCIAL JUSTICE

Classroom Observation Protocol Directions

This observation protocol captures the teaching practices, pupil learning, and the pupils' exposure to issues of social justice that occur within the classroom and school contexts. Completion of the observation protocol form requires the researcher to compile her or his observation notes, categorize these data into a chronology of events, create a script for these events, and begin analysis by providing a general overview of the content of the lesson, pedagogical approaches and opportunities for learning provided by the teacher, pupil learning and assessment, social justice and classroom environment.

The Classroom (page 1):

At the beginning of each observation, the researcher records the details for the first page of this observation protocol. This page provides an overview of the pupils and context of the classroom. Included is an informal count of the pupils' gender and race. Other prompts on this page focus on the physical characteristics of the room, including the pupils' seating arrangement and the visuals on the walls (e.g., pupil work, educational materials). Researchers should also record the interactions between the teacher and pupils prior to the beginning of the observed lesson. These data provide an opportunity for the researcher to record her or his overall sense of the classroom's climate.

School Background (pages 2, 3, & 4):

Prior to the observation, the researcher completes the second, third, and fourth pages of the observation protocol. This information includes the quantitative data for the entire school and serves as the cover pages for all of the observations that take place at that school. Information for page two is obtained from the Massachusetts Department of Education's website and includes:

- the school's setting (e.g., suburban)
- pupil demographics
- percentage of pupils receiving special services
- school indicators (e.g., retention rate)
- teacher data (e.g., percentage who are licensed)
- pupil expenditures

Page three contains MCAS data for the school and a scale to rank the quality of the classroom's resources (e.g., technology) and environment (e.g., cleanliness). This page also offers the researcher an opportunity to provide a justification for these rankings. Page four includes a similar chance to rank the overall condition of the school, its resources (e.g., library/media center) and environment (e.g., building and grounds) and prompts the researcher to justify these rankings. Rankings may be completed with the participant to capture a more accurate rating.

Chronology of Events (page 5):

The scripted data are categorized into a chronology of events. The number of events will vary by observation (page 5 of the observation protocol). For an early elementary classroom observation, these events might include (but are not limited to):

- 1) teacher greets pupils before class
- 2) circle time (e.g., pupils sit together on a rug and the teacher reads them a book)
- 3) teacher models lesson
- 4) pupils complete worksheets
- 5) recess

The table includes the duration of time for each event, a title for the event, its setting, participants, and materials used (e.g., worksheets pupils were assigned).

Script of Events (page 6):

During the observation, researchers focus on the teaching, learning, and social justice events to guide their observation notes. Though there is not a tape recording of the observation, the researcher has captured, as much as possible, the activities and quotations from each event as well as her or his commentary about these events. The script of events should be written in dialogue format and double spaced.

In particular, researchers focus on **teaching practices** such as:

- content
- pedagogy, and
- expectations/objectives.

Pupil learning focuses on:

- academic learning,
- social learning, and
- emotional learning.

Finally, **social justice** includes:

- the classroom's environment,
- equity in learning,
- pupils' exposure to social justice, and
- inquiry as stance.

Annotated Observation Record (pages 7-8 or included as a separate document):

Please include the following header on the annotation if included as a separate document from the observation -

Researcher:

Participant:

Observation Date:

Observation Number (ex: **FP2** = full practicum obs 2 or **FY3**=first year teaching obs 3):

Rationale for selecting this observation for annotation

- This rationale is important because annotations will be completed for 3 of 4 observations completed during the full practicum and 3 of 4 completed during the first year of teaching. Thus, the rationale provides an opportunity for justification of the selection which might include researcher comments like “this observation provides the most behavior management difficulty during the full prac observations”).
- For the pre-prac observation and the one observation from the full prac and first year that are **not** selected for annotation include a one paragraph overview of the lesson with research insights.

The researcher begins the first round of preliminary analysis of these data. The Teaching, Learning, and Social Justice Guidelines (see pages 3-6) help the researcher identify what occurred during the observation. The researcher should take care to capture the *general tone* of the observation and include *evaluative remarks* by the researcher indicating *what stood out, what was consistent with or divergent from the teacher candidates' previous lessons*. There is no page limit to this document, but points only need to be made once under an indicator.

The categories the researcher uses for this analysis include: Content, Pedagogy, Teacher Pedagogy & Opportunities for Learning, Pupil Learning & Assessment, Social Justice, Relationships & Classroom Management.

- Under each category there are a number of indicators that should be highlight in **ALL-CAPS** to denote their absence or presence. If it is an absence please type “**ABSENCE**” next to the indicator.
 - If an indicator is highlighted it should be addressed in the notes and dialogue that follow. If selected for absence then address what is lacking in the observation.
 - Go with a general overview rather than addressing each indicator under each category when describing the observation. The more insights the better as you are the only one who can provide these!
- In the “Content” section, be sure to note whether the lesson plan appeared to be designed entirely by the teacher or if the lesson plan was part of a school mandated curriculum (i.e. TERC or OPEN CIRCLE etc). Then include a brief summary of what occurred in the lesson. No dialogue sections are to be included under the content category.
- Dialogue Excerpts - provide adequate context and/or lead-up to each dialogue excerpts. Excerpts from the observation should be enclosed in borders, written in dialogue format with each new speaker on a new line and single-spaced. Include enough in the boxes to get a sense of what is going on and whether it is helpful to go to script.
- Terms such as *always*, *once*, *never*, and *worst* may be beneficial for explaining a bit more about the observation.

Attributions

The observation protocol was developed drawing on the following resources:

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APPENDIX F

ANALYSIS #2: PAPERS AND PARTICIPANTS

| Paper ID | Participant | School Context | Question |
|------------------------------|-----------------------------|--|--|
| Score Range 60-69 | | | |
| 741 Vera | Asian-American Female | 2 nd grade Urban Public/Pilot | What strategies can I implement with my ELL struggling readers to improve their reading skills, as measured by the DRA? |
| 715 Caroline | White, Female | High School Urban, public | How does the implementation of different vocabulary strategies and graphic organizers affect my 9 th grade English Language Arts students' knowledge and understanding of new vocabulary words? |
| 729 Jared | African-American Male | 6th grade Urban, private Catholic | How will the use of focused journal writing affect the writing of my sixth (6th) grade students? |
| Score Range 70-79 | | | |
| 702 Diana | White, Female | 3rd grade Urban public | How will a student-generated word wall affect how students approach unknown words in text? |
| 707 Ellen | White, Female | High School Urban, private Catholic All male | How do oral dramatizations enhance student comprehension and engagement in a text? |
| 738 Sophie | Asian-American, Female | 1st grade Suburban, public | How does fluency practice at home help improve the reading skills of below grade level readers? |
| Score Range 80-89 | | | |
| 710 Susan | White, Female | 6th grade Advanced Work Classroom Urban, public | How does classroom based assessment impact students' qualitative learning experience, measurable test results and the teacher's experience of teaching mathematics at the sixth grade level? |
| 722 Mikayla | African-American, Female | 1st grade Urban, public | How can the strategic implementation of a class-wide Readers' Theater project affect first-graders' level of reading fluency as well as their attitudes and motivations toward reading? |
| 727 Peyton | White, Female | 1st grade Urban, public Special Needs | How does positive reinforcement impact the self-confidence and academic performance of one student with a specific learning disability in writing? |

| Paper ID | Participant | School Context | Targeted Learning Outcomes |
|----------------------------|---------------------------|---|---|
| Score Range Over 90 | | | |
| 717 Amelia | White, Female | 2nd grade Urban, private | Social justice through literacy What happens to my second grade students' understandings of social justice issues when I introduce such issues using a critical literacy approach? |
| 732 Raymond | White, Male | 6th grade Middle school Suburban, public | How do students perceive my classroom practice? How can their reflections inform my practice as a teacher and leader in the school? |
| 745 Xiaomiao | Asian-American, Female | Elementary Urban, private SSN day program (multi-district population) | How will the application of co-active movement strategies support Student J to learn to use a tangible object schedule? |

CONTENT ANALYSIS MATRIX

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| Participant: | | Grade Level: |
| Subject: | | Research Site: |
| Special Area: (Severe/Moderate Special Needs; Reading; ELL) | | |
| | | NOTES |
| 1. Question: | | |
| 2. Rational for Question | | |
| 3. Theoretical & Conceptual Frame | | |
| 4. Entering Characteristics | | |
| 5. Context | | |
| 6. Social Justice | | |
| 7. Intervention | | |
| 8. Content & Pedagogy | | |
| 9. Data Sources | | |

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| 10. Findings | | |
| 11. Pupil Learning | | |
| 12. Analysis | | |
| 13. Adjusting Practice | | |
| 14. Candidate Learning | | |

APPENDIX H
CONTENT ANALYSIS MATRIX

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| Participant: #722; Mikayla | | Grade Level: 1st grade |
| Subject: Literacy/Reader's Theater | | Research Site: Urban, inner-city public |
| Candidate Special Area: (Moderate/Severe Special Needs, Reading, ELL) NA | | Gender/Ethnicity: African-American female |
| | Selected Information and Quotes | Notes |
| 1. Question: | <i>How can the strategic implementation of a class-wide Readers' Theater project affect first-graders' level of reading fluency as well as their attitudes and motivations toward reading?</i> | |
| 2. Rational & Purpose | <p>Purpose: With this in mind I organized and implemented a readers' theater project that I hoped would act as a supplementary, exciting source of reading instruction. The program attempted to address several key points of reading including fluency, decoding, comprehension, critical thinking, text analysis and the identification of characters, plot and setting as well as emphasizing story sequencing. P. 11</p> <p>The goal of the rehearsal process was to guide each child into gaining proficiency in the reading of their role so that they able to read their passage with clarity, comprehension and expression: memorization was <i>not</i> an aspect of this process and the children performed with scripts in hand.</p> <p>The true goal of this intervention is to find a method that serves to enhance pupil learning through explicit, purposeful, hands-on reading activities. It is hoped that through the students' attainment of fluency and comprehension skills they will become, not simply competent, but avid and effective readers. P. 15</p> | <p>Question from practice – improvement of literacy skills; support from literature</p> <p>Knowledge of practice</p> |
| 3. Literature | The popularity of readers' theater is due to the results of research which indicates its positive effects on students' reading fluency, reading comprehension and connection to the material. There is evidence that the implementation of readers' theater can have a strong impact on communities of learners by furthering children's enthusiasm surrounding reading class, allowing opportunities for reluctant readers to be successful and by improving the confidence of lower-level readers (Binhart, 1999). P. 7 | <p>Well written, well resourced</p> <p>Uses research to support question in practice</p> |

Research shows that after completing methodical, and systematic readers' theater sessions, a large percentage of students exhibit an increase in reading rate and competency levels; many who were reading below grade level have risen to be at grade level, and those already performing at their benchmarks, move beyond (Caluris, 2005). An increase in reading fluency- i.e. expression, clarity, comprehension and intonation – is evident among many students as well (Martinez et al. 1999).

In addition to the affect on reading rate and fluency, a rise in comprehension has also been evident among classrooms engaging in readers' theater. According to Sherry DuPont (1995), “[T]here was a definite transfer of their comprehension skills into other reading activities” (p. 18). It is also stated that readers' theater encourages children to make predictions about text; a skill which is carried to literature outside of readers' theater activities (Martinez et al. 1999).

Another strong component in the research of readers' theater is how its implementation affects the confidence and motivation of its participants. It has been suggested that the students' awareness that they are going to have to perform a given piece provides an added level of motivation and determination among the students (Binhart 1999); it was also found in this same study that, “students who tried to avoid other reading activities didn't try to avoid Readers Theater” (p. 27). Martinez et al. (1999), goes on to say that “preparing a reading for an audience motivates students to practice through rereading and interpreting the text.” (p. 16). The study also shows that through readers' theater, students gain a greater understanding of the basic story elements; plot, character, main character, conflict etc. (Caluris, 2005).

Perhaps one of the most valuable findings regarding readers' theater is its effect on the confidence of readers. Because of the constant repetition and exploration of the text, students are given ample opportunity to become familiar with the words, content and vocabulary of the piece. This offers the unique opportunity for readers of different levels to work together effectively on the same material. Due to the extent of time spent on each theater piece the students are able to participate on a more level playing field, which has great effects on the confidence of lower level readers. Additionally, Binhart (1999) states that “Readers' Theater provides opportunities for less skilled readers to be on equal footing with better readers through practice and repetition” (p. 30).

The effect of readers' theater on children with special needs has also been a topic of study. It has been found that favorable gains can be made in the reading fluency and comprehension of children with diverse learning needs. In the Caluris (2005) study, it was found that drastic improvements had been made among the population of special education students who participated in readers' theater. Many children rose from reading below grade level to reading at grade level by the end of the 12 week session (pp. 26,28).

Additionally, DuPont (1995), found in her study that remedial reading students improved their comprehension skills and that these improvements were evident in readings beyond the theater text (p. 22). The students in this same study also achieved higher scores on reading sections of standardized tests after extensive practice and participation in readers' theater activities (p. 22). P. 8-10

Engagement and Motivation p. 11

Working Toward Equity and Social Justice p. 12

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| <p>4. Entering Characteristics</p> | <p>Black female, spent the vast majority of my school career in predominantly white, middle class schools in Los Angeles, California. My experiences in school, at times, left me with a feeling of alienation for the simple reason that I went to a school where no one – neither teachers nor students – resembled me at all. This fact left me relegated to being somewhat of an oddity within schools, and while I was an efficient, and rather successful, student, I always felt a certain level of distance and detachment to the institutions that I attended.</p> <p>My mother had sent me to the schools I attended in hopes of attaining a better education for her only child as well as a safer school environment. P. 6</p> <p>BA from UCLA in Theater Arts p. 7</p> | <p>African –American woman</p> <p>Alienated from white school community</p> |
| <p>5. Participants</p> | <p>1st grade students - full class High minority pop. 1st and 2nd generation immigrants and ESL; 10 of 24 children free or reduced lunch One IEP; 7 below literacy benchmarks Four groups of six students grouped by DIBELS scores Lowest students worked together</p> <p>Park Academy is an urban charter school in the greater Boston area. The school population is recorded as being 47% Black/African American (per the 2005-2006 annual report) and the majority of these students are either first, or second generation Americans whose parents come from various islands in the West Indies. Haiti is, by far, the most represented country, with much of the school population speaking Haitian Creole as their primary/home language. The remainder of the student body is comprised of students of Brazilian, African, Puerto Rican, Irish, Japanese, and Chinese descent. Though there are several languages represented within the student body, the students within our class are identified as English dominant and are not receiving services for being English Language Learners (ELLs).</p> <p>The class in which this intervention took place is a first grade, general education class comprised of 24 students ranging in age from six to eight; each of the ethnic groups mentioned above are represented. Ten of the twenty four students are eligible for free or reduced lunch. The reading tests conducted by literacy specialists at the inception of the school year reported that four students were reading well above grade level benchmarks, seven were below grade level and the remaining thirteen students were at the expected benchmark for first grade. Of the students that were reported to be reading below grade level, one of them is on an IEP for learning disabilities. P. 5</p> | <p>Diverse school</p> <p>IEP – 1 ESL Low SES</p> |
| <p>6. Social Justice</p> | <p>One of the strengths of this approach that I found appealing is the ways in which readers’ theater can serve to ‘level the playing field’ in reading instruction. Within the program, struggling readers, ELL students, and students with special needs can benefit by being able to have access to the same material for several periods of instruction and, thus, gain proficiency with the presented material. Students are given scripts and</p> | <p>Social justice connected to life chances through</p> |

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| | <p>individual roles which they practice over the span of several classes. All children are also given a second copy of their script that will remain at their homes. The home copies were attached to a letter which explained the project to the parents and provided ideas for how they could help their child get ready for this special event. During the rehearsal period we sought to give all students the support they needed to become an ‘expert’ at their particular role. By providing a student who often struggles reading the material of the class a specific piece that they are responsible for mastering, you create a scenario in which the confidence of the struggling reader can be boosted through their own achievements (Binhart 1999). Additionally, the knowledge that their work will be viewed by an audience may serve to add another factor that motivates the students to become more engaged with the text.</p> <p>The attempt to ‘level the reading playing field’ speaks to the theme of social justice in creating a space and opportunity for all children within this group of students to shine and be able to develop, and display their skills regardless of their current reading level or challenges they face with regard to reading. Through the ongoing repetition and practice of the text, as well as explicit one-on-one, and small group guidance from the two teachers in the room, this project offers a unique space for both student and adult collaboration. Potentially, the affects of the project can be both varied and beneficial. Aside from having positive affects on the reading fluency and comprehension of this group of first graders, it also provides ample opportunity for the students to gain experience in the effective execution of working in a collaborative group with their peers.</p> <p>As for my own learning, I hope to gain insight into the successful organization of such a project, as well as observe how creative methods of reading instruction can serve to enhance and improve my teaching of reading to diverse groups of students. P. 10-11</p> <p>My quest was to find a creative outlet for the children of my class that was both useful and productive academically, as well as potentially serving to boost self-esteem and confidence in the students of the class. While these attributes were not the only motivating factors in the choosing of this project, because of my personal past and memories, I feel an intense desire and responsibility to enhance the self-images of minority children of this country, and help create a school environment in which they feel as they, not only belong, but are successful, vital members of their communities and of society at large. P. 6-7</p> <p>Reader’s Theater also, in this case, proved to provide a realm in which lower-level readers and higher-level readers could participate equally and feel successful. The task of “leveling the playing field” (Binhart, 1999) was truly achieved in this process in a manner that was evident; not only to the teachers, but to the students themselves as they measured their success in their ability to read the words, perform their role, and incite laughter and applause from an audience. This speaks toward the quest of creating an academic and social environment which is, not only all-encompassing and accepting, but also one in which all students feel competent, successful and necessary to the completion of a worthwhile product. P. 26</p> | <p>education; level the playing field for pupils with special needs and ELLs.</p> <p>Connections noted at beginning and end of paper, reminders in several sections.</p> |
| <p>7. Intervention</p> | <p>The exploration of the above question was implemented in the following manner: the class explored a novel through read-aloud sessions and by keeping individual literature response journals regarding the</p> | <p>Targets: Literacy (Reader’s Theater)</p> |

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| | <p>story. P. 13</p> <p>I created four short, six-person scenes for the class to rehearse and ‘perform.’ The lines within these scenes were of varying difficulty levels to address the multiple needs of the students. The goal of the rehearsal process was to guide each child into gaining proficiency in the reading of their role so that they able to read their passage with clarity, comprehension and expression: memorization was <i>not</i> an aspect of this process and the children performed with scripts in hand. P. 14</p> <p>. At the conclusion of the rehearsal process - which consisted of sixteen, fifty minute sessions spanning seven weeks - the students performed their scenes in front of a small audience comprised of school faculty, literacy specialists and parents. P. 14</p> | <p>Fluency Participation Self-esteem Student motivation</p> |
| <p>8. Content & Pedagogy</p> | <p>The chosen novel for this project was Roald Dahl’s <i>James and the Giant Peach</i> (1961). I chose this piece both because of my personal affinity for the story, as well as the enthusiasm with which it has been received by students I have taught in the past. Another element that made this book adapt well to this project was the large number of very ‘actable’ characters that can be adopted by young students.</p> <p>To foster an advanced level of involvement in the story, as well as support high levels of comprehension regarding the text; the read-aloud sessions were supplemented by critical discussions surrounding the various events of the piece, exploration of selected vocabulary words and the creation of written predictions about the outcome of the story. In addition to promoting critical thinking about literature, implementing activities that boost students’ involvement with the presented story may allow them to connect to the characters and events in a more personal way, therefore making their attempt to act out scenes from the story more engaging and successful. P. 13-14</p> <p>Prior to this project they were <i>told</i> as opposed to <i>shown</i> how they should read. Prior to this intervention we – the teachers of the room – gave instruction such as, “<i>That sentence ends in with a question mark, how should we read it?</i>” During the span of this intervention, the students were repeatedly shown by teachers and their peers what reading a question sounds like, how to make sentences ending with exclamations sound exciting, etc. This instruction made the children consciously aware of what reading fluency encompassed and, during the assessments, when we instructed them to use their best reading, they now had a better understanding of what that entailed. P. 22</p> <p>Finally I realized that by making the children completely aware of the objectives of our Reader’s Theater project, they were able to produce better results. Once I began repeatedly informing them as to why we were endeavoring to read fluently, and that it effected everything that they read, they made the connection and improvements that, prior to this, I had taken for granted would naturally occur. P. 23</p> | <p>Use of Readers Theater well supported by literature Notes age appropriate text</p> |

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| 9. Data Sources | <ul style="list-style-type: none"> ➤ A reading survey was administered both before and after the intervention: the survey anonymously assessed students' opinions about how well they feel they can read, their enjoyment and motivations toward reading, level of enjoyment during the in-class reading periods as well as general opinions of the stories presented within the curriculum. ➤ All students kept ongoing literature response journals in which they were encouraged to write about any questions they have about the reading, keep track of story elements, produce drawings of their favorite characters, create predictions, record new vocabulary and write about their personal roles within their scenes. ➤ The results of the oral fluency reading tests administered in September and January with comparison to a similar test to be administered post-intervention will be used as a quantitative indicator of any changes to pupil reading behaviors, as well as a measurement of the amount of change from the school year's inception to January in which there was no Reader's Theater - nor any other supplementary reading activity - presented - in comparison to the amount of change during the time span of this intervention ➤ Ongoing anecdotal notes were taken with specific regard paid to student behaviors during reading class: changes in students' willingness to read aloud, level of engagement shown, changes in levels of critical thinking and comprehension. Notes were also kept regarding the various student attitudes and responses to the Reader's Theater process addressing engagement, enjoyment and evidence of student learning. In addition to the above notes, observations of the actual performance itself will be documented and analyzed for evidence of pupil learning, engagement and enjoyment. P. 16 | All sources noted as collected are in findings |
| 10. Findings | <p>Survey shows improved outlook on reading p. 17</p> <p>Oral Fluency reading test results</p> <p>The average difference in scores between the September assessment and the January assessment was 4 points.</p> <p>The average difference between January and April scores was 7 points.</p> <p>The aspects that showed the greatest amount of change were the areas of expression, intonation and proper attention paid to punctuation.</p> <p>Journal and notes</p> <p>Reports specific improvement in voicing character attributes, making predictions, record of vocab work. Good engagement reported; higher level questioning. Increase in volunteering to read aloud over period.</p> <p>Overall, I found this intervention to be rather successful in its goals with regard to reading fluency and reading motivation. Upon analyzing the results of the two reading surveys, the students indicated a much higher level of enjoyment during in-class reading sessions, were more willing and excited about reading aloud and indicated finding more enjoyment in what they read in school. I think that the primary reasons why this was occurred stemmed from the emergence of a new attitude about reading that began to exist</p> | Well organized, complete displays and well described |

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| | <p>within the class. Due to the implementation of pre-rehearsal mini-lessons geared toward explicit and modeled instruction in <i>how</i> to read fluently; i.e. the heeding of commas, periods, exclamation points and question marks as well as how to let the text itself guide the tone in which words are read – the reading periods became a rather very amusing ‘game’ to the students. p. 21</p> <p>Perhaps the most valuable piece of evidence is not in the raising of scores – for one could assume that the scores would rise throughout the year regardless of Reader’s Theater – but the <i>rate</i> of change between the periods with, and without this intervention. The students gained the highest growth of points in the areas of expression, intonation and the use of punctuation. I found the reasons for this to be that from January to April the children were given a real, hands-on experience that alerted them to what fluency <i>means</i>. Prior to this project they were <i>told</i> as opposed to <i>shown</i> how they should read. Prior to this intervention we – the teachers of the room – gave instruction such as, “<i>That sentence ends in with a question mark, how should we read it?</i>” During the span of this intervention, the students were repeatedly shown by teachers and their peers what reading a question sounds like, how to make sentences ending with exclamations sound exciting, etc. This instruction made the children consciously aware of what reading fluency encompassed and, during the assessments, when we instructed them to use their best reading, they now had a better understanding of what that entailed. P. 22</p> | |
| 11. Pupil Learning | <p>A fluent reader is capable of, not just decoding words, but also quickly interpreting material while utilizing proper phrasing and intonation. P. 3</p> <p>As with many classrooms, the emphases during reading instruction were on decoding strategies and basic comprehension, but the art of extracting and <i>displaying</i> meaning while reading seemed to be regarded as a skill that some children simply ‘had’ and some did not. P. 4</p> <p>That passion and faith in the art of drama has served as part of the impetus of this project. My quest was to find a creative outlet for the children of my class that was both useful and productive academically, as well as potentially serving to boost self-esteem and confidence in the students of the class. While these attributes were not the only motivating factors in the choosing of this project, because of my personal past and memories, I feel an intense desire and responsibility to enhance the self-images of minority children of this country, and help create a school environment in which they feel as they, not only belong, but are successful, vital members of their communities and of society at large. P. 6-7</p> <p>To foster an advanced level of involvement in the story, as well as support high levels of comprehension regarding the text; the read-aloud sessions were supplemented by critical discussions surrounding the various events of the piece, exploration of selected vocabulary words and the creation of written predictions about the outcome of the story. In addition to promoting critical thinking about literature, implementing activities that boost students’ involvement with the presented story may allow them to connect to the</p> | Academic, social and emotional learning valued |

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| | <p>characters and events in a more personal way, therefore making their attempt to act out scenes from the story more engaging and successful. P. 13</p> <p>In addition to the acquisition of fluency, I also hoped to find a reading activity that would inspire more interest and motivation among the readers in our class. It has been observed by me and the other members of my grade level team that the students, as a whole, appear to have little interest in the stories that are read during our reading periods and there is limited engagement in the reading materials provided. One of the primary concerns that is addressed in our grade level meetings is the effect that the current lack of reading motivation may have on the students’ opinions about reading. P. 4</p> <p style="padding-left: 40px;">The threat of a less-than-stimulating reading program is one that seems to have a large impact on the attitudes surrounding reading that are held by our students. P. 10</p> <p>The effect of readers’ theater on children with special needs has also been a topic of study. It has been found that favorable gains can be made in the reading fluency and comprehension of children with diverse learning needs. P. 8-9</p> <p>One of the drawbacks of this system is that the stories are exceptionally basic as they are designed strictly for sake of developing the students’ decoding abilities. The stories often do not provide students with the opportunity to explore key elements such as plot, character, conflict, etc; nor do they afford many rich opportunities for students to think critically about the text. In addition to the nuts-and-bolts style of reading instruction provided in the textbooks, the Project Read system is also utilized as a means of assisting children in learning and retaining long sound relationships. It has been shown that direct phonics instruction is very effective and the students – as a whole – have an incredibly strong knowledge of phonemes and are able to recognize and manipulate them. P. 9-10</p> <p>Another challenge that I struggled with was the level to which the one child in the class on an IEP was able to participate. This student had a role that was manageable for her, and she participated fully in the rehearsal process, yet she participated by memorization of what her lines and cues were. She did this wonderfully and provided a performance that was expressive and enthusiastic, but I fear that, since she was unable to read the text, the objectives of this project were different for her, and I found no way of organically adhering them to the objectives created for rest of the class. P. 24</p> | |
| <p>12. Analysis</p> | <p>Table of Responses Pre-Post p., 17</p> <p><i>Oral Reading Assessment Results DIBELS, p. 18</i></p> <p><i>Literature Journals and Anecdotal Notes p. 20; appendices</i></p> | <p>Balance of quantitative and qualitative presentation.</p> |

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| | <p>The student questions that were recorded show many instances of higher-level thinking, particularly during the later chapters of the book. For example, during the final chapter a child asked “<i>Are the people [of New York] afraid of James and his friends because the peach is so big, or because the bugs look so different from regular people?</i>” another question asked was “<i>Will the magic wear off? If James and his friends get normal, will James get sad all over again?</i>” p. 20</p> <p>. Upon analyzing the results of the two reading surveys, the students indicated a much higher level of enjoyment during in-class reading sessions, were more willing and excited about reading aloud and indicated finding more enjoyment in what they read in school. I think that the primary reasons why this was occurred stemmed from the emergence of a new attitude about reading that began to exist within the class. Due to the implementation of pre-rehearsal mini-lessons geared toward explicit and modeled instruction in <i>how</i> to read fluently; i.e. the heeding of commas, periods, exclamation points and question marks as well as how to let the text itself guide the tone in which words are read – the reading periods became a rather very amusing ‘game’ to the students. During the reading periods in which the basals were used I explicitly told the students to utilize our new class mantra, “<i>Read it like you mean it!</i>” Students were charged with the task of making everything that they read aloud follow this rule, and were often told by their peers to reread sections of the text if the reading didn’t seem exciting or accurate - at times, the students were far more stringent judges in their assessment of fluent reading than I; I somehow unearthed a room of 24 emerging drama critics, though I was pleased that the criticism usually was dispensed respectfully and encouragingly. This new level of engagement brought a more defined sense of purpose to the reading periods and a discovery of the potential theatricality in all text presented in class. This level of enjoyment was reflected in the administered reading surveys.</p> <p>Perhaps the most heartening development with regard to student engagement and involvement was the effect that this task had on the lower-scoring students of the class. Many of our lower readers appeared to take great joy in this project; they participated fully during rehearsals, they were quick to ask for help on words they didn’t know and they excitedly informed me of how much they had practiced at home. Interestingly, the three students who are recorded as having the lowest reading scores, ended up giving three of the most entertaining, expressive performances in the class. Perhaps one of my struggling readers stated this phenomena most effectively when he asked me, “<i>Miss Mills, am I one of the best readers in the class now?</i>” I was thrilled to be able honestly inform him that he was. P. 21</p> | |
| 13. Adjusting Practice | <p>At the conclusion of the novel, the students were separated into four groups consisting of six students each. The groups were determined by student reading level as recorded at the inception of the school year as well as by <u>D</u>ynamic <u>I</u>ndicators of <u>B</u>asic <u>E</u>arly <u>L</u>iteracy (DIBELS) scores. At the advice of the senior teacher with whom I work, one group was comprised of those students whose DIBELS scores were the lowest in an effort to concentrate the students most in need of reading assistance within one scene so that added attention can be easily administered to those who require it. P. 14</p> | <p>Lowest students grouped; Monitor during rehearsal noted. See Part for note on child with Sig</p> |

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| <p>14. Candidate Learning</p> | <p>As for my own learning, I hope to gain insight into the successful organization of such a project, as well as observe how creative methods of reading instruction can serve to enhance and improve my teaching of reading to diverse groups of students. p. 12</p> <p>. Finally I realized that by making the children completely aware of the objectives of our Reader's Theater project, they were able to produce better results. Once I began repeatedly informing them as to why we were endeavoring to read fluently, and that it affected everything that they read, they made the connection and improvements that, prior to this, I had taken for granted would naturally occur. Another aspect that may have helped their reading assessment scores was simply the fact that they were given practice in the art of oral reading, which is not a skill in which they had received explicit instruction prior to this intervention. P. 23</p> <p>An unexpected lesson that was illuminated in this project was the importance of making students explicitly and consistently aware of the objectives and tasks they are expected to accomplish. There was a clear level of improvement within the class once I explicitly, and constantly, reminded them of why they were embarking on this journey, and how it was relevant to their future reading success. This lesson in teaching will prove important in all subjects and classes that I teach. Perhaps the highest example of this concept is the fact that we – as educators-in-training – are constantly told to have clear objectives, communicate them to the students and give students a practical reason for learning; while I had ingested all of these points as <i>concepts</i> they did not branch into becoming <i>practices</i> until I embarked upon this project and wished to see greater results. P. 25</p> | <p>special needs</p> <p>Reflective candidate</p> |
| <p>4. Limitations</p> | <p>Within this project I did find very large challenges with reference to time. Toward the end of the process I found it to be impossible to work through all four scenes during one fifty-minute period. I would typically get through two and then be forced to work with the remaining scenes during the next period or the next day....</p> <p>Another challenge that I struggled with was the level to which the one child in the class on an IEP was able to participate. This student had a role that was manageable for her, and she participated fully in the rehearsal process, yet she participated by memorization of what her lines and cues were. She did this wonderfully and provided a performance that was expressive and enthusiastic, but I fear that, since she was unable to read the text, the objectives of this project were different for her, and I found no way of organically adhering them to the objectives created for rest of the class. P. 2</p> | <p><i>Reports full autonomy in directing this intervention</i></p> <p>Accommodations for Student w/Spec Needs</p> |

