EXAMINING A FRAMEWORK OF DIALOGUE E-MAILS AND INQUIRY INTO PRACTICE TO SCAFFOLD REFLECTIVE PRACTICE IN PRESERVICE TEACHERS DURING THEIR EARLY FIELD EXPERIENCE

by

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Susan L. Lloyd

ABSTRACT

This qualitative study focused on the development of reflective practice with preservice teachers through a framework during an early field experience. The framework provided an explicit structure for the preservice teachers to investigate four focus areas (teacher’s role, active learning, culture, and assessment). The preservice teachers explored a focus area, dialogued via e-mail with a peer, and then discussed their findings in small groups.

The preservice teachers were given a pre and post survey that queried them about their beliefs related to the four focus areas and the concept of reflection. Content analysis of the explanatory statements on the survey, dialogue e-mails and written reflections after small group discussions, and focus group interviews guided a systematic examination of the data. The dialogue e-mails and written reflections were also analyzed using a rubric for reflective levels.

The survey results indicated that while a substantial number of preservice teachers maintained the same belief after experiencing the framework of inquiry into practice, an equal or greater number of preservice teachers changed. These preservice teachers became more student-focused as the semester progressed. They also became increasingly
self-critical of their own teaching practices which led them to alternative approaches.
Consequently, these preservice teachers were able to articulate their beliefs in the context of teaching.

The structure of the framework provided opportunities for the preservice teachers to rehearse reflective practice; thus teacher educators have an explicit methodological model for developing reflective practitioners. Moreover, the preservice teachers indicated that the framework increased self-monitoring which facilitated analysis of their teaching. The preservice teachers documented flexibility in reference to instruction to meet the needs of their students. Finally, this study indicates that beliefs may be more fluid than originally thought, but restructuring reflective assignments in preservice teacher programs to include an authentic audience is an important component of developing reflective practice. Additionally, restructuring teacher education to include opportunities in which preservice teachers investigate specific focus areas linked to course requirements may be an additional path to bridge the gap that preservice teachers believe exists between the university and school realities.
CHAPTER I: INTRODUCTION TO THE STUDY

Introduction

There is a growing recognition in teacher education that gaining insight into preservice teachers’ pre-existing assumptions about teaching (core beliefs) is the beginning step in guiding them toward a better understanding of teaching practices. After more than 20 years of research focused on the issue of preservice teachers’ development in learning to teach, the data suggest they bring with them experiences, knowledge, dispositions, beliefs, attitudes, and perceptions, all of which greatly influence their development (Johnston, 1992; Lortie, 1975; Minor, Onwuegbuzie & Witcher; 2002; Whitbeck, 2000; Zeichner & Liston, 1987). This “operative schema at any given time governs what is accepted as evidence for or against new information…. who we are, and what we learn depends on what we learned at earlier stages of our lives” (Gould, 2000, p. 92).

For example, Tabachnick and Zeichner (1985) examined the development of preservice teachers’ perspectives and found that student teaching did not significantly alter their views about teaching. The preservice teachers became more skillful in articulating and implementing their core beliefs, but their initial beliefs remained intact. Meanwhile, Doyle (1997) found that preservice teachers, who at the beginning of their field experiences held the core belief that learning is a passive act, later changed their core beliefs about the way students learn, concluding that learning is an active process facilitated by teachers. Two important influences affected the change in beliefs: the
experience of being in the field, and the teachers’ abilities to reflect and analyze the experience. These contradicting results exemplify the common threads in both studies; the starting point that governed what was accepted as new evidence began with the pre-existing assumptions (core beliefs) of the preservice teachers. The challenge before teacher educators appears to be how to access “these beliefs [that] act as a gatekeeper to change throughout the teacher education program” (Joram & Gabriele, 1998, p. 177).

Preservice teachers may not be cognizant of their core beliefs related to teaching because their understanding of teaching is bound by their experiences as students (Kagan, 1992; Lortie, 1975; Pajares, 1992; Proefriedt, 1994; Whitbeck, 2000). The apprenticeship of teaching, or learning the profession from the vantage point of a student, leaves the preservice teacher with the impression that learning to teach does not involve the complex preparation of some professions. What preservice teachers learn through the apprenticeship is based on individual experiences which form their core beliefs held about teaching, rather than pedagogical principles (Lortie, 1975). Additionally, the “apprenticeship of observation is not likely to instill a sense of the problematics of teaching--that students, because of the limits of their vantage point and empathetic capacity, will see it simplistically” (Lortie, 1975, p. 65). Often the beliefs acquired through years of being a student are so ingrained that the preservice teachers simply fall into doing what has always been done (Schoonmaker, 2002; Whitbeck, 2000). Impacting preservice teachers requires a different tack, because the mind of the education student is not a blank slate.

If the goal of education is, as Freire (1998) says, “not to transfer knowledge but to create possibilities for the production or construction of knowledge” (p. 30), then
preservice teachers’ knowledge is not the issue, but rather the flexibility to generate comprehensive ways to help students. Recognizing the complexity of professional responsibilities in teaching children with different skill sets, cultures, and needs is critical to understanding teaching (Gould, 2000). However, preservice teachers’ beliefs about their own abilities as teachers are often “unrealistically optimistic” (Weinstein, 1989), and by and large they hold strong beliefs that learning to teach can only be accomplished through experience (Johnston, 1994; Richardson, 1996). Pajares (1992) concluded that beliefs about teaching are well established by the time a student reaches college, and that changes in beliefs during adulthood are quite uncommon. When changes do take place, they occur as a result of a conversion from one authority to another or a gestalt shift.

Professors will not find it easy to develop consensual standards of practice, and in such circumstances instruction can easily move to a superficial level of discourse. Unless students in training can experience at least some sense of professional collegiality—some sharing of technical problems and alternative solutions—they will be ill-prepared for such efforts when they work alongside one another. (Lortie, 1975, p. 66)

Teachers’ knowledge proved fluid and sensitive when the experiences were designed to frame the experience and reconstruct prior beliefs (Schon, 1987). In other words, this reconstruction of core beliefs is not likely to happen without the structural impetus to do so. Interestingly, Jones and Vesilind (1996) found that interaction with pupils in schools and dialogue with others proved to be the most powerful catalyst for the examination of core beliefs. In order to understand and develop flexible educational practices that meet the needs of students, preservice teachers need to examine their own
beliefs (Jones & Vesilind; Zeichner & Liston, 1996). Unfortunately, the practical pressure of the preservice teaching experience appears to limit the ability and inclination of preservice teachers to do anything other than survive (Johnston, 1994; Kagan, 1992). Identifying this inclination to merely survive the practicum experience have resulted in numerous calls for an examination and a subsequent negotiation of an effective teaching role (Kagan; Lortie, 1975; Pajares, 1992; Richardson, 1996; Wideen, Mayer-Smith, & Moon, 1998). In addition, The National Standards of Excellence in Teacher Preparation (2003, Standard 1 section, ¶ 13) [NCATE] includes in the evaluation criteria of teacher education programs an emphasis on reflective practice. Criteria such as, “they [preservice teachers] are able to reflect on and continually evaluate the effects of choices,” and “they [preservice teachers] make necessary adjustments to enhance students’ learning” call for teacher education preparation to facilitate thoughtful practice rather than mere survival of the practicum experience.

Reflective educators view their practices through the lens of their beliefs (Cruickshank, 1985; Schon, 1987). On any given day, teachers are faced with an array of demands, expectations, and possibilities and, often, environmental factors impact decisions and subsequent reflection (Kitchner, 1983). Inviting preservice teachers into the community of practice entails “learning that transforms who we are and what we can do, it is an experience of identity … not just an accumulation of skills and information, but a process of becoming” (Wenger, 1998, p. 215). When preservice teachers collaborate in a reflective atmosphere, their core beliefs are shaped and redefined, as new knowledge of effective teaching emerges (Cochran-Smith, 2004; Hillocks, 1995; Schoonmaker, 2002; Zeichner & Liston, 1996). The National Board for Professional Teaching Standards
(1987), Teachers think systematically about their practice and learn from experience section, ¶ 3) [NBPTS] in a core proposition that articulated the aim of reflecting in a learning community stated, “striving to strengthen their teaching, accomplished teachers critically examine their practice, seek to expand their repertoire, deepen their knowledge, sharpen their judgment and adapt their teaching to new findings, ideas and theories … by working collaboratively with other professionals.”

Likewise, reflective practice is developed when preservice teachers identify their own philosophy of teaching, investigate teaching in collaborative environments, recognize the problematic nature of teaching, demonstrate sensitivity to diverse backgrounds, monitor program implementation, and build a repertoire of skills (Hatton & Smith, 1995). One of the cornerstones of teacher professionalism as described by the NBPTS (1987) is the development of thoughtful reflection. Thinking about experiences involves a cycle of thought and action exploring values, attitudes, thoughts and experiences:

The reflective teacher recognizes that a central source of his or her teaching practice is his or her practical theories, but is also sensitive to the way in which the contexts in which he or she works influence his or her actions. Reflective teaching entails a recognition, examination, and rumination over the implications [of] one’s beliefs, experiences, attitudes, knowledge, and values as well as the opportunities and constraints provided by the social conditions in which the teacher works. (Zeichner & Liston, 1996, p. 33)
The process of reflection begins when preservice teachers experience a difficulty or a troublesome event. The difficulty or troublesome event often hinges on the experience of surprise and is not immediately resolved. The “surprise” is the unexpected results noticed during a lesson (Ayers, 1993; Schon, 1987; Zeichner & Liston, 1996). For example, the surprise manifests itself in the furrowed brow of a student, or in the results of a quiz in which the majority of students fail. When teachers get the expected results from teaching a lesson, they tend not to think about it, but when “intuitive performance leads to surprises, pleasing, promising or unwanted, [teachers] may respond by engaging in a conversation” referencing the situation in which they use various tools and strategies to solve a problem (Schon, 1983, p. 56). As the conversation takes place, whether within the teacher or with other professionals, the interaction is both a product of a person’s thinking and that which shapes the thinking (Dewey, 1933; Schon, 1987).

Reflection on core beliefs is key to developing the strategies needed to meet the needs of students and to cultivate reflective practitioners who recognize the impact of their beliefs on teaching. Teacher educators have realized that exposing students to useful theories is not enough; rather moving preservice teachers to question, adopt, personalize, and reflect becomes essential in developing the university course of study (Cochran-Smith, 1991a; Good & Whang, 2002; Holt-Reynolds, 1992). The importance of reflection is based upon the notion that the initial beliefs held by a preservice teacher affect his/her growing knowledge of effective teaching practices.

Although reflection sometimes occurs while alone with one’s thoughts, it can also be enhanced by communication and dialogue with others. Researchers suggest that when students are asked to reflect in writing about their experiences, the opportunity to think
about and document their reactions to teaching experiences results in reconstructing values and assumptions, an essential element in understanding teaching and becoming a reflective practitioner (Black, Siloe, & Prater, 2000; Zeichner, 2002; Zeichner & Liston, 1996).

The thinking of Vygotsky (1978), Bahktin (1986), Clay (1975), and McCarthey (1994) acknowledges the need for writing to be socially and culturally situated and realizes that talk is an essential component of composing text, no matter the age of the student. Vygotsky’s defined learning development, the zone of proximal development, is “the distance between the actual development as determined by independent problem-solving and the level of potential development as determined through problem-solving under adult guidance or in collaboration with more capable peers” (p. 86), which indicates that learning of functional human activities occurs first through the learner’s cooperative participation in accomplishing tasks with a more experienced partner. Through dialogue, teachers are able to learn from each other and construct new knowledge.

After examining 93 studies on learning to teach, Wideen, Mayer-Smith, and Moon’s (1998) review supports Kagan’s (1992) findings that many traditional programs of teacher education have little effect on the firmly held beliefs of preservice teachers. However, Wideen et al. also found examples of successful programs that typically were built on the beliefs of preservice teachers and featured systematic and consistent long-term support. These successful programs held that intervening factors promise results that indicate these core beliefs may not be as fixed and stable as previously thought. These factors are a program of longer duration, an approach more consistent with constructivist
thinking, a careful examination of prior beliefs before implementation, and an approach that guides preservice teachers to access their beliefs and then challenges those beliefs.

Research Questions

This study was designed to investigate a framework for the development of preservice teachers during their early internship experience. The framework for the design includes combining dialogue e-mails in which the preservice teachers inquire into specific areas of classroom practice with inquiry group discussions as a scaffold for preservice teachers to engage in reflective practice. The purpose of this study is to describe changes in the core beliefs of preservice teachers as a result of participating in the inquiry process. Specifically, the guiding research questions are the following:

1. After the implementation of a framework of inquiry based on reflective dialogue in a field experience seminar, do preservice teachers' core beliefs change? If so, how?

2. How does the framework of inquiry into practice with preservice teachers effect growth in reflective behaviors?

Statement of the Problem

Zeichner (1996) called for teacher educators to “move beyond the uncritical celebration of teacher reflection and teacher empowerment, and focus our attention on what kind of reflection teachers are engaged in, what it is teachers are reflecting about, and how they are going about it” (p. 207). If learning from teaching means that teachers generate knowledge from their practice by integrating theory and experience together through reflection and critical analysis (Cochran-Smith, 2004; Schon, 1983), then teacher
educators need approaches or methods that access the preservice teachers’ beliefs, and provide opportunity for dialogue and debate by challenging those beliefs in practice.

Even though Kagan (1992) found that there were few systematic efforts to encourage novices to make their personal beliefs and images explicit in teacher education, there is an encouraging trend in recent years toward teacher education programs that build on the beliefs of preservice teachers and feature systematic and consistent long term support (Wideen et al., 1998). Fenstermacher (1994) in his review of issues concerning teachers’ knowledge concluded, “The critical objective of teacher knowledge research is not for the researchers to know what teachers know, but for teachers to know what they know” (p. 50), implying that a critical component in developing preservice teachers is accessing their pre-existing beliefs about teaching.

Strategies are sought that make it possible for preservice teachers to confront their own notions of teaching and learning as a beginning step in learning how to teach. Classroom experiences such as research assignments that allow novices to stand back temporarily from their personal beliefs appear to be crucial in developing reflective practice in preservice teachers (Benson, 1998; Bray, 2002; Carroll, 2000). The novice’s growing knowledge of pupils must be used to “challenge, mitigate, and reconstruct prior beliefs and images” (Kagan, 1992, p. 142). The preservice teacher’s self image as a teacher may be closely related to his or her self image as a learner, and this knowledge of self, classrooms, and pupils appears to evolve in tandem with experience. Effective teaching remains rooted in the reflective nature of learning and teaching (Johnston, 1994; Kagan, 1992). Because preservice teachers tend to grow more authoritarian with practicum experience (Brindley & Emminger, 2000), and become increasingly focused
on classroom control rather than the students’ learning, facilitating a reflective stance promises to help preservice teachers move beyond their inward focus (Cochran-Smith, & Lytle, 1999; Schwartz, 2001).

In order to move beyond that inward focus, researchers (Vygotsky, 1978; Bahktin, 1986; Clay, 1975) agree that the construction of new knowledge is socially and culturally situated, and that talk is an essential component of the process. In other words, reflective thinking among prospective teachers requires a supportive environment which in turn motivates, encourages, and sustains growth. This necessary environment has the potential to scaffold preservice teachers into a community of inquiry in which they are confronting core beliefs, having opportunities to talk, and interrogating their practice.

Significance of the Study

After examining the research on learning to teach, we find that the interplay between inquiry-based reflection and discourse appears to be a critical part of reconstructing understandings in order to meet the diverse needs of students. Researchers agree that preservice teachers’ core beliefs about teaching and learning affect what they know and how they experience the knowing (Gould, 2000; Johnston, 1992; Lortie, 1975; Minor, Onwuegbuzie & Witcher; 2002; Whitebeck, 2000). Furthermore, change is not considered until there is a sustained period of critical thinking and self-inquiry (Ayers, 1993; Lortie, 1975; Rogers, 2002). Teacher education research endorses the concept that core beliefs change only when challenged with experiences (Wideen et al., 1998). However, few studies have determined the beliefs of preservice teachers before assigning inquiry projects, consistently included a discourse component into assignments, or linked the talk component to inquiries into practice. This study seeks to further understand
preservice teachers’ ability to negotiate becoming inquirers into their own practice by investigating their core beliefs through a practicum experience coupled with an ongoing dialogue with a peer.

Preservice teachers need an atmosphere conducive of reflective discourse (Brindley & Emminger, 2000) in order to interpret the classroom experience. Johnston (1992) asserted that the foremost task of the teacher educator should be exploring the practical knowledge of preservice teachers. She insisted that the starting point must involve preservice teachers’ understanding of teaching as they see it rather than the training for specific skill and knowledge outcomes. Good and Whang (2003) found that through a response journal preservice teachers were able to grasp educational theories and grapple with issues and new concepts. Cochran-Smith (1991a) reported on the effectiveness of inviting preservice teachers to reflective discourse by redefining the role of preservice teachers to “construct their own emerging theories of teaching and learning, call into question conventional practices, write about their work, and participate with their experienced mentors as inquiring professionals” (p. 305). This relationship described by Cochran-Smith promotes the thoughtful examination of the beliefs of both the mentor and the preservice teacher as they articulate questions rather than imitate the instructional style of the mentor. Sanchez and Nichols (2003) agreed that examining assumptions and questioning goals and values are at the core of reflective practice, and the notion of being thrown off balance by the results of a lesson (Ciardiello, 2003) begins the reflective process.

The intent of this study is to invite the preservice teacher into the community of practice in which “learning transforms who we are and what we can do, it is an
experience of identity…not just an accumulation of skills and information, but a process of becoming” (Wenger, 1998, p. 215), and to investigate a framework that would scaffold their understanding of inquiry, resulting in reflection and changed core beliefs. Through inquiry-based conversations built upon the beliefs of preservice teachers and their mentor teachers, this study examines the process of reflection as the catalyst for reform of teaching practices. Cochran-Smith (1991b) suggested that through the mutual construction of the experiences in a relationship of collegiality or an atmosphere conducive to reflective discourse, the university supervisor must spend time assisting each preservice teacher in devising differing teaching strategies most appropriate for him or her. By collaborating in reflective inquiry, the very beliefs that are foundational to preservice teacher’s understandings are shaped and redefined as new knowledge of effective teaching emerges. Hatton and Smith (1995) stated that reflective practitioners are formed when preservice teachers develop their own philosophy of teaching, investigate teaching in collaborative environments, recognize the problematic nature of teaching, demonstrate sensitivity to diverse backgrounds, monitor program implementation, and build a repertoire of skills. This study will add to the body of research on the reflective behaviors of preservice teachers, and will provide continuing attention to the phenomenon of reflection that has been absent in recent years.

Inviting preservice teachers into the professional community of reflective educators has the possibility of guiding them toward the strategies needed during their beginning years of teaching. Lave and Wenger (2003) suggest that this community of practice includes three dimensions: mutual engagement, joint enterprise, and shared repertoire. Through inquiry-based assignments challenging the core beliefs of preservice
teachers, documented in dialogue journals and group interaction, this study fulfills these three dimensions of a community of practice. This study also facilitates an attitude of shared power among preservice teacher, mentor teacher, and university supervisor, and encourages inquiry of practice in the practicum classrooms. Mutual engagement creates relationships between people due to participation in practice, and through negotiation of a joint enterprise, the results can create mutual accountability. Teacher educators’ understanding of how beliefs change through an inquiry into practice using dialogue and group interactions could be a roadmap for guiding future teachers. As future educational leaders open to multiple perspectives, these preservice teachers’ ability to make decisions based on multiple sources of information will be enhanced. In this study, structuring inquiry-based reflection around the existing beliefs of preservice teachers invites them into a professional stance of constant growth and readiness for meeting the needs of diverse learners.

Limitations of the Study

The following list is provided to acknowledge and clarify the limitations of this study that may affect the generalizability of the findings. These limitations are also addressed in the researcher perspective section of chapter III.

1. Participation in the study was limited to only one section of preservice teachers, thereby limiting the diversity of perspectives included in the data.

2. Participation in the study occurred over one semester, limiting the amount of time for change to occur.
3. The researcher is a participant observer, and, as a result, the facilitator of the seminar discussions may emphasize specific topics (this limitation is addressed later in describing the researcher role in chapter 3.).

4. The participants enrolled in the internship will be evaluated by the researcher, and the data collected are assignments required for completion of the course, which may result in participants “saying what the professor wants to hear” in their dialogue entries.

5. Due to the preponderance of females in the Elementary Education programs, males are inadequately represented in the study.

Assumptions of the Study

The following list serves to clarify the premises under which the study was conducted.

1. Reality is defined as the multiple perspectives of the participants as they view their experiences.

2. Power relations that are socially and historically framed are at work within the framework of the study.

3. The researcher, in the process of survey administration, does nothing to bias the results of the evaluation procedure.

4. Although the assignments contributed to a completion grade, the participants are not unduly pressured to please the professor in their responses.

5. The collegial relationship built throughout the semester between the researcher and the participants as co-investigators into practice is a critical component to an accurate understanding of the participants’ understandings, because “when a writer can assume a knowledge base shared with an audience, much can be left
unsaid that would have to be made explicit for a less knowledgable audience” (Hillocks, 1995, p. 82).

6. The 15-line minimum requirement for the dialogue entries provides sufficient length of text to prompt reflective thoughts about teaching practices.

7. The topics assigned for inquiry reflected dissonance in historical data collected in the pilot study, and the dissonance serves as a springboard for increased thought, debate, and discussion during inquiry group meetings.

8. The structure of the interview protocol emerging from the dialogue e-mails allows the researcher to go beyond the external behavior and explore feelings and thoughts (Patton, 2002).

9. The additional use of a rubric that identifies levels of reflection to analyze the data measures the effect of the opportunity structure as described in the study.

Definition of Terms

The following is a list of terms used throughout this study:

*Apprenticeship of observation*: Knowledge about teaching practices gained from the experiences of being a student (Lortie, 1975).

*Core beliefs*: Pre-existing assumptions about students, learning, the material to be taught, and the organization of the class. These assumptions comprise the foundational understandings of teaching--conscious or subconscious--demonstrated by what a person says or does.

*Inquiry into practice*: Constructing emerging theories of teaching and learning by calling into question conventional practices. In this way, teachers generate knowledge from their
practice, integrating theory and experience together through reflection and critical analysis.

*Dialogue e-mail:* Articulating a written conversation with a peer through e-mail.

*Reflective practice:* Involves a cycle of thought and action in order to explore values, attitudes, thoughts, and experiences related to the classroom experience (Dewey, 1933; Schon, 1987; Van Manen, 1977).

*Community of practice:* A community with three dimensions: mutual engagement, joint enterprise, and shared repertoire. Through an attitude of shared power and with the negotiation of a joint enterprise, solving the problems that occur in the classroom (Cochran-Smith, 1991b).

*Scaffold:* The supporting structure (framework) that facilitates a shift or transfer from actual development as determined by independent problem solving to the level of potential development as determined through problem solving in collaboration with peers (Vygotsky, 1978).

**Chapter Summary**

This introduction has established that after 20 years of research focused on the issue of how preservice candidates learn to teach, the data suggest that preservice teachers bring with them experiences, knowledge, dispositions, beliefs, attitudes and perceptions, all of which greatly influence their development (Johnston, 1992; Lortie, 1975; Minor, Onwuegbuzie & Witcher; 2002; Whitebeck, 2000). With the increasing pressure to graduate preservice teachers with the flexibility to meet the diverse needs of today’s classrooms, it has become increasingly important for teacher educators to
consider methods that will scaffold learning experiences to give preservice teachers opportunities to examine and challenge their core beliefs.

If the goal of education is, as Paulo Freire (1998) says, “not to transfer knowledge but to create possibilities for the production or construction of knowledge” (p. 30), then preservice teachers’ knowledge is not the ultimate aim of teacher education. Rather, the key is developing preservice teachers with the flexibility to generate comprehensive ways to help students. Based on the thinking of Vygotsky (1978), Bahktin (1986), Clay (1975), and McCarthey (1994), educators acknowledge the need for writing to be socially and culturally situated, and realize that “talk” is an essential component of composing text, no matter the age of the student. In the same manner, after researching the effect of dialogue journals (Garmon, 2001), preservice teachers self-reported that one of the greatest benefits to dialogue journals was that they “promoted self-reflection and self-understanding” (p. 41). The goal of this study is to bridge the preservice teachers’ understanding of inquiry into practice through reflective dialogue e-mails with peers and to add to the body of knowledge about preservice teachers as reflective practitioners.
CHAPTER II: REVIEW OF LITERATURE

Introduction

To situate the practice and impact of inquiry as a tool currently used in many teacher education programs, this chapter is divided into four sections. The first section is a theoretical overview of the concept of inquiry into practice and reflection. Included in the concept of inquiry into practice is the connection to core beliefs, components, reflective theory, community of inquiry, and barriers to inquiry implementation. The second section discusses dialogue journals, an often overlooked yet critical component of inquiry (Ayers, 1993; Lortie, 1975; Olsen, 2000), as a bridge from inquiry to reflective practice. The third section discusses recent history of inquiry into practice with preservice teachers and summarizes current trends and directions that research in inquiry has taken in the last decade. The final section summarizes the fields of inquiry into practice and dialogue journaling, and then links some of the apparent gaps in the research to highlight the need for further study.

Inquiry

*Inquiry into Practice*

The neglect of teacher education as a continuing enterprise in the United States resulted, by the end of the 20th century, in the rise of non-education policy makers as arbitrators for the current direction of teacher preparation (Kohn, 2000; Goodlad, 2002; Zeichner, 2002). One consequence of this new role for policy makers in determining teacher education direction has been an unfortunate “hardening of the lines of educational
inquiry” (Goodlad, 2002, p. 216) by limiting the emphasis to specificity of standards as reflected in standardized tests. Supporters of standardized testing provide long lists of facts for students to learn as proof of competence, a practice that equates academic rigor with narrowness (Cochran-Smith, 2001; Kohn, 2000). This narrowness, however, ignores the need to address real dilemmas in the classroom (Lortie, 1975), which plague current educational efforts. These educational efforts include the shift of focus from an outside specialist as the problem solver to teacher expertise (Risko, Osterman, & Schussler, 2002), the change from mastery of teaching technique to reflection (Boyd, Boll, Brawner, & Villaume, 1998), and the ability to meet the unique needs of diverse students.

Kagan’s (1992) summary of research on teacher growth observed that in the 1960s and 1970s, researchers documented attempts to encourage growth in teachers through workshops and training programs. Kagan noted this changed in the 1980s and 1990s to an emphasis on naturalistic inquiries focused on the beliefs, behaviors, and mental processes of teachers. Wideen, Mayer-Smith, and Moon (1998) expanded on Kagan’s (1992) summary and examined 93 studies that evaluated teacher education programs that built on the beliefs of preservice teachers and other programs that featured systematic and consistent long-term support. The shift to naturalistic inquiry guided by teacher beliefs expanded upon Lortie’s (1975) findings that identified the concept of the “apprenticeship of observation.” This concept posits that many teaching behaviors developed by the student are a result of many years of observing the act of teaching. As a result of the “apprenticeship,” preservice teachers believe they already know what teaching is about before entering the classroom in the teacher’s role (Pajares, 1992; Richardson, 1996).
This “apprenticeship of observation” promotes early levels of high confidence in preservice teachers, which, when coupled with actual apprenticeships in the classroom, force the beginning of the process of socialization and identification with teachers (Lortie, 1975, p. 65). The socialization and increased identification with experienced teachers cause preservice teachers to accept continuity rather than initiate change. In other words, after years spent as a student in the classroom, the apprentice is more comfortable doing what has always been done (Gitlin, Barlow, Burbank, Kauchak & Stevens, 1999; Reiff, 2002).

Unfortunately, the apprenticeship does not necessarily prepare the preservice teacher for the craft of teaching. The rapid identification with teachers reinforces the belief that experience is the best practice to emulate, rather than stimulating an approach that questions the effectiveness of a lesson on students’ learning. The preservice teachers’ first foray into the classroom is typically an eye-opening experience, but the apprenticeship tends to encourage their reliance on past experiences instead of focusing on the experiences as points of entry for understanding teaching methods. As preservice teachers rely on experience as a guide to teaching, Risko, Roskos, and Vukelick (1999) found that they focused on the factual and technical aspects of the lesson, a tendency that resulted in shallow and egocentric reflections. The current emphasis on the observation of a lesson as a stepping-stone from practice to directed reflection and from action research to improved practice substantiates that teacher educators value reflection as a key component in the practice of inquiry (Bush, 2003; Cochran-Smith, 1991b, 1999; Kincheloe, 1991; Middleton, 2000; Williams, 1992).

20
Inquiry Begins with Beliefs

Research focused on how preservice candidates learn to teach indicates that they bring to the practicum a myriad of experiences, knowledge, dispositions, beliefs, attitudes and perceptions, all of which greatly influence their development as teachers (Gould, 2000; Minor, Onwuegbuzie & Witcher, 2002; Pajares, 1992; Zeichner & Liston, 1996). In fact, preservice teachers’ operative schema is sufficiently powerful to actually determine and govern their interpretation of new information. Further, their core beliefs regarding the craft of teaching are dependent upon what they had learned and experienced during earlier stages of their lives.

These core beliefs about the craft of teaching garnered through an apprenticeship of observation prepare the preservice teacher with more on-the-job training hours than any other profession. However, Lortie (1975) pointed out that the “apprenticeship of observation is not likely to instill a sense of the problematics of teaching—that students, because of the limits of their vantage point and empathetic capacity, will see it [teaching] simplistically” (p. 65). Not only is their view of teaching simplistic, Lortie’s study prompted later research that identified additional factors as major influences on preservice teachers’ core beliefs (about teaching) during their practicum experience.

These additional factors include the following: Most mentor teachers rank practice above courses in education for usefulness (Ayers, 1993; Kohn, 2000); preservice teachers work only with one teacher (Stanilus & Jeffers, 1995); preservice teachers experience a limited view of teaching techniques (Damnjanovic, 1999); there is no assurance that mentor teachers will explain to preservice teachers rationales for decisions made (Stanilus & Jeffers); preservice teachers are not invited to compare, analyze, or
select from diverse possibilities (Gitlin et al., 1999); no evidence exists to suggest that
there is any movement away from traditionalism and individualism (Goodlad, 2002); and
preservice teachers frequently resolve situations prior to asking for assistance (Lortie,
1975).

Because beliefs are ingrained from an early age, preservice teachers must undergo
focused training experiences in order to challenge their core beliefs effectively and offset
their tendency to accept individualistic traditional experiences as truth (Brindley &
suggestion that “for professional growth to occur, prior beliefs and images must be
modified and reconstructed” (p. 142). Teachers’ beliefs, experiences, attitudes,
knowledge, and values are factors that are relevant to their teaching practice. To
understand and direct their educational practices, teachers need to investigate these
foundational understandings (Bray, 2002; Conle, 1996; Wilhelm, Cowart, & Hume,
1996; Windschilt, 2002; Wideen et al.). Examining one’s own beliefs, within the context
of the classroom, is the essence of the reflective teacher who is able to reframe
assumptions and evaluate belief structures (Cochran-Smith & Lytle, 1999; Hillocks,
1995; Sanchez & Nichols, 1995; Schon, 1983).

If core beliefs are the “best indicators of the decisions that individuals make
throughout their lives” (Pajares, 1992, p. 307), then the teacher’s beliefs, experiences,
attitudes, knowledge, and values are critical because they influence specific actions on his
or her work (Bray, 2002; Jackson & Wasson, 2003; Jones & Vesilind, 1996; Sleeter,
reorganizes or reconstructs the experience, then the reflective process has begun (Dewey,
Kagan’s (1992) review found no systematic effort to encourage novices to make “their personal beliefs and images explicit, to study pupils, to compare ongoing experiences and pre-existing images, to construct standardized routines, or to reconstruct the image of self as teacher” (p. 150). Yet, in later research, Meier (1995) found that “when the preservice teachers feel angry, confused, [or] frustrated; these are signs that their own beliefs … are being challenged” (p. 112). Kagan found that the “personal beliefs and images (of preservice teachers) generally remain unchanged by a preservice program” (p. 142), but later researchers concluded that preservice teachers’ core beliefs were more fluid than originally thought (Jones & Vesilind; Kelly, 2001; Reiff, 2002; Sanchez & Nichols, 2003; Steele, 1994). The teacher educator’s challenge in facilitating a reconstruction of the preservice teachers’ beliefs prompted Cochran-Smith (1991b, 2003) to call for the linkage of field-based school experiences to university experiences through mutually constructed learning communities. This approach recognizes that neither the classroom nor university experiences alone are sufficient to prepare the preservice teacher for reflective work.

Components of Inquiry

Reflection and inquiry are often defined together. Both require a systematic approach, and the process of implementing an inquiry stance mirrors Dewey’s (1933) four criteria for reflection. Dewey’s criteria include reflection as a meaning-making process based on the connections with one experience resulting in a deeper understanding; reflection as a systematic, rigorous, and disciplined thinking process based on scientific inquiry; reflection as a social construct experienced with others in community; and reflection that values the intellectual and personal growth of others.
These criteria are distinctly different from reactive, haphazard thinking over a classroom occurrence. Instead, reflective thought consists of “definite units that are linked together so that there is sustained movement to a common end” (Dewey, 1933, p. 5). The process of reflection or inquiry moves the learner from a disturbing state of perplexity (disequilibrium) to a harmonious state of settledness (equilibrium) (Dewey, 1933). The “yearning for balance in turn drives the learner to do something to resolve it—namely, to start the process of reflection [inquiry]” (p. 850).

Inquiry must be seen from a questioning, open-minded position rather than a judgmental position (Conle, 1996). For example, using an open-minded approach, Meier (1995) responded to preservice teachers’ stories with invitations for more questions and anchored inquiry in the following five habits of mind:

- Evidence: How do we know what we know?
- Point of view: Whose perspective does this represent?
- Connections: How is this related to that?
- Supposition: How might things have been otherwise?
- Relevance: Why is this important? Who cares?

Guided by a structure in which the preservice teacher chooses an issue of interest to investigate, then gathers and interprets data, Meier (1995) found that sharing in groups prompted an examination of long held assumptions about teaching practice. Thus, the process of inquiry includes the practice of reflection. The National Board of Professional Teaching Standards’ (1987) fourth proposition of accomplished teaching states, “Teachers must be able to think systematically about their practice and learn from experience” (p. 8).
Teachers must be able to examine their practice critically, seek the advice of others, and draw on educational research to deepen their knowledge, sharpen their judgment, and adapt their teaching to new findings and ideas (Cochran-Smith, 1999; 2003). This concept is quite different than a project or an activity in teacher education and requires that the preservice teacher poses questions on the basis of his or her everyday work and then explores these questions in a systematic way. Through this method, the preservice teacher begins incorporating theory into the daily practice of teaching (Bianchini & Colburn, 2000). In summary, the components of inquiry include teachers’ ability to think systematically about their practice, critically examine their practice, reflect on questions, and adapt teaching to new findings and ideas (Cochran-Smith, 2004; Kagan, 1992; Schon, 1987; Van Manen, 1990; Zeichner & Liston, 1987).

Reflection Theory

**Distinctions in reflection.** Much of the literature concerning teacher education over the past decade has been dominated by a celebration of teacher reflection and teacher empowerment. Zeichner (1996), however, called for teacher educators to focus attention on the kind of reflection teachers are engaging in and what teachers are reflecting about, as well as the kind of reflection that requires thinking. Researchers distinguish between reflective action and routine (technical) reflection (Dewey, 1933; Schon, 1983; Zeichner & Liston, 1996). Reflective action, characterized by active, persistent, and careful consideration of any belief or practice, requires a holistic approach to solving problems. Reflective action involves questioning both goals and values that are used to guide practice and also involves examining assumptions in the context of
teaching (Sanchez & Nichols, 2003). When using reflective action, preservice teachers think about how to frame and solve the problem at hand.

Much reflection-in-action hinges on the experience of surprise. When intuitive, spontaneous performance yields nothing more than the results expected for it, then we tend not to think about it. But when intuitive performance leads to surprises, pleasing and promising or unwanted, we may respond by reflecting-in-action (Schon, 1983, p. 56).

Schon described surprise as a key stimulant to generating an inner conversation with the situation. The surprise, even in solitude, is the initiator of speech with one’s self that is necessary for reflection. Through the inner conversation new strategies are discussed and debated that result in reframing the situation (Bahktin, 1986; Schon, 1983). Researchers agree that noticing a bump in the road of a lesson (Chandler-Olcott, 2002), being thrown off balance (Ciardiello, 2003), being dissatisfied with a result (Posner, 1996), or experiencing “cognitive conflict” (Steele, 1994, p. 31) are all variations of the “surprise” that causes preservice teachers to confront their preconceptions and motivates them to extend their thinking.

The act of accessing alternative strategies allows the teacher to talk back to the inquirer (often themselves), which prompts a transaction with the situation. In this way, the conversation shapes thinking and is both the action and product of reflective thought. Perkins (1992) illustrated the value of reflective action, observing that “studies have demonstrated that we memorize best when we analyze what we are learning, find patterns in it and relate it to knowledge we already have” (p. 8). This reflective action invites the
teacher to consider student needs and alternative, yet appropriate, ways to address each learner.

The second type of reflection researchers describe is routine action (also referred to as technical action), a process in which teachers are guided by impulse or tradition and authority (Schon, 1983; Lortie, 1975; Dewey, 1933). Routine action locates the problem entirely in the students, wherein the teacher accepts the problem as a given and the focus is on changing student behavior. In routine action, the preservice teacher is only a conduit for implementing a program. LaBoskey (1994) built upon the reflective levels (discussed further in this chapter) and expanded upon these distinctions in reflection by delineating specific characteristics. For example, LaBoskey correlated routine action with the “common sense thinker,” listing accompanying characteristics that included, “self-orientation, short-term view, teacher as transmitter, knowing much from having been a student, broad generalizations and existing structures taken as given” (p. 29).

Reflective levels. Over the past 15 years, reflection has suffered from a loss of meaning (Rogers, 2002), because a single definition of reflection is missing from contemporary literature (Laboskey, 1994), and the professional literature is “thick on describing researchers’ goals and intentions but thin on providing guidance for teaching students how to reflect” (Risko et al. 2002, p. 135). Influenced by Dewey’s (1933) notion of a systematic, rigorous way of thinking and Schon’s (1987) belief that studying one’s own teaching dilemmas can produce well reasoned action, researchers describe reflection as active and purposeful. According to Dewey, individuals must proceed through three steps of reflection: problem definition, means-ends analysis, and generalization. The model overemphasizes the procedures of logical thinking, and
although they help researchers focus attention on aspects of the general process, not all of these steps are necessary to each act of reflection (LaBoskey, 1994).

Building on Dewey’s (1933) steps, Cruickshank (1985) developed arguments supporting reflective teacher education. Cruickshank’s instructional techniques loosely used Dewey’s work by proposing a process of laboratory practice where preservice teachers used reflective teaching defined in a very structured, step-by-step process. In the reflective teaching scenario, teachers conduct exercises that mandate a particular method and are then followed by debriefings in small group discussions. The reflection is on an artificial situation using specific instructional forms. Gore (1987) contended that Cruickshank’s approach restricted the process to a question of means instead of “actively encouraging students to question existing practices, to consider why something is taught or the possible long-term effects of a particular classroom action or decision” (p. 36).

In an effort to dissect the steps of implementing an inquiry, Drennon and Foucar-Szocki (1996) identified the salient dimensions of inquiry as intention, order, community, and voice. These dimensions of inquiry paralleled Zeichner and Liston’s (1987) earlier levels of reflection (factual, prudential, justificatory, and critical). These dimensions are embedded in Dewey’s (1933) four phases of reflection. Dewey’s approach stipulates that the reflective process begins when the preservice teacher experiences an occurrence that includes noticing a method, behavior, or practice. The observation is limited and focused and is followed by an interpretation of the occurrence. This interpretation requires that preservice teachers slow their thought processes to discover what is already known about the experience (Ayers, 1993; Bednar, 1991; Posner, 1996; Sanchez & Nichols, 2003). The next phase is the most challenging because it depends on the teachers’ ability to pay
attention, perceive, and observe relevant data. In this phase, the teacher names the problem or develops a question from the experience. Drennon and Foucar-Szocki stated that this phase leads to inquiry where questions are pursued and assumptions are challenged. The intent of the teacher in this phase is to seek answers that emerge from practice.

Hatton and Smith (1995) contended that the reflective process was more developmental than hierarchical in nature. Their analysis identified three key components to the developmental process: “technical rationality,” a stage at which decisions are arrived at from a theoretical base and yet interpreted in light of prior experiences; “reflection-on-action,” where reflection depends on ethical competing viewpoints seeking the best practice; and “reflection-in-action,” in which processing problems are solved as they arise and then later shared. Hatton and Smith identified distinct forms of reflection, distinguished by defining characteristics, and challenged the very notion of “levels” (Van Manen, 1977; Kemmis, 1985) in the reflective process. The levels of reflection, whether seen as developmental or as growth levels, were identified as essential to the practice of reflection with preservice teachers (Cruickshank, 1985; Hatton & Smith; Kemmis, 1985; Tsangaridou & Sullivan; Van Manen, 1977; Zeichner & Liston, 1987).

Most researchers agree that in its earliest stages, reflection centers on technical aspects (Kemmis, 1985; Van Manen, 1977; Zeichner & Liston, 1987). Once the technical aspects of reflection are known, the cyclical nature of the reflection process emerges. Although there is little agreement among researchers on the labels used to describe the various levels of reflection, the levels generally appear to parallel each other. (See Table 1.)
<table>
<thead>
<tr>
<th>Researcher</th>
<th>Reflective levels</th>
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<tbody>
<tr>
<td></td>
<td>Seeing: identified components</td>
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<tr>
<td></td>
<td>Strategizing: problem solve an issue</td>
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<tr>
<td>Dewey (1933)</td>
<td>Interpretation of experience: data</td>
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<td></td>
<td>Description of experience: holding spontaneous</td>
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<td></td>
<td>interpretations</td>
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<td></td>
<td>Analysis: generating possible explanations</td>
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<td></td>
<td>Action: experimenting, testing hypothesis</td>
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<tr>
<td>Drennon &amp; Foucar-Szocki (1996)</td>
<td>Intention: limited and focused</td>
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<td></td>
<td>Order: interpretation of the experience, slow down</td>
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<td></td>
<td>thought process</td>
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<td>Community: pay attention, perceive, and observe</td>
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<td></td>
<td>relevant data</td>
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<td>Voice: questions pursued and assumptions</td>
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<td>challenged</td>
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<td></td>
<td>experience</td>
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<tr>
<td></td>
<td>Reflection-on-action: ethical, competing viewpoints</td>
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<tr>
<td></td>
<td>Reflection-in-action: processing problems as they arise</td>
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<tr>
<td></td>
<td>Situational: contextual</td>
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<tr>
<td></td>
<td>Sensitizing: social, ethical, moral</td>
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<tr>
<td>Van Manen (1977)</td>
<td>Technical accuracy: procedural concerns</td>
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<tr>
<td></td>
<td>Reasoning: reasons for instruction</td>
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<tr>
<td></td>
<td>Critiquing: questioning accepted ideas</td>
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<tr>
<td>Zeichner &amp; Liston (1987)</td>
<td>Factual: procedural steps</td>
</tr>
<tr>
<td></td>
<td>Prudential: focus on experience, outcomes</td>
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<tr>
<td></td>
<td>Justificatory: rationale for actions</td>
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<tr>
<td></td>
<td>Critical: focus on assumptions, social justice</td>
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</table>
In Van Manen’s (1977) discussion of “deliberative rationality,” the focus is mainly on the practical, or the decisions that teachers make based on situations manifested in the everyday life of the classroom. These practical decisions demand a level of reflection. The reflective levels associated with “deliberative rationality” are associated with corresponding interpretations of the practical (Van Manen, p. 226). Van Manen explained that the reflectivity within deliberative rationality progresses from technical accuracy or a determination based on “economy, efficiency, and effectiveness,” to reasoning or “the process of analyzing and clarifying individual and cultural experiences, meanings, perceptions, assumptions, prejudgments, and presuppositions, for the purpose of orienting practical actions” (p. 226). Furthermore, deliberative rationality gives way to the highest level of reflectivity (critiquing) when ethical considerations challenge the worth of education. These ethical considerations, evidenced in the critique of power and authority, pursue educational ends on the basis of justice, equality, and freedom.

Tsangaridou and Sullivan (1994) refined these reflective levels of deliberative rationality through an inductive analysis of data collected from the reflective journals of Physical Education preservice teachers. In an attempt to describe the focus and level of preservice teachers’ reflections, the researchers defined the focus of reflection as “technical, situational, and sensitizing” responses. Similar to Van Manen’s (1977) discussion on deliberative rationality, Tsangaridou and Sullivan defined reflective levels in conjunction with the decisions that arise during teaching. These three levels are identified as follows: “technical reflection” which is concerned with the instructional or managerial aspects of teaching, “situational reflection” which deals with the contextual
aspects of teaching, and “sensitizing reflection,” which represents reflection upon social, moral, ethical, or political aspects of teaching” (p. 18). However, Tsangaridou and Sullivan proposed that the notion of a hierarchical order was an inappropriate application to the interconnected nature of the reflections. Furthermore, they suggested that the interconnected nature of the reflection levels does not lend itself to values being assigned and then contrasted to each other.

Carlson and Parry (2003) agreed that the reflective level terminology (Tsangaridou & Sullivan, 1994; Van Manen, 1977) implied a hierarchical framework; consequently, one type of reflection was determined more valuable than another. As a result of data analysis, a matrix was designed which incorporated “three stages of action” and “three reflective foci” (p. 212). The three stages of action were defined as follows: “Looking” (a superficial glance at the lesson as a whole), “Seeing” (teachers identified components that contributed or detracted from the effectiveness of the lesson), and “Strategizing” (the ability to devise an approach to problem-solve an issue identified in the “Seeing” stage). Within each stage, the matrix provided further description by distinguishing the three reflective foci as surface, deep, or intense. For example, in the second stage of seeing, the reflection could be identified as surface seeing (identifying components in the lesson), deep seeing (lesson examined in detail), and intense seeing (realizing wider implications of one’s teaching).

Community of Inquiry

Cochran-Smith (2003) noted that the inquiry as stance must be seen as a continuous process (Dewey, 1933) over the lifetime of a teacher, and the phase of developing a question is dependent upon social interaction with a more knowledgeable
Inquiry has the potential to facilitate the practitioner’s entrance into the professional community. Taking the stance of inquiry (Cochran-Smith, 1991a) requires that the questions posed are not answerable by anyone in the triad made up of the preservice teacher, the mentor teacher, and the university professor. A community of inquiry requires that while each may have a hypothesis related to the answer, each member remains “open-minded” to new insights and open to interrogation (Dewey, 1933; Lave & Wenger, 2003; Olsen, 2000; Vygotsky, 1978).

Once the question and relevant data are identified, the teacher generates possible answers, brings other resources to the data, and deepens his or her scope of understanding with the help and support of other professionals (Cruickshank, 1985; Hatton & Smith, 1995; Kemmis & McTaggert, 2000; Tsangaridou & Sullivan, 1994; Van Manen, 1977; Zeichner & Liston, 1987). Key to this order is the systematic manner used to collect and analyze data. Data collection does not occur on a casual or incidental basis. Rather, the work is anchored in literature and conducted over a specified period of time (Drennon & Foucar-Szocki, 1996). This learning community, alternatively referred to as a community of inquiry, is a cooperative attempt to inquire into problematic issues with an emphasis on dialogue. The collaborative environment encourages reflection and critical analysis to arrive at sound judgments (Cochran-Smith, 1991a). The emphasis on asking one’s own questions as a highly effective way of learning resonates in a community of inquiry (Meier, 1995; Splitter & Sharp, 1995).

Cochran-Smith (2001) explained the importance of teacher educators taking into consideration the power structure embedded in the collaborative nature of this phase.
Instead of the preservice teacher relying on the knowledge of the university professor or the mentor teacher, the input from these individuals is questioned and challenged. This collaboration broadens the scope of understanding for the university supervisor, the mentor teacher and the preservice teacher. Drennon and Foucar-Szocki (1996) suggested that the community of inquiry invites educators to experience the richness of their work. Creating a community of inquiry requires time, trust, commitment, struggle, mutual recognition, and shared purpose. Here, the whole is greater than the sum of its parts and includes a commitment to honor diversity of thought (Cochran-Smith, 2004; Lave & Wenger, 2003; Stanilus & Jeffers, 1995).

The professional discourse born of recognizing and valuing each contribution then creates a collective voice (Drennon & Foucar-Szocki, 1996). Discourse is accompanied by listening attentively to each inner voice, the student’s voice, and the voices of fellow practitioners. Shared power between the university supervisor, the mentor teacher, and the preservice teacher requires a change in the basic structure of the preservice preparation programs in many universities today (Cochran-Smith & Lytle, 1999; Middleton, 2000). The structure must include a commitment to the placement of preservice teachers into classrooms where shared power is valued (Olsen, 2000; Stanilus & Jeffers, 1995). This reasoning sets inquiries apart from other models of teacher education, especially as preservice teachers reconsider their experiences with the underlying assumption that further questions are an expected outcome. The cyclical process of inquiry requires a specific community, one in which questions are pursued and assumptions challenged (Cochran-Smith, 2004; Zeichner, 1996). Knowledge is personally and socially constructed in situations as people share their ideas and stories.
“Authority shifts to practitioners inside the program who come to develop and articulate theories [that are] grounded in real world experiences” (Drennon & Foucar-Szocki, 1996, p.72).

This collaborative work of reinventing teaching between the school and the university demands that the school-based knowledge is critical to a university-based education (Cochran-Smith, 1991a, 2004). Changing the power structure among university supervisors, mentor teachers, and preservice teachers is built upon the notion that knowledge about teaching is fluid and socially constructed within the context of lived experiences.

Professors will not find it easy to develop consensual standards of practice, and in such circumstances instruction can easily move to a superficial level of discourse. Unless students in training can experience at least some sense of professional collegiality—some sharing of technical problems and alternative solutions—they will be ill-prepared for such efforts when they work alongside one another. (Lortie, 1975, p. 66)

**Barriers to Inquiry**

Multiple barriers have been identified in the research. Teacher isolation and using past experience for guidance in teaching practice (Lortie, 1975; Kohn, 2000) have limited the practice of inquiry. Miseducative experiences (Dewey, 1933) or confusions about inquiry, and conceiving university knowledge to be insignificant (Ayers, 1993; Boyd et al., 1998; Kohn, 2000; Lortie, 1975; Wideen et al., 1998) have contributed to defining inquiry as an impractical process. Finally, advocates of outcomes-based education have considered it more important to be effective, with the emphasis on teachers who *adopt*
the curriculum rather than those that adapt to the needs of individual students (Cochran-Smith, 2004; Gitlin et al., 1999; Posner, 1996).

Goodlad’s (1984) analysis, incorporating visits to over a 1,000 classrooms, found classrooms that were traditional in nature and “almost entirely teacher dominated with respect to seating, grouping, content, materials, use of space, time utilization and learning activities where teachers out-talked the entire class of students by a ratio of three to one” (p. 229). Lortie (1975) explained that teachers sometimes welcome the draw to technical action because freedom carries a burden. The “opportunity to assess one’s own teaching is also the obligation to do so … ” (p. 142), and when classroom teachers self-assess their practice, the experience magnifies any recurrent doubts held by most teachers about the value of their work. Teachers who doubt their own effectiveness or who rely on their past experiences as students often resort to a programmatic approach (Gitlin et al., 1999). The effect of a programmatic approach is deleterious because it lifts the responsibility of implementing appropriate teaching strategies from teacher expertise to the robotic implementation of curriculum.

The isolation of the classroom experience can foster a self-accusing and moralistic stance rather than promote an analytic and self-accepting mindset (Lortie, 1975). In this scenario, teachers often see teaching outcomes as capricious or affected by numerous outside factors, and they suspect that reflection on practice is futile. Their approach indirectly supports the advocates of high stakes testing as the major gatekeepers for the profession (Cochran-Smith, 2001; Zeichner, 2002). Researchers agree that non-reflective teachers rely on routine behavior guided by impulse. Instead of responding to the needs of an increasingly diverse population of learners, the teacher merely addresses
Dewey (1933) stated that educative experiences broaden the field of experience and knowledge, but educative experiences are not enough. The ability to perceive and then weave meaning among the threads of experience is also critical (Dewey, 1933; Kagan, 1992; Loughran, 2002; Schon, 1983). Nonetheless, the idea of reflective practice is tempered with Dewey’s (1933) reminder,

All genuine education that comes about through experience does not mean that all experiences are genuinely or equally educative. Experience and education cannot be directly equated to each other. For some experiences are miseducative. Any experience is miseducative that has the effect of arresting or distorting the growth of further experience. (p. 25)

Miseducative experiences can, therefore, lead one into routine patterns of action, thereby narrowing the field of further experience. Kagan (1992) and later Wideen et al. (1998) found common themes in the research that appear to contribute to the miseducative experience. First, due to the close connection between preservice teachers’ biography and their experiences in the teacher education program, their prior experiences in the classroom appeared to determine the knowledge acquired through coursework at the university (Boyd et al., 1998; Bullough & Gitlin, 1995; Carroll & Yarger-Kane, 2000; Fecho, Commeyras, Bouchereau-Bauer, & Font, 2000). As a result, the sum of the preservice teachers’ experiences can result in a miseducative experience (Dewey, 1933).

Miseducative experiences also build a common misconception among preservice teachers related to inquiry (Reiff, 2002) by restricting their understanding of inquiry as
linked to the scientific approach. Limiting preservice teachers’ understanding of inquiry to a very structured formula in highly controlled situations was not representative of the real classroom experience (LaBoskey, 1994). Connecting inquiry to the structure of the scientific process clouds the goal of inquiry and creates a barrier to implementation (Reiff). Prior classroom experiences in which passive listening was the norm (Goodlad, 1984; Lortie, 1975; Kohn, 2000) resulted in preservice teachers experiencing a void in their background knowledge of inquiry. Reiff found that teachers’ misconceptions about inquiry were based on the early experiences as a student, thus hampering their ability to comprehend the process. “If they [teachers] suspect that classroom events are beyond comprehension, inquiry is futile” (Lortie, 1975, p. 212). Surmounting these misconceptions requires that teachers “do” inquiry (p. 20). Overcoming the semantic barrier is critical as teacher educators pursue inquiry into practice as a bridge for teacher growth.

Another barrier is the belief that the connection between the university education and practical experiences in the classroom is nonexistent (Ayers, 1993; Boyd et al., 1998; Kohn, 2000; Lortie, 1975; Wideen et al., 1998). This perceived lack of connection between university coursework and the reality of classroom teaching results in the conclusion that there is too little focus on practical strategies at the university (Wideen et al., 1998). Coupling the mindset of preservice teachers and their initial focus inward with the lack of reflection, Kagan (1992) found that the preservice teacher tends to “grow more authoritarian with practicum experience” (p. 148). Many teachers believe that university courses are not useful, and that the truth delivered at the university is disconnected from the reality of the actual classroom (Ayers, 1993; Kohn, 2000). Some
teacher education programs fail to connect knowledge taught in their classes to the classroom experience (Fecho et al., 2000; Holmes, 1995), and such programs are more likely to prepare teacher technicians rather than reflective professional educators. Bridging the gap between what is learned in the university class and the practice of teaching appears to hinge on the practice of inquiry (Cochran-Smith, 2004; Zeichner, 2002; Loughran, 2002).

Many teachers hampered by attitudes rooted in the disconnect between university coursework and the classroom experience will both adapt and adopt curriculum through a balance of intuitive and reflective thought to suit their own purposes (Ayers, 1993). This balance is not acquired, however, without inquiry into one’s own teaching practice (Posner, 1996). The process of learning to adapt curriculum requires the ability to perceive that the technique lies not in the answers but in the process of figuring out the better question (Ayers, 1993; Bednar, 1991; Benson, 1998; Kohn, 2000; Posner, 1996). According to Kohn (2000), great teachers realize that their primary job is not transmitting content to students, but developing the ability to guide students’ thinking as they make more sophisticated kinds of mistakes.

Howes (2002) suggested that mistakes viewed through the lens of understanding students’ strengths enable the teacher to guide students’ thinking through a more complex curriculum. Through this approach, item knowledge is a tool in the hands of the teacher. Cochran-Smith (2001) challenged the policy makers’ intent on establishing an educational system measured by and summarized by a single number (Cochran-Smith, 2001). The Department of Education (No Child Left Behind, 2001) supports the notion of using test scores as a representative measure of teacher effectiveness by stating, “How
would you know a high-quality teacher if you saw one other than looking at the achievement of his or her students?” (p. 2). The same document also stated that “teachers’ general cognitive ability is the attribute studied in the literature that is most strongly correlated with effectiveness” (p. 2). However, research indicates that growing effective practitioners depends more on developing practices that allow novices to stand back temporarily from their personal beliefs to meet the needs of individual students (Bianchini & Colburn, 2000; Fecho et al., 2000; Kagan, 1992; Windschilt, 2002).

Testing continues to be the most expedient measure of student growth. Unfortunately, adherence to this method overlooks and ignores the enrichment that occurs from the practice of inquiry (Fordham Foundation, 1999; Cochran-Smith, 2004; Kohn, 2000). Teachers under pressure to cover specific items on a test rapidly abandon teaching strategies that encourage thoughtful debate in favor of item knowledge, the lowest level of thinking. This diminishes the opportunities and value of student talk and reflection. The developmental approach to process learning requires a commitment to the development of critical thinking over the regurgitation of facts.

I have no doubt that a study today would reveal equally traditional procedures…. almost everywhere I go, individuals endeavoring to bring about change report that teachers are paying less and less attention to the needs of individual children and more and more to the standards being imposed on them. (Kohn, 2000, p. 573)

Inquiry into practice challenges the end-results thinking that limits reflection, and it moves teachers away from technical teaching techniques driven by policy makers (Cochran-Smith, 2004; Posner, 1996; Schon, 1983; Zeichner & Liston, 1996). Zeichner
(1996) claimed that despite the rhetoric surrounding efforts to develop more reflective teachers, teacher education has done very little to foster genuine growth in teacher empowerment, in part due to the political pressures brought about through the standards movement. As a result, some teachers blindly relegate the most “at-risk” students to the dull, repetitious skill drills that do not enable them to grasp the underlying concepts, and consign them to a single strategy of memorization as the only avenue for school success (Delpit, 1995).

Dialogue Journals

Dialogue Journals Defined

The dialogue journal serves as a conduit between the expert and the novice. Researchers defined dialogue journals as an instructional activity that emphasizes meaning while providing natural functional experiences (Kreeft, 1984; Stanton, 1980). The dialogue journal becomes a two-way communication between the teacher and student, where the students regularly write to the teacher on any subject and the teacher consistently responds. It is an “interactional, functional, and self-generated” activity (Shuy, 1987, p. 894). Dialogue journal writing resembles oral conversation (interactional) and has a social aspect of using language to get things done through relationship (functional). Dialogue journal writing is focused on topics generated by both parties (self-generated). Gambrell (1985) described the teacher’s role in using dialogue journals with students as an opportunity for the teacher to “share, comment, react, model, answer questions, and most important of all, encourage children to express themselves in writing” (p. 514). As the writer engages in dialogue journal writing, the writer gains a fresh perspective on self. Isakson (1996) considered the reflective nature of a journal [a
personal dialogue with herself], “Writing invites moments of insight by creating a space in which I can make sense of my experience ... also provokes thinking I otherwise would not do and prods me into uncomfortable areas that I otherwise dismiss” (p. 15).

Likeminded thinkers Bakhtin (1986), Clay (1975), Bereiter & Scardemalia (1982), & Kreeft (1984), who established the understanding that “talk” is an essential component in developing writers, support the idea that dialogue journals can bridge the gap between two forms of communication. Kreeft found that dialogue journals lead to natural prose based on the characteristics of spoken language and traditional ways children learn to speak and write. The context of dialogue journals provides the environment in which meaning is created by the writer for an audience who is not present, possibly not known, and who is often imagined in the mind of the writer. Dialogue writing has some of the qualities often considered unique to speech, such as turn taking, feedback from the reader, and changes in the speaker. The dialogue journal distinguishes between oral conversation and written conversation. In the context of written communication, the writer must anticipate audience needs while making sense without audience help. The dialogue partner models the form, function, and uses of language that are gradually internalized by the student (Peyton & Seyoum, 1989; Peyton, Staton, Richardson, & Wolfram, 1990; Shuy, 1985).

**Dialogue Journals as a Bridge**

Although the research on dialogue journals is limited and dated, this review provides a rationale for using the context as a tool for bridging from the known (oral) communication to the unknown (written) communication (Clay, 1975). Stanton (1980) referred to dialogue journals as interactive writing, and after analyzing a year’s worth of
journals in which a sixth grade teacher wrote daily messages to her students, she concluded that journals are highly useful in involving each student, uniting reading and writing, and encouraging thinking and reflection. “Dialogue journals use writing as a genuine means of communication between each student and teacher to get things done [as they experience] the common life they share in the classroom” (Stanton, 1988, p. 198).

Research conducted in the 1980s and early 1990s in dialogue journal use focused on K-12 students (see Table 2). Dialogue journals have been studied for their positive effect on students’ personal adjustment (Stanton, 1988), development of awareness of audience (Peyton & Seyoum 1989), increased motivation for purposeful writing (Atwell, 1984), improved skill in conversing (Peyton, Richardson, Stanton, & Wolfram, 1990; Stanton), and overall growth in writers (Kreeft, 1984; Peyton & Stanton, 1993; Shuy, 1985; Stanton).

Table 2

<table>
<thead>
<tr>
<th>Author</th>
<th>Participants</th>
<th>Study Focus</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Atwell (1984)</td>
<td>(2) Eighth-grade students</td>
<td>Using dialogue journals to learn about writing</td>
<td>Motivated increase in writing for struggling reader, transfer of language through reading to writing</td>
</tr>
<tr>
<td>Kreeft (1984)</td>
<td>(1) Elementary student</td>
<td>Dialogue journals as communication</td>
<td>Leads to natural prose, elaboration promotes growth</td>
</tr>
<tr>
<td>Peyton et al. (1990)</td>
<td>(12) Sixth-grade ESL students</td>
<td>Influence of dialogue journals on writing tasks with ESL students</td>
<td>More writing in DJ than assigned writing increased use of clause connectors, increase in linguistic complexity</td>
</tr>
<tr>
<td>Study</td>
<td>Group</td>
<td>Methodology</td>
<td>Findings</td>
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<tr>
<td>Peyton &amp; Stanton (1993)</td>
<td>ESL students</td>
<td>Teacher and student questions in dialogue journals</td>
<td>Increased vocabulary development, higher level thinking, opportunity for elaboration and reflection</td>
</tr>
<tr>
<td>Peyton &amp; Seyoum (1989)</td>
<td>(1) Teacher (12) ESL students</td>
<td>Case study of teacher using dialogue journal</td>
<td>Teacher not initiator of dialogue topic, Students, writing more freely, built collaborative relationships, extended range of writing</td>
</tr>
<tr>
<td>Stanton (1980)</td>
<td>Sixth-grade students</td>
<td>Effect of dialogue journals</td>
<td>Dialogue journals meet needs: knowing student, meaningful reading and writing, acquisition of complex reasoning skills</td>
</tr>
<tr>
<td>Shuy (1985)</td>
<td>Elementary students</td>
<td>Comparison of classroom talk and dialogue journal communication</td>
<td>Increase in personal involvement, use of connectors, higher order functions, reduction of fact repetition</td>
</tr>
</tbody>
</table>

**Dialogue Journals Increase Motivation**

Atwell (1984) studied dialogue journals as a means to prompt discussion and motivate reading and writing. She tracked the progress of two students in their evolution of themselves as writers in a dialogue format. “It is as participants in the processes of writing and reading that students—and teachers—become insiders” (Atwell, 1984, p. 240). Atwell tried approaching written language from the perspective of an insider with
particular attention to the intersection between the writer and the writing that the students were asked to read. In a dialogue journal format, the reluctant reader noticed and connected with an author as he critiqued the lead sentence in a text. This facilitated further conversation which resulted in the student examining reading using a writer’s lens. Atwell recognized the criticism as an opportunity to explore the thinking done during writing and found that understanding the students’ strengths and weaknesses in the dialogue journals motivated both the reluctant writer, and the accomplished reader, to write.

Stanton (1980) found that use of dialogue journals created opportunities for teachers to motivate students through familiarization with individual interests and concerns, specific feedback on lessons, improved classroom discipline, and greater involvement by the students in meaningful reading and writing. Throughout the research, heightened motivation is credited to the use of dialogue journals as the teachers learn the personalities and interests of their students (Atwell, 1984; Stanton). Dialogue journals emphasize personal interaction which, when coupled with the deliberate focus on meaning rather than mechanics, increases the commitment of students to reading teacher responses and writing their responses in a timely manner. Students experience the freedom of creating text without having to apply the revision to each piece (Emig, 1971; Schneider, 2003).

Researchers (Peyton, 1993; Stanton, 1980; Peyton, Stanton, Richardson & Wolfram, 1990) investigated the context that might be the most effective in the teaching of writing. They observed that dialogue journals resulted in three times more writing than assigned texts, gave students more practice with written expression, and provided
opportunity to use a variety of structures. For example, the most complex writing appeared in the letter to a friend, the next most complex in dialogue journals, and the least complex in essay writing. Additionally, observations documented a greater variety of clause connectors in dialogue journals. The context of communicating a real message enhanced complexity of writing.

*Dialogue Journals Enrich Language Acquisition*

Much of the research on dialogue journals stems from Stanton’s (1980) initial work, but Shuy (1985) refocused on the impact of dialogue journals used with the second language learner. He studied several aspects of language including dialect issues, teachers’ attitudes toward linguistic differences, and classroom language functions. His work provided a clear and persuasive conclusion about the social aspects of language and learning. Specifically, he correlated the acquisition of language with dialogue and noted the fact that within five years a child becomes a native speaker without a set of textbooks. Through dialogue, Shuy compared classroom teacher talk and dialogue journal writing use and found the following:

- Teachers spent 35% of classroom talk on asking questions, yet only 15% of the written texts in dialogue journals were questions.
- Students’ dialogue journals documented an increase in personal involvement when compared to classroom talk.
- Students’ reporting of general facts grew from a 15% reporting rate in the classroom to an 80% reporting rate in journals.
- Student classroom talk consisted of 10% personal facts or opinions, while journal writing consisted of 50% personal thoughts.
Student use of higher order functions accounted for 3% in classroom talk, compared to 23% in dialogue journals.

Peyton and Seyoum (1989) focused specifically on the interaction in dialogue journals between one teacher and 12 students classified to be included in an English Speakers of Other Languages program. The focus of the study was to describe the effect of the interaction strategies used by the teacher on her students who were learning English as a second language. These researchers found that the teacher predominantly responded to the students’ choice of topics and did not initiate topics herself. In this way, the teacher was a responder, contributing information and opinions, refraining from eliciting writing from her students through questions. In fact, when the teacher posed a question, she always made a contribution to the topic. This interaction strategy resulted in the students viewing the teacher as a collaborator in the writing process rather than a supporter and sustainer of the writing as she did during the oral interaction during class. Peyton and Seyoum concluded, “The success of the dialogue interaction lies precisely in the teacher’s participation as an active partner in a meaningful, shared communication” (p. 27).

Similarly, Peyton and Stanton (1993) examined teacher and student questions as well as the interaction patterns in dialogue journals, arguing that this type of one-on-one interaction is an effective way to promote student participation in dialogue and develop language facility. Peyton and Stanton found that second language learners increased vocabulary development when using dialogue journals. The value of multiple exposures to vocabulary through the conversation reinforced new vocabulary for the student within the context of meaning. Through interactive and genuine questioning of the partners,
dialogue journals encouraged the elaboration necessary for students learning the language to have a need to grow their vocabulary. Further, the authentic context of a written conversation required that, instead of listening to questions, the student create and design his or her own questions, and instead of reporting out facts, the student integrates the facts into his or her real life experiences, which results in high level thought processes. The results indicate that dialogue journals provide opportunities for students to practice higher order functions to a greater degree than classroom talk.

Kreeft (1984) followed the developmental progress of only one student. Here, Kreeft assumed that the primary goal of the dialogue journal was communication and focused her analysis on three areas central to communication: degree of interaction with the audience, elaboration to make the meaning clear or interesting to the audience, and creation of meaningful text. Kreeft also noted that in the early entries in the student’s dialogue journal, the student did not elaborate or demonstrate awareness of audience, whereas later entries produced interactive dialogue. Near the end of the study, the writing became focused, as evidenced by increased elaboration and the shift of writing from academic to personal topics. Kreeft concluded that the thought elaboration observed in the dialogue entries indicated that dialogue journals are a “natural bridge from interactive communication to reflective thought and subsequent growth” (p. 149). Peyton et al. (1990) agreed that dialogue journals are more than an enjoyable activity for getting to know students, and their study demonstrated that informal writing allows free expression and opportunity to work through developing ideas just as a conversation does in problem solving. When used with students at more advanced levels, dialogue journals are linked to growth in developing a personal voice in writing.
Gaps in Dialogue Journal K-12 Research

Most of the research describes participants by grade level and neglects factors such as literacy levels, socio-economic status, and the racial make-up (Kreeft, 1984; Stanton, 1980; Shuy, 1985). Atwell (1984) added gender to her description of students studied. Although Peyton et al. (1990), Peyton & Stanton (1993), and Peyton & Seyoum (1989) include the second language learner designation; in all three of the studies the level of English acquisition for these students is not mentioned. The background experiences of the students with letter writing and the availability of literature in the home also are neglected factors in students’ growth as writers and could have affected the results of the studies. Many of the studies focus on the second language learner (Kreeft; Peyton et al.; Peyton & Seyoum; Peyton & Stanton). Such efforts may inform educators about the impact of using dialogue journals within a specific population, although generalizing such results to the broader population may lead to inaccurate conclusions.

Stanton (1980) found that, in creating a dialogue setting, the teacher supports the acquisition of complex reasoning skills, and results subsequent to Stanton’s original study confirm that these complex reasoning opportunities translate into improved student abilities. These abilities include the following: engaging in reflection about experiences (Kreeft, 1984; Peyton & Seyoum, 1989), writing in a natural purposeful way (Atwell, 1984, 1987; Shuy, 1985), reading a personalized text and student initiated topics (Kreeft; Peyton & Stanton, 1993), and developing long-range techniques for students managing their own actions (Atwell, 1984; Peyton et al., 1990). Unfortunately, the studies are dated. Stanton’s research occurred more than 24 years ago and is limited to one sixth-grade class.
Based on interviews with students who wrote once a week in a dialogue journal over one school year, Stanton’s work (1980) suggested that dialogue journals involved the practice of three levels of language. These levels were identified as the surface forms of spelling, the syntactical rules for transforming word meaning into comprehensible statements, and the deep structure or semantic level. Stanton’s suggestion appears logical but is tempered with the observation that virtually all writing requires these three levels of language use. Additionally, the framework of a dialogue journal throughout the research stipulates the condition that mechanics are not corrected, and Stanton describes the teacher’s role explaining, “She does use their misspelled words and garbled syntactic patterns correctly in her responses to each student” (Stanton, p. 516). In other words, as she responds in the journal, she uses the misspelled words correctly, and then assumes this practice informs and educates the student. She does not duplicate the problem in her own writing, but she does not address the number of times the student repeated an incorrect spelling, cementing the error in the students’ mind, nor does she address how the correct example specifically changes the students’ writing. To some degree, the practice of reflective writing appears to overcome both the mechanical and thought-based limitations. The “invitation” to growth through reflection in the journal as the student responds to and initiates topics for discussion is offered without teacher evaluation, and yet the research shows that students continue to develop their writing skills and abilities in many areas (Stanton).

This context of accepting the writing offered as given is not addressed in the research aside from explaining the role of the teacher. An important goal of dialogue writing is to have an ongoing genuine conversation with the students. As a genuine
collaborator in the writing process, the teacher encourages elaboration and development of thinking with the emphasis on response and questioning ability, and, at the same time diminishes evaluation (Gambrell, 1985; Kreeft, 1984; Shuy, 1987). However, when the teacher responds to the student with correct spelling as a model for future writing, evaluation has, nevertheless, occurred, and the students’ acquisition of correct spelling is based on the corrective nature of the response.

Although the research emphasizes that the teacher’s role contributed to the effectiveness of the dialogue, Peyton and Stanton’s (1993) work was based on questions asked by one teacher. In this study, Peyton and Stanton stated that the teacher’s questions demonstrated genuineness, rarely asking display questions often observed in classroom talk. The display questions that occur in classroom talk may have been building background knowledge critical for further study of a topic. These researchers equated genuine questions with those specifically related to the students’ interests, without regard for the rationale embedded in the different functions within the classroom lesson.

Promoting a dialogue that consists of a conversation about interests, opinions, problems, and clarifications, Peyton and Stanton explained that questions extended the dialogue between the student and teacher and communicated the teachers’ interest in the students, thereby encouraging them to write.

Peyton and Stanton (1993) also found that students asked questions for clarification, which permitted them to get to know the teacher beyond the constraints of the classroom and to jointly explore topics of interest. They concluded, “Good dialogue—the open exchange of information, questioning to gain information and clarity, and responding to develop or support an idea … develops thinking, language, and writing
However, the open exchange of information may be overly dependent on the individual teacher’s disposition rather than the questions posed in the journal. The emphasis on questions that are specifically related to the students’ personal interests and concerns is integrally tied to the disposition of the teacher.

In Atwell’s (1984) study, she set out to define dialogue journals and explain how to execute them in the classroom. Such guidelines are no doubt useful, but the results, however encouraging, are not comprehensive. Claims that dialogue journals succeed because they give the students daily practice expressing themselves in writing and moving beyond themselves to topics studied in school cannot be fully substantiated. Such success may be more a result of the questions posed by the teacher or the relationships the students enjoy with the teacher. The teacher-student interaction is a critical factor when researchers analyze implementation of dialogue journals. The nature of accepting all that is written the first time without evaluation, asking genuine questions, and making connections, along with encouraging elaboration, sets the stage for growth to occur and undergirds a positive relationship between the dialogue partners.

McCarthey’s (1994) introduction to intersubjectivity (through negotiation, speakers create a temporary shared social reality that may be transformative for both participants) and internalization (our phases of appropriation, transformation, publication, and conventionalization in which the child reconstructs social experiences into individual psychological processes) found that classroom dialogue was more likely to reemerge when the students had established “intersubjectivity with the teacher” (p. 201). This implies that a positive, interactive relationship between the teacher and student is essential. McCarthey’s study supports further investigation of the “appropriation and
transformation of classroom dialogue to provide further information about the social nature of learning” (p. 227).

Missing from the research are studies in which students engage in dialogue journals with peers. Johnson and Johnson (1999) examined more than 375 studies over the last century investigating competitive, individualistic, and cooperative work and found that individuals working together to achieve a common goal manifest higher achievement and greater productivity than by working solo. The reflective nature of dialogue journals requires the students to expand their thoughts, elaborate on topics of choice, and practice communication with one another. Although the expectation is that the teacher’s feedback is a critical element of the growth witnessed through the use of dialogue journals, research into peer dialogue writing needs to be explored in light of results that claim the student expands a repertoire of writing topics and complex reasoning skills based on the personal interaction (Kreeft, 1984; Peyton et al. 1990; Peyton & Stanton, 1993; Stanton, 1980).

Although the research does emphasize creating a real message filled with meaning, growth in writing is not correlated to the structured writing process approach that is currently accepted as the way to promote writing growth in students (Hillocks, 1984; 1995). A closer examination into the nature of students learning to write may show that it is without the lens of revision that students are motivated to write lengthier and more complex pieces. The context of dialogue writing appears to be a natural bridge from oral communication to written communication. When students are learning a new language, it makes sense to provide vocabulary instruction in which the words are used in context of real communication. Implications for instruction center about the notion that
dialogue journals promote growth in reflective writing. The interactive and authentic context invites students to attempt new ways to communicate in writing. Much of the current practice in the teaching of writing in classrooms today focuses on the writing process as the proven method for promoting writing growth. This review of research, however, indicates that the context of the dialogue journal generates complex language use and vocabulary growth, and allows free expression and opportunity to work through developing ideas, just as a conversation does in problem solving. Yet, the possibility that other factors genuinely contribute to writing growth is sufficient basis to call for further research on both the writing process approach and dialogue journals.

*Dialogue Journals with University Students*

Much of the dialogue journal research springs from the original work of Stanton (1980), but it is interesting to note that in recent years the dialogue journal is being researched with young adults primarily in college classes (Table 3). This research overwhelmingly suggests that one of the major benefits of dialogue journal use is the positive relationship developed between the professor and student (Hennings, 1992; Garmon, 2001; King, 2001; Nistler, 1998). Additionally, researchers found that using dialogue journals with prospective teachers influenced their implementation of the journals in their own practice (Hennings, 1992; Nistler), increased their understanding of course material (Garmon; King, 2001), developed greater understanding of their role as a reflective practitioner (Garmon; King; Norton, 1997; Roe & Stallman, 1994), and facilitated the preservice teachers’ writing growth (Brinton et al. 1993; Nistler).
<table>
<thead>
<tr>
<th>Author</th>
<th>Participants</th>
<th>Study Focus</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brinton et al.</td>
<td>Teacher educators, novice</td>
<td>Identify and categorize responses made in focus dialogue journals</td>
<td>Identified need to use response to focus dialogue journals on teaching, ask questions, draw on experience, refer to resources.</td>
</tr>
<tr>
<td>(1993)</td>
<td>teachers</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Garmon (2001)</td>
<td>Preservice teachers</td>
<td>Benefits and drawbacks using e-mail for dialogue journals</td>
<td>Positive perception benefits: understand different material, role of teacher, social context of teaching.</td>
</tr>
<tr>
<td>Hennings (1992)</td>
<td>(44) Undergraduates, graduates</td>
<td>Use of dialogue journals as model for teaching and reflection on practice</td>
<td>More relaxed and competent writers, increased fluency, improved relationship with the professor, increased use of dialogue journals with students.</td>
</tr>
<tr>
<td>King (2001)</td>
<td>Preservice teachers</td>
<td>On-line bulletin board case study</td>
<td>Facilitated learning course material and dialogue, deeper thought, lengthier conversations, greater analysis</td>
</tr>
</tbody>
</table>
As researchers extended the dialogue journal into the college experience, the focus of developing writing growth changed to a focus on developing thoughtful reflection. Developing reflective practice attends to teachers’ needs as articulated by Henke (1990):

Teaching is such a busy profession that it is easy to fall into the habit of ‘just doing’ without thinking about the doing. Active learners, however, need to reflect, conceptualize, and experiment. In order to learn about teaching, then, we need to build in time and tools that facilitate the process…. The professional journal seemed an ideal place to begin. (p. 283)

Teacher educators interested in facilitating the development of reflection have studied the linkage of dialogue journals to reflective practice. Norton (1997) studied locus of control in preservice teachers through analysis of weekly dialogue journals to examine reflective thinking. Norton defined Locus of Control as an essential component of reflective practice and a significant predictor of reflective thinking. Using specific guidelines and topics that related to seminar lectures, preservice teachers submitted
weekly journals to their field supervisors. The quantitative analysis in this study indicated that “Locus of Control” correctly predicted the reflective behaviors of the preservice teachers on only one week of the journaling. However, qualitative analysis revealed that “during the individual interviews many preservice teachers mentioned the weekly dialogue journals as a major catalyst in promoting and refining strategies of reflective thought” (Norton, 1997, p. 8).

King (2001) found through a case study with undergraduate students that web-based bulletin boards facilitated similar experiences as undergraduates dialogued with one another. The discussion board encouraged more student-centered dialogue than face-to-face dialogue in classroom, prompted deeper thought about questions and responses to web board queries and quotes, stimulated lengthier conversations, and produced greater analysis and critical thinking of the issues presented for dialogue. Students reported that they got to know each other personally and were able to include family news and professional opportunities. The group dynamics in class changed after one or two weeks and resulted in visibly increased student participation in class discussions. Even reticent students spoke out:

People became more comfortable saying things because, like me, in conference I had gotten a lot of feedback on what I said … because I had time to think about what I said on the web board, I made my words count. Once I had posted I felt more confident to speak in class. It made the class open and real. (King, 2001, p. 349)

Researchers are quick to highlight the positive result of developing relationships with their students and the subsequent effect of more relaxed and competent writing,
lengthier conversations, and deeper analysis (Hennings, 1992; King, 2001). Hennings (1992) conducted an informal study using dialogue journals in language arts and reading classes with graduate and undergraduate students with the purpose of asking whether journal writing, as part of an education class, had an effect on their feelings about writing. Responses supported the idea that journal writing at the college level leads to fluency in writing and increased feelings of relaxation about writing: “The journal has given me a chance to speak to you on a one-to-one basis” (p. 19). King’s study also supported the notion that students need time to reflect and consider a topic that a dialogue journal with a focus can provide. This notion builds upon Vygotsky’s (1978) premise that learning is socially constructed and enhanced by opportunities to test an answer with a supportive group. The student has a context for trying out thoughts in a safe environment before testing them in public.

Similarly, Nistler (1998) found that preservice teachers’ use of dialogue journals with a sixth-grade class became a critical component for implementing effective classroom writing practices. The context of a dialogue journal provided opportunities for the social nature of learning as the collaboration between the student and a more knowledgeable other benefited the student (Vygotsky, 1978). The dialogue journal replaced the concept of grasping a technique through imitation without regard for the learner’s needs. Nistler (1998) used dialogue journals to establish relationships that went beyond the more public level of classroom talk. “My students began to glimpse the world of sixth-grade students—the uneven nature of peer relationships, their interests, attitudes, concerns, differentiated levels of social and academic maturity, and abilities to interact with others” (p. 14). Nistler implied that student ownership affects the results of dialogue
journals since the students choose the direction of the topics to be discussed, but apart from general observations of the preservice teachers, this conclusion is without documentation. Further research is needed to determine whether the impact of topic choice or the personal relationships developed are the motivating factor for increases in reflection and subsequent growth.

Studies also found that dialogue journal use resulted in an increased understanding of course material and the role of the teacher (Brinton, Holten, & Goodwin, 1993; Garmon, 1992; Roe & Stallman, 1994). Brinton et al. examined the responses of teacher educators and categorized the kinds of responses they wrote to their students via journal entries. Four types of responses were identified: course related and procedural comments, personal comments, direct responses to questions and insights, and unsolicited comments about pedagogy. They concluded that the responses taken together serve to redefine the teacher educator and novice teacher roles as collaborative and collegial in nature. This collaborative and collegial relationship provides the opportunity for preservice teachers to reflect on the craft of teaching and their emerging identity as teachers. Garmon explored the preservice teachers’ perceptions of the collegial relationship created through the use of dialogue journals. Specifically, he focused on the benefits and drawbacks of using dialogue journals with preservice teachers in a multicultural education course. The benefits identified by the preservice teachers primarily related to the improvement of learning and personal growth through journal use, and the drawbacks that the preservice teachers identified related primarily to the requirements and procedural aspects of dialogue journaling.
In an experimental study that focused on the distinctions between dialogue journals and reflective journals, Roe and Stallman (1994) found that each statistically significant questionnaire item favored the dialogue journal, except for questions that asked about being more reflective and increasing understanding of course concepts. However, triangulating the quantitative data with qualitative analysis of interview data, resulted in a richer understanding of the data. Statistically significant results on understanding the role of the teacher and the context where the teaching occurs required increased understanding of course concepts. Preservice teachers demonstrated increased reflection through their dialogue journals as a result of valuing the collegial consultation and “availability of another person’s thinking” (p. 585).

**Dialogue Journal Gaps**

In many classrooms, dialogue journals have been relegated to “relationship building” and “community building” goals. As a means of improving the understanding of the diversity in the student population, dialogue journals should not be overlooked. The paucity of current research indicates that dialogue journals have been ignored as either an interaction or developmental tool. Demographic changes in the United States show that by 2025 students of color (non-Caucasian) will increase to approximately 50% of the total student population, while at the same time, the preservice population of teachers of color has declined from a high of 12% in 1970 to 7% in 1998 (Gay & Howard, 2000). The importance of understanding the diversity of classroom populations is increasing as Cochran-Smith (1995) has argued:

> We need to go beyond color blindness and basket making as responses to cultural diversity. Instead, we need generative ways for student teachers
and teacher educators to reconsider their assumptions, understand the values and practices of families and cultures different from their own, and construct pedagogy that not only takes into account in locally appropriate ways but also makes issue of diversity an explicit part of the curriculum.

(p. 49)

Cochran-Smith (1995) posits that there are no “universal strategies for teaching about cultural diversity or for teaching students who are culturally and linguistically different from each other” (p. 494). However, the research on dialogue journals indicates that a context is available that meets the challenge of developing a better understanding of the culturally diverse student population, provides a tool for writing growth, and promotes cognitive growth and personal relationships in students at the university level.

The research with dialogue journals touts the benefits of relationship building, but the interactions also have the potential to tear down relationships (Peyton & Seyoum, 1989; Hennings, 1992; Nistler, 1998; Shuy, 1985; Stanton, 1980). McCarthey’s (1994) study of a writing conference between teacher and student demonstrates that the interaction may be a less than positive experience for the learner. If dialogue journals have the potential to build relationships, does it not also mean that there will be some connections that create a negative bias for some students in the classroom? It seems appropriate to consider the negative impact that dialogue journals could have on students.

Only one study (King, 2001) partners the students together for writing in dialogue journals. The web-based discussion board could have negatively affected some students who have limited technological knowledge, and King does not address this potential restriction on the interchange of thought. To some extent, this question of potential
negative outcomes is rendered moot by the uniformly positive conclusions of his study.
The class discussions became livelier, course material was clarified, lengthier
conversations promoted greater analysis, and the overall environment became more
trustling as the bonds between students grew.

Teacher educators agree that reflective thinking among prospective teachers
requires a supportive environment in which individuals encourage and sustain each
other’s growth (Cochran-Smith, 2004; Zeichner & Liston, 1996). “Reflective teaching
entails a recognition, examination, and rumination over the implications of one’s beliefs,
experiences, attitudes, knowledge, and values as the opportunities and constraints
provided by the social conditions in which the teacher works” (Zeichner & Liston, p. 33).
Roe and Stallman (1994) acknowledged the possibility that the preservice teacher’s voice
could be overpowered by an instructor’s comments. They pointed out that in the case of a
preservice teacher who is reluctant to assume the role of an equal participant, the
preservice teacher could consider the comments by the instructor as definitive. This belief
could have the effect of reducing or even eliminating reflective practices. Again, the lack
of research in this area signals a need for more investigations into empowering preservice
teachers with a collegial support system, such as dialoguing with peers.

Garmon’s (2001) study suggested dialogue journals “appear to promote greater
self-reflection and self-understanding” (p. 47), but the small sample used limited the
generalizability of the results. Moreover, the sample was self-selected, and the students
who volunteered may have been the ones who liked to write and were already
predisposed favorably to journaling. Garmon (2001) began analyzing students’ comments
in journals by looking for details related to five different categories. He found that some
of the comments didn’t fit into these categories, so he created three broad categories of benefits, drawbacks, and suggestions. These categories were later split to identify specifics more clearly. Shifting his analytical approach in the middle of the study raises concerns about the viability of the results and whether the research was unduly geared toward identifying more benefits than drawbacks. This potential bias is further revealed when Garmon explained the lowest rated subcategories of benefits: “I would argue that the low rating received belies its true significance…. I routinely push my students’ thinking…. And I am convinced that my questions and comments stimulated good thinking on my students’ parts” (p. 48).

King (2001) reported several benefits that derived from using dialogue journals with preservice teachers, including the fact that their use promoted students’ reflective thinking, provided a window into their students’ thinking, and opened a line of communication between the instructors and their students. These benefits, however, with the exception of the last one, do not appear to be unique to dialogue journals. Although the number of participants in King’s study was quite large (109), the site of the study was limited to only one private, urban university. Although having the same lead professor for all the classes created uniformity in the instructional focus, the variability of responses to participants and the electronic nature of the medium may have affected the data collected.

Brinton, Holten, and Goodwin (1993) identified and categorized specific responses from teacher educators that promise to guide facilitating dialogue journals. However, the summary of the study does not include the methodology for the analysis of data nor the number of journals examined to arrive at the categories. The dialogue journals examined are limited to English as Second Language teachers, possibly
restricting the conclusions to the general preservice teacher population. A more specific focus on the particular components of dialogue journals that stimulate reflective thought appeared in Henning’s (1992) study. She suggested that without specific writing suggestions relating directly to the content to be learned, dialogue journals do not seem to encourage reflection. The emphasis on specific writing suggestions contrasts the consistent theme heralded throughout the research that reflective thinking among prospective teachers requires a supportive environment, which in turn motivates, encourages, and sustains growth. The possibility that the combination of writing suggestions and the dialogue journal format may contribute to a better understanding of developing a reflective stance in preservice teachers is sufficient reason to call for further research including both components.

Practice of Inquiry

Recent Trends in the Practice of Inquiry

Initial Forays into Inquiry

An expanding number of teacher education programs began to reexamine the predominate approach to teacher training and adopted some form of inquiry orientation early in the last decade. This approach grew in response to a growing recognition that

If prospective teachers do not understand that questions of “what” and “why” are as central to teaching as the understandably pressing questions of “how,” not only is the range and quality of their decision making drastically limited, but teaching can easily drift into a meaningless activity, for students as well as for teachers. (Zumwalt, 1991, p. 90)
Earlier in the 1980s, new forms of teacher inquiry built upon the work of teacher educators to lessen the divide between theory and practice, as well as to contribute needed insider perspectives to the knowledge base about teaching and learning (Lagemann, 2000). Lagemann’s analysis of educational research found that there was an active and ongoing conversation about practitioner inquiry. Cochran-Smith and Lytle (1993) argued:

Beginning as well as in-service teacher education programs are typically organized to disseminate a knowledge base constructed almost exclusively by outside experts. This means that throughout their careers teachers are expected to learn about their profession not by studying their own experiences but by studying the findings of those who are not themselves school-based teachers….We argue for a different knowledge base, one that is not designed so that teachers function simply as objects of study but also as architects of study and generators of knowledge. (pp. 1-2)

This line of inquiry pursued the notion that thought and subsequent action associated with the experience was the determining factor in the learning process (Johnston, 1994; Bednar, 1991; Gore & Zeichner, 1991; Williams, 1992). As a result, a consensus of thought in the early 1990s prompted researchers to question whether experience was an adequate base to build the knowledge necessary for teaching. (See Table 4.)
### Table 4

**Initial forays into inquiry**

<table>
<thead>
<tr>
<th>Author</th>
<th>Participants</th>
<th>Study Focus</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bednar (1991)</td>
<td>60 preservice</td>
<td>Reflective inquiry</td>
<td>Increased ability to discuss, reflect on professional knowledge</td>
</tr>
<tr>
<td></td>
<td>teachers</td>
<td>as self-questioning one’s level of understanding with specific reading concepts</td>
<td></td>
</tr>
<tr>
<td>Gore &amp; Zeichner (1991)</td>
<td>18 preservice</td>
<td>Action research to promote reflective practice</td>
<td>Little evidence of developing Reflective practice</td>
</tr>
<tr>
<td></td>
<td>teachers</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Johnston (1994)</td>
<td>2 preservice</td>
<td>Perspectives in student teaching</td>
<td>Need to focus on self-awareness during practicum</td>
</tr>
<tr>
<td></td>
<td>teachers</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Williams (1992)</td>
<td>Preservice teachers</td>
<td>Using naturalistic inquiry</td>
<td>better understanding of students, shift to responsive teaching, helps model learning process</td>
</tr>
</tbody>
</table>

Early in the 1990s, most research with preservice teachers and inquiry focused on projects and action research in the classroom. Researchers found mixed results. On the one hand, preservice teachers’ perspectives appeared to shift toward a more responsive teaching emphasis (Williams, 1992), yet other studies indicated that there was little evidence that preservice teachers understood the reflective process (Gore & Zeichner, 1991; Johnston, 1994). The practice of inquiry appeared to increase preservice teachers’ ability to discuss and reflect on professional knowledge and to make specific instructional
decisions (Bednar, 1991). Nonetheless, concerns were raised about whether the practice of reflection would continue after the semester ended (Bednar; Gore & Zeichner).

Two longitudinal studies (Williams, 1992; Johnston, 1994) collected data over a three-year period, focusing on the experience of the preservice teacher. The qualitative design in both studies relied on data such as field notes and interviews based on open-ended questions. In both studies, constant comparison of data guided the analysis of data. Johnston’s results found that preservice teachers believed that teaching was a passive process, and there was little evidence that they used experience to transfer understandings to other contexts or problems. This inability to transfer a student-centered philosophy between classroom situations highlighted the need for programs to focus on developing self-awareness in collaborative situations with preservice teachers. In addition, she observed that preservice teachers who did not seek to orchestrate particular experiences also held the widespread notion that learning to teach was accomplished through doing. This mindset was also characterized by the idea that trial and error, as a learning mechanism, illustrated the belief that “banking” experiences (simply spending time in the classroom) educates a teacher (p. 204). Johnston suggested that “frequent discussions before, during, and after the student teaching experience are necessary to help them [preservice teachers] ascertain what can be or has been learned from their experiences” (p. 206).

In Johnston’s (1994) study, the interviewer was neither the supervisor of the preservice teachers nor the evaluator, minimizing the power differential that could have an impact on the candid responses during the interview process. Williams (1992), however, supervised the preservice teachers and later followed them into their first
teaching experience. Yet, she does not address any limitations to the study, including the impact of supervising the participants. Williams found that when novice teachers saw themselves as learners or researchers and spent effort gaining understanding of their students and their students’ perspectives, they became less attached to the pedagogical techniques and moved quickly to a responsive and reflective way of thinking about teaching. In an effort to facilitate the use of experiences in the classroom as the context for developing a student focus, they kept field notes, observed students, and interviewed each other as they completed their student teaching internship.

In a comparable study, Bednar (1991) operationalized reflective inquiry as ongoing self-questioning by asking students to reflect and discuss their level of understanding about reading. As the semester unfolded, the students grew in the ability to discuss and reflect on professional knowledge. In this shorter, one-semester study, Bednar’s comprehensive analysis included a quantitative component in which the thought units identified in the qualitative analysis were collapsed and later classified according to a scale. Independent readers of the data arrived at 94% agreement when identifying thought units. Preservice teachers expanded their risk-taking behaviors after they had reflected upon their own instructional decisions. The reflective writings required the preservice teachers to address both content and personal concerns, thus compelling them to spend time in careful thought. Through the inquiry focus, their perspective changed from that of a passive observer merely assigned to spend time in the classroom to that of a responsive teacher confident of instructional decisions. The preservice teachers also became more flexible in their approach to teaching techniques, relying more on the response to specific need than to a programmed curriculum.
Studies that focused on self-questioning (Bednar, 1991; Williams, 1992) led to preservice teachers increasing the quality of questions. Researchers agreed that through the use of field notes (Williams) and through the use of open-ended questions (Bednar), the preservice teachers were better able to discuss and reflect on professional knowledge and their students. The techniques used by Williams to model reflective writing and the focus by Bednar on using reflective writing to push self-questioning may have provided the developmental framework that permitted the transfer of experience to new situations, a transfer that Johnston (1994) found lacking.

Gore and Zeichner’s (1991) results using action research appeared to contradict the promising transfer of action research and found the effect resulted in little actual development of reflective practice. The students in the study did report some beginning steps toward implementing reflective practice when they assessed the impact of the action research. The preservice teachers reported that the action research helped them become more thoughtful about teaching, helped them become more aware of the gaps between their beliefs and practices, and helped them become more aware of their students’ needs. In these early studies, there are few if any references to the importance of the placement of the preservice teachers in classrooms where the mentor teacher is a learner, questioning and examining his or her practice. Johnston’s (1994) study refined the direction for inquiry as a tool for facilitating reflective practice by pointing out that such an effort must include a component of self-awareness during the practicum. In this developmental process, learning how to teach gradually transitions to learning from teaching, and implicit in the transition is placement of preservice teachers with mentors who understand the relationship of collaboration (Cochran-Smith, 1999).
In recent years, “action research represents, formally, what reflective teachers do informally, and that is study about practice. It [action research] is a part of the quest to become self-conscious about teaching” (Bullough, & Gitlin, 1995, p. 200). Engaging teachers in productive reflection is a necessary precondition to developing this skill of continual self-assessment. A number of approaches examine the use of inquiry with in-service teachers: a project that considered both the development and research on the integration of technology into urban Professional Development Schools (PDS) (Sanchez & Nichols, 2003); an examination of how teachers think about research through a questionnaire at the beginning and end of an inquiry oriented program (Gitlin, Barlow, Burbank, Kauchak, & Stevens, 1999); a three-year case study of an elementary school implementing the use of portfolios as a part of a school-wide reform effort to explore teachers’ conceptions of their own professionalism (Ellsworth, 2002); and a qualitative research project by the end of which students have generated a proposal, paper, and research notebook (Breidenstein, Liberatore, Lioi, Miro, Weber, & Stoeck, 2001). (See Table 5.)

Table 5

<table>
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<tr>
<th>Author</th>
<th>Participants</th>
<th>Study Focus</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Breidenstein et al. (2001)</td>
<td>Inservice teachers</td>
<td>Qualitative research project</td>
<td>Changed stance to inquirers in classroom, collegial, pedagogical, self-inquiry</td>
</tr>
</tbody>
</table>
Researchers found that the acquisition and development of reflective teaching skills practiced in inquiry projects resulted in skills improvement. Reflective teaching skills strengthened teacher involvement in reflection and heightened sophistication of technological integration (Sanchez & Nichols, 2003), increased teacher ownership of learning as well as expanded learning opportunities for students (Ellsworth, 2002; Chandler-Olcott, 2002), increased the ability of the teachers to learn through active discovery at their own rate and according to their own needs and interests (Breidenstein et al., 2001, Chandler-Olcott; Ellsworth); and increased engagement in ongoing learning community activities that built a trusting environment and allowed preservice teachers to revisit practice and learning expectations (Sanchez & Nichols; Gitlin et al., 1999; Ellsworth; Breidenstein et al.).

Several longitudinal studies (Chandler-Olcott, 2002; Ellsworth, 2002; Sanchez & Nichols, 2003) included common threads of self-designed research questions, volunteer
participation, and over time, the benefits of extended guided practice of inquiry within a community of learners. New insights about professional development needs resulted from constant reflection and, finally, the inquiry groups promoted collegiality (Sanchez, & Nichols; Ellsworth). These researchers also report that as these groups of teachers reflected on their practices and assumptions about teaching, their learning focus became more purposeful and action oriented. Still, little is discussed about the relationships of group members prior to the research. The freedom to challenge group members and question accepted teaching practices could have a positive effect on the results if the teachers had already experienced collaborative group work. These same group members volunteered, which may indicate a propensity toward inquiry at the outset of the study influencing the results. Qualitative analyses triangulated data from interviews, surveys, multiple classroom documents, and field notes (Chandler-Olcott; Ellsworth; Sanchez & Nichols), which provided multiple views of the perceptions held by the group members.

The role of the researcher differed significantly from one study to another. Gitlin et al. (1999) maintained the role of an outside researcher, and the data analysis relied on frequency of response to determine themes. This method resulted in more data related to the participant’s actual experience than garnered themes from categories arrived at from meaningful units. Other researcher roles were developed over time (Chandler-Olcott, 2002; Ellsworth, 2002; Sanchez & Nichols, 2003), as the researchers became participants in the process. This resulted in a trusting environment that contributed rich discussions and an insider view of the experience, yet also made it more difficult to determine patterns in the data.
Ellsworth (2002) suggested that portfolios provided the following necessary conditions for inquiry: effective leadership, shared decision-making, opportunity for collaboration, time to focus and reflect, and follow-up opportunities. Gitlin et al. (1999) agreed that the inquiry structure requires that the teacher negotiate the problem by recognizing the uniqueness of each classroom community, and that problem solving is context-specific. This perspective results in “insights that reverberated far beyond the immediate context of their individual research questions and thus improved their capacity to teach as well” (p. 33). In this way, teacher researchers construct understandings of their classroom practices, rather than relying on external authorities, such as textbook publishers, to direct their work (Cochran-Smith & Lytle, 1993). However, the specific questions the teachers researched were missing. Some studies suggested that self-selection of questions studied must have some basis of prior knowledge (Chandler-Olcott, 2002; Ellsworth, 2002; Sanchez & Nichols, 2003), yet the Gitlin et al. (1999) study stands alone in identifying the need to identify, use, and build upon preservice teachers’ previously held beliefs.

Breidenstein et al. (2001) found that research projects foster an inquiry stance in teachers, and outcomes of teacher inquiry fell into three categories: self-perception as experimenters in the classroom and the consequential extension of the inquiry approach; use of collegial inquiry, which in turn promoted increased collegial interaction; and ability to carry over curricular and pedagogical procedural insights as they related to gathering data. This also increased the tendency to use reflection on curricular experiences later in their teaching careers and the use of self-inquiry to provoke an intense focus on themselves as teachers and learners. Although the outcomes imply a
coherent approach to inquiry, the conclusions fall short of describing a specific structure for developing the strategies that the inquiring teachers employed. Chandler-Olcott (2002) suggested that learning inquiry requires comprehensive strategies, and illustrated this need for a framework by quoting Clay (1991) and substituting the word “teach” for “read” in her work:

> Once a teacher (reader) is using a set of strategies which enable him to monitor his own teaching (reading) and check one source with other sources in a sequential problem solving process, then engaging in these activities serves to extend the potential of the teacher to engage in more difficult activities and he assumes a major responsibility for learning to teach by teaching. (p.317)

Inquiry Explored Through Interactions

Many investigations into inquiry as a conduit for developing reflective practice in preservice teachers depend on both written and verbal interactions (Table 6). Researchers who investigated the links between inquiry and observations in practice used a variety of research tools, including daily journal writing as an opportunity for inquiry (Brown, Harte, Hilson, Kleine, Malone, Niblette, Toole & Walker, 2002; Olsen, 2000), a collection of data in a “dual journal” (Windschitl, 2002), the use of a narrative or story (Conle, 1996, p. 301), the use of a project as a part of the student teaching experience requiring writing a daily reflection, the use of videotape analysis, use of a program portfolio for presentation (Carroll & Yarger-Kane, 2000), and case writing (Risko, Osterman, & Schussler, 2002).
Table 6

<table>
<thead>
<tr>
<th>Author</th>
<th>Participants</th>
<th>Study Focus</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bray (2002)</td>
<td>(23) Inservice teachers</td>
<td>Groups investigating specific question related to classrooms</td>
<td>Renewed self-improvement, networking, improving school culture</td>
</tr>
<tr>
<td>Brown et al. (2002)</td>
<td>(16) science teachers</td>
<td>Implementing an inquiry based instructional model</td>
<td>Asking more complex questions, synthesizing, connective thinking</td>
</tr>
<tr>
<td>Conle (1996)</td>
<td>(4) preservice teachers</td>
<td>Practical knowledge analyzed through experiential storytelling</td>
<td>“Resonance” linking experiential contexts to narrative</td>
</tr>
<tr>
<td>Carroll &amp; Yarger-Kane (2000)</td>
<td>Preservice teachers</td>
<td>Impact of inquiry based assignments</td>
<td>Project must be created jointly include choice, result in a product, and invite mentor teacher involvement.</td>
</tr>
<tr>
<td>Olsen (2000)</td>
<td>Preservice teachers</td>
<td>Longitudinal narrative inquiry</td>
<td>Inquiry must emerge from own Narratives respect invites inquiry</td>
</tr>
<tr>
<td>Risko et al. (2002)</td>
<td>Preservice teachers</td>
<td>Case study and writing as inquiry project</td>
<td>Increases in knowledge acquisition, shift to flexible and expanded lesson options, and reconsidered beliefs</td>
</tr>
<tr>
<td>Windschitl (2002)</td>
<td>(6) preservice science methods</td>
<td>Use of inquiry in practicum dual-entry journals</td>
<td>Increased understanding of inquiry as process</td>
</tr>
</tbody>
</table>

The analyses of data in the aforementioned studies consistently used interactive techniques as tools for encouraging inquiry and have resulted in overlapping themes and
conclusions. Conle’s (1996) research found that resonance (an empathetic viewing of another’s experience) fosters an emotional interaction. This interaction prompts connections that bridges differences and creates similar perspectives alongside a concrete event. Ultimately, the experience provides the educational setting necessary for inquiry into the core beliefs and understandings of preservice teachers. In the same way, Olsen (2000) found that because the narrative version of knowledge construction is transactional, experiences facilitate the reconstruction of beliefs as each person shapes his or her own knowledge and is similarly shaped by the knowledge of others. Reflective writing based on experiences creates knowledge that is socially constructed in situations as people share their ideas and stories with others (Dewey, 1932; Vygotsky, 1978).

Olsen also found that the direct questioning of preservice teachers’ feelings of anger, confusion, or frustration would challenge their own beliefs and their commonsense understandings, as well as their personal and professional knowledge of teaching and learning. In this way, she refined the process of constructing new knowledge by facilitating conversations. Brown et al. (2002) added, “What is even more important is the type of questions the teacher poses during the inquiry itself. Skill in questioning will permit teachers to demonstrate the complexity involved in learning to do science, as well as learning about science” (p. 38). Bray (2002) also found that in the beginning of the process, being a member of the research was difficult because participants tended to defer to the researcher. Yet as the study progressed, the question pursued became the focus, shifting challenges and comments away from participants and toward intense interrogation of the question. This intense focus invigorated individual teachers’ renewed efforts in self-improvement, which in turn prompted a network of teacher interaction
(Bray). The networking resulted in changes in teachers’ classroom behavior and supported broader cultural and structural changes school wide. Inviting inquiry into the preservice teachers experience may be the avenue that indirectly affects the culture of schools (Bray).

In one of the few studies to link student achievement to inquiry, Brown et al. (2000) identified some gains in student learning. Before inquiry, classroom students gave the right answer, but they didn’t necessarily understand the concept. However, as the inquiry method was modeled, students began to ask more complex questions. Through the process many students enhanced their understanding of the course material by synthesizing and applying knowledge, listening to peer analysis, and responding with their own arguments. Student artifacts displayed critical, creative, and connective thinking when defending their knowledge. Brown et al. suggested that instruction based on inquiry opened doors for spontaneity and moments of insight, and more preservice teachers were motivated to participate in lessons. However, the study also found that for those students without the background knowledge of the science concept, it was almost impossible to gain their participation in the inquiry process. These promising conclusions were countered by conflicting results showing that preservice teachers expressed uncertainty and concern due to their lack of experience with inquiry based instruction (Brown et al.). In addition, previously academically successful students found the uncertainty of inquiry troublesome, implying the need for explicit guidance when introducing inquiry, but the study does not discuss how this problem was addressed.
Windschitl (2002) concluded that “journaling must be strategically structured to prompt reflection on key aspects of the students’ experiences and when combined with key questions from the instructors (or their peers), to perturb the equilibrium of the students’ world views” (p. 139). In order to monitor and guide reflection, researchers often turn to journaling (Olsen, 2000; Windschilt, 2002), experiential storytelling (Conle, 1996), case studies (Risko et al. 2002), and projects (Carroll & Yarger-Kane, 2000) as the means of prompting and facilitating reflective practice. Although Johnston (1994) identified the need for accessing the prior experience and taken-for-granted assumptions before embarking on inquiry, Olsen (2000) stands alone in highlighting the important component of interaction to confront pre-existing beliefs held by preservice teachers. However, missing in her discussion on interaction is inclusion of other mediums, such as e-mail and Internet discussion boards, all of which could offer new avenues to prompt reflective practice. Conle’s (1996) study using experiential storytelling demonstrated the use of an interactive medium that could result in reflective behaviors as the experience is revisited and mulled over in a storytelling format. Conle called for creating holistic teacher development through melding emotions and concrete practical experiences as an avenue to explore beliefs and understandings. Unfortunately, her work was limited to a small sample of only four students, and the students selected for the study had already been invited to be participant observers in a similar course. The narrow basis for this selection calls into question whether the results can be extrapolated to the larger preservice teacher population. Risko, Osterman, and Schussler (2002) expanded the number of students studied in a similar study examining the preservice teachers’ case writing to identify problems they considered important, and gain insight into the
perspectives that guided their problem solving. Using initial and final case studies analyzed by the preservice teachers, Risko et al. coded and analyzed data independently by each researcher. Overall, Risko et al found that the process of developing a case study or as Conle described it “experiential storytelling,” produced substantial changes in knowledge acquisition and depth of reasoning that occurred over the semester (p. 301).

Olsen (2000) reported that for inquiry to develop, preservice teachers needed to identify an issue emerging from their own narrative or experience, and inquiry must be understood as coming from an open-minded rather than a judgmental position. Carroll and Yager-Kane (2000) initially provided the study topics and confirmed Olsen’s conclusions that without topic choice, the preservice teachers’ investment in the inquiry was severely limited. Despite the apparent support, however, Carroll and Yarger-Kane’s research analysis was both informal and impressionistic. This lack of a systematic analysis raises questions about the viability of the conclusions. These researchers adjusted follow-up research to include the preservice teachers’ choice in topic, but the choices were still based on the attitudes measured in the first study. Alternatively, conclusions may be less dependent on topic choice than whether the pre-existing attitudes and assumptions of the preservice teachers were adequately accessed. Similarly, Windschilt’s (2002) conclusion reflects the notion that linking preservice teachers’ beliefs to the inquiries is a critical first step in facilitating inquiry into practice. The reflective light that each professor shines on pre-existing beliefs illuminates future considerations for inquiry. Conle (1996) called for creating holistic teacher development through melding emotions and concrete practical experiences as an avenue to explore beliefs and understandings.
Interactive techniques are not seen as a finale in themselves, but teacher educators continually reassess the value of the techniques in light of the evidence. Some of the results indicate that the mentor teacher’s involvement and investment is key to inquiry projects implemented effectively in the classroom (Carroll & Yarger-Kane, 2000). Those participants who used inquiry regularly in their practicum were the same students who had previous long-term research experiences involving authentic investigations. There was no clear correlation between regular inquiry users and those participants who reflected deeply, or had more authentic views of inquiry (Windschitl, 2002). In other words, preservice teachers suffer measurable harm as a result of a miseducative experience, either by themselves ignoring the important role of the mentor teacher or the mentor, or by the mentor not giving careful attention to each preservice teacher as an individual with unique experiences.

Inquiry Relating to Cultural Awareness

According to recent U.S. Department of Education statistics, student enrollment proportions are changing along racial lines. Sixty-four percent of students are European-American while the other thirty-six percent are distributed among minority groups: 17% African-Americans, 14% Latinos, 4% Asian-Pacific-Islander-Americans, and 1% Native-Americans (Gay & Howard 2000). Current projections are that today’s minority groups will increase as a combined total to approximately 50% of the entire student population by the year 2025 (McFalls & Cobb-Roberts, 2001).

Comparing the demographics of the student population to the demographics of the preservice teacher population, Shultz, Neyhart, and Reck (1996) noted that the profile for the typical teacher education students of the future is that of a predominately white,
female, monolingual from rural or suburban communities with limited cultural experiences. Gay and Howard (2000) make similar observations; thus, the diversity of preservice teachers is appearing to trend opposite to the demographic predictions of the student population. This trend is already evidenced by Gay and Howard who stated “the number of African-American teachers declined from a high of 12% in 1970 to 7% in 1998” (p. 1).

The present educational system has proven inadequate in addressing the cultural and linguistic needs of children who are not a part of the racial and language mainstream (Delpit, 1988; Heath, 1983). Ladson-Billings (1999) identifies this as the “perversity of diversity” in teacher education where White is normative and diversity is equated with depravity, disadvantage, and deficiency (p. 216). Cochran-Smith (2004) stated that the problem of regarding diversity as a deficit invites the perspective that the inevitable solution to the problem is assimilation. Many preservice teachers do not share the cross-cultural understanding needed to meet the needs of an increasingly diverse student population, and their beliefs may affect how they understand multiculturalism (Dee & Henken, 2002; Jackson, & Wasson, 2003; Sleeter, 1992; Van Hook, 2002).

Through personal observations, Gay and Howard (2000) found that preservice teachers view diversity as a problem rather than a resource to be tapped for student expression and growth. This lack of understanding can be recognized in resistance, which often takes “a variety of forms, including fear, denial of the verity of ethnic and cultural diversity in teaching and learning, and reluctance to confront issues of racial, ethnic and cultural diversity directly” (p. 3). There are no universal strategies for teaching about cultural diversity or for teaching children who are culturally and linguistically different
from one another, and it is “not advisable for teachers or children to mistake color-
blindness for educational equity or to learn the ‘characteristics’ of people” as a strategy
for multicultural education (Cochran-Smith, 1995, p. 494). Cochran-Smith explained that
such a narrow focus often results in bolstering biases and stereotyping:

Instead, I propose that what we need are generative ways for prospective
teachers, experienced teachers, and teacher educators alike to work
together in communities of learners—to explore and reconsider their own
assumptions, understand the values and practices of families and cultures
that are different from their own, and construct a pedagogy that takes these
into account in locally appropriate and culturally sensitive ways (Cochran-

In order to prepare preservice teachers as culturally sensitive educators, Cochran-
Smith (2004) proposed systematic and critical inquiry. Table 7 summarizes the research
on inquiry using a multicultural lens to guide preservice teachers toward an examination
of their beliefs and practices.

Table 7

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<thead>
<tr>
<th>Author</th>
<th>Participants</th>
<th>Study Focus</th>
<th>Results</th>
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<tbody>
<tr>
<td>Bollin (1996)</td>
<td>Preservice teachers</td>
<td>Tutoring project to study racial sensitivity through project journals</td>
<td>Improved understanding of themselves as racial beings</td>
</tr>
<tr>
<td>Fecho et al. (2000)</td>
<td>Preservice teacher reading methods</td>
<td>Inquiry into issues of injustice, and inequality</td>
<td>Provided range of voices, invited examination of dominant cultures authority is shared</td>
</tr>
</tbody>
</table>
Small-scale studies initiated by preservice teachers have increased opportunities for them to learn about the children and families in the schools (Shultz, Neyhart, Kelley, & Reck, 1996; Wilhelm, Cowart & Hume, 1996). Wilhelm et al. plunged preservice teachers into a community experience by assigning a “scavenger hunt” intended to introduce the social, economic, and cultural organization of their assigned school. Debriefing with a faculty member helped the preservice teachers probe their feelings, attitudes, and new insights about the area and their future students. In addition, preservice teachers were assigned an observation form that highlighted preservice teacher interactions with students. The form required that the preservice teachers record each time they called on, observed, smiled at, or talked with individual pupils (C.O.S.T. chart).

In a similar approach to self-examination, Bollin assigned weekly journals in which preservice teachers recorded a factual description of a tutorial session with a low socio-economic status (SES) student. An important component to the journal was a self-evaluation of personal reactions to the experience. These journals prompted “self-reflection and resulted in much spontaneous examination of prior negative beliefs and
attitudes toward minorities” (p. 70). Initial concerns related to the poor neighborhoods, language barriers, and being welcomed into the children’s homes gave way to the realization that their stereotypes were inaccurate. Content analysis of the journals indicated that the preservice teachers demonstrated an increased understanding of themselves as racial beings and the complexities of teaching in culturally diverse classrooms. These active prompts promoted self-awareness and understanding from within themselves as they reconsidered their own cultural preconceptions.

Contradicting Bollin’s findings, Wilhelm et al. (1996) found that preservice teachers demonstrated significant change in knowledge-based items in a final questionnaire but no significant differences in the attitudinal items. However, these preservice teachers expressed increased confidence in their abilities to plan for multicultural education, evaluate materials for bias, and understand the basic knowledge of English Speakers of Other Languages (ESOL) students.

Fecho, Commeyras, Bouchereau-Bauer, and Font (2000) found that their participation in elucidating the assumptions and beliefs held by preservice teachers, rather than creating a safe and non-threatening environment, produced the uncertainty or disequilibrium needed for the first step of inquiry. Although this conclusion appears to contradict the notion of establishing a safe environment identified earlier in this review, these researchers confirm the notion that in the surprise of facing assumptions and drawing attention to pre-existing beliefs, preservice teachers begin the process of rethinking their previously held notions about culture. These researchers made the distinction that a safe environment still can include confrontation of thought and that inquiry begins with that conflict. Moreover, Fecho et al. found that although authority
complicated the relationship, the act of acknowledging the power, yet embracing the classroom as a contact zone, still provided room for ambiguity and uncertainty, which in turn contributed to the depth of discussion and reflections. Even with rich interaction, exploring beliefs and assumptions research found that the newfound knowledge did not always translate into actual practice when preservice teachers encountered the constraints of the classroom culture and the established curriculum of the mentor teacher (Wilhelm et. al., 1996).

Shultz et al. (1996) stated that the process of clarifying the beliefs of preservice teachers within the frame of diversity is essential because preservice teachers’ understandings of diversity cannot “evolve in isolation, and left to themselves, students tend to solidify the anti-diversity beliefs they brought to the program” (p. 23). Shultz et al. examined 300 preservice teachers’ attitudes toward culturally diverse students and teaching in an urban environment. Data were analyzed to detect emerging trends using a comparative method that allowed the data to be continuously examined and compared. Shultz et al. found that preservice teachers’ responses regarding learning ability and behavior attributed negative qualities to a difference, and although they recognized that urban students were similar to them, the similarities were qualified and minimized. Additionally, prejudices and stereotyping were often cited as factors inhibiting student achievement; yet, the preservice teachers failed to identify themselves as part of the problem. Although learning to deal with personal and professional barriers can be a daunting task, university supervisors of preservice teachers have a mandate from local school districts, the National Council for Accreditation of Teacher Education (NCATE),
parents, and, most importantly, the students to guide preservice teachers into a
comprehensive understanding of multicultural education.

*Inquiry as an Instructional Model in the Content Areas*

The National Committee on Science Education Standards and Assessment (1996) asserted that “inquiry into authentic questions generated from students’ experiences is a
central strategy for teaching science” (p. 21), and that students should “engage in aspects
of inquiry as they learn the scientific way of knowing the natural world, but should
develop a capacity to conduct inquiries” (p. 23). The science community has made
“authentic science” activities for K-12 students a priority in the American school agenda
(NRC, 2000), but research indicates that inquiry has not yet become a characteristic of
science classroom practice (Wells, 1995). With the emphasis on a true inquiry-based
question defined as a question to which the outcome or answer is unknown (Benson,
1998), preservice teachers have been assigned a variety of projects to provide them with
“opportunities, support, and challenges to become reflective, critical, and creative
thinkers, to grow intellectually, to engage in a process of constant transformation” (Hill,
2000, p. 51). Researchers investigating the use of inquiry as an instructional model agree
with Benson that guiding preservice teachers into inquiry through projects practicing the
method will in turn affect the instructional strategies used with students in the classroom
(Benson; Bessier, 2000; Hill; Kelly, 2001). Several studies focused specifically in the
area of science instruction to examine inquiry as an instructional model (Bianchini &
Colburn, 2000; Howes, 2000; Reiff, 2002). The assigned projects revolved around three
main components of inquiry; developing questions, researching the questions, and
making judgments (Benson; Carlson & Parry, 2003; Kelly). (See Table 8.)
<table>
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<tr>
<th>Author</th>
<th>Participants</th>
<th>Study Focus</th>
<th>Results</th>
</tr>
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<tbody>
<tr>
<td>Benson (1998)</td>
<td>Preservice teachers</td>
<td>Structured questions projects</td>
<td>Project completion focused generalizations not rote items</td>
</tr>
<tr>
<td>Bessier (2000)</td>
<td>(22) preservice teachers</td>
<td>Course of study on action research</td>
<td>Richer understanding of educational practice due to action research.</td>
</tr>
<tr>
<td>Bianchini &amp; Colburn (2000)</td>
<td>Preservice teachers science methods</td>
<td>Use of inquiry focus as method for engaging preservice teachers</td>
<td>Knowledge of science essential to instruction, teacher has pivotal role</td>
</tr>
<tr>
<td>Howes (2002)</td>
<td>Preservice teacher science methods</td>
<td>Preparing science teachers as teachers of all, “research as praxis”</td>
<td>Identified strengths: propensity for inquiry, attention to children, awareness of school, society relationships</td>
</tr>
<tr>
<td>Kelly (2001)</td>
<td>(83) Preservice teachers</td>
<td>Immersion in a spiral-based inquiry approach to math</td>
<td>Increased confidence in content and ability to teach math</td>
</tr>
<tr>
<td>Reiff (2002)</td>
<td>48 Science methods preservice teachers</td>
<td>Inquiry as a method for teaching science, journal reflections</td>
<td>Improved understanding of inquiry as method and practice</td>
</tr>
</tbody>
</table>

Bianchini and Colburn (2000) investigated the use of inquiry to teach the nature of science to preservice teachers. One professor and 15 students participated in the study in an urban university in Southern California. Implementing inquiry-oriented units focused on exploration, concept introduction, and application, Bianchini and Colburn
found that knowledge of science concepts was essential to instruction. In other words, the teacher was instrumental in fostering student understanding of the nature of science. Data analysis of videotaping small group inquiries and whole class deliberations highlighted the impact of the teacher’s guiding questions. This pivotal role was not explored in the study, and more research is needed to determine the “range and depth of knowledge, professional experiences, and support mechanisms necessary for teachers to adequately understand and effectively teach the nature of science through inquiry” (Bianchini & Colburn, p. 204). Interestingly, the teacher as researcher role was able to provide greater insight into the contexts of the teacher-student exchanges, and the teacher was able to critique his own words and actions more constructively.

Adding to the body of research on inquiry in science methods classes, Howes (2002) studied four preservice teachers enrolled in an elite private college in a multiracial, multiethnic city. Data sources for the study consisted of assignments in the science methods class, e-mail communications, and interview conversations. In the three themes identified as strengths in learning to teach, Howes proposed that building on such strengths could help move preservice teachers toward better practice in the teaching of science. She identified these strengths as propensity for inquiry, attention to children, and awareness of school/societal relationships, with suggested ways to build on these strengths to support teacher growth. Howes found that preservice teachers were more confident with open-ended inquiry than science content knowledge. This propensity for inquiry models the scientific inquiry that is absent the rigidity of predetermined truths and procedures. When the preservice teachers were faced with encouraging open-ended questions, they were relieved from the weight of being the controller of all knowledge in
the classroom. The process not only empowered the students in the classroom, but also built confidence in the preservice teachers as they together searched for answers to genuine questions. Preservice teachers who used inquiry as a method for science instruction reported that they were less likely in the future to reproduce the practices (of lecture and direct instruction) they experienced as students (Howes). In a comparable study using an inquiry method for instruction, Benson (1998) concluded that linking an inquiry project with social studies as the domain subject helped preservice teachers focus on generalizations rather than rote items. Benson encouraged students enrolled in social studies methods classes to develop an inquiry lesson. Benson emphasized the importance of pushing students to understand the “bigger issues by asking them the right questions. … If we ask only that our students know the capital of Minnesota, rather than asking them why the capital of Minnesota is located so close to the border of eastern border of the state, we keep them from learning as much as they can” (p. 230). In this way, by basing instruction in the students’ thinking, the preservice teachers were more attentive to the questions and observations of the children they taught. Unfortunately, the data used to arrive at this conclusion were garnered from a single reflective essay at the end of the semester, and the analysis appeared to be holistic interpretation. A follow-up study with more preservice teachers and a more rigorous and systematic approach to data analysis would engender more confidence in the conclusion.

However, Reiff (2002) found that lack of experience with scientific inquiry limited preservice teachers’ tendencies to use the technique in the classroom. Reiff examined preservice teachers’ use of inquiry as a method for instruction within the practicum experience. He compared three journal reflections that the preservice teachers
wrote throughout the semester based on the experience of using inquiry as a technique in the classroom. Reiff found that preservice teachers refined their concept of questions to include and invite multiple solutions, and they realized that teaching using inquiry involved a high level of organization, planning, and structure. In addition, the preservice teachers found that implementing inquiry in the classroom sparked their students’ interest, prompting more genuine investigations. This improved understanding of inquiry countered results showing that preservice teachers expressed uncertainty and concern due to their lack of experience with inquiry based instruction (Benson, 1998; Howes, 2002).

Kelly (2001) found that offering preservice teachers concrete explicit guidance in inquiry methods resulted in preservice teachers employing strategies for future practice such that their attitudes and beliefs as reflected on pre and post surveys appeared to have changed. Kelly’s study indicated that the use of inquiry-based science approaches appeared to have the effect of spring boarding student confidence of teaching in the content area. Interestingly, the pretest score on the direct instruction method indicated that the preservice teachers initially felt that the lecture-based direct instruction approach was most important. After participating in inquiry as a method for instructing science, however, the preservice teachers scored direct instruction significantly lower. The shift in their attitude toward lecture-driven instruction indicates that concrete guidance using inquiry served as the catalyst for effective changes in the instructional method of choice. Finally, much of the research with inquiry and preservice teachers only lasts one semester (Bianchini & Colburn, 2000; Benson, 1998; Kelly, 2001), and questions remain about the lasting effect of change after such a short period of time (Bessier, 2000; Kelly).
However, researchers also found that a supporting mentor coupled with the concrete nature of a project had a greater impact on preservice teachers than the time spent implementing an inquiry project (Bessier; Bianchini & Colburn, 2000; Howes, 2002; Kelly, 2001). Bessier (2000) and Hill (2000) both found that a key factor impacting implementing an inquiry project was the intellectual functioning of the teacher. Intellectual functioning is an important factor in the teacher’s ability to grasp the students’ intellectual offerings and engage the children in further learning. Because intellectual functioning is a determining factor in the quality of learning and teaching, Hill (2000) studied preservice teachers’ intellectual functioning in terms of developing critical and reflective judgment. The results of Hill’s experimental study using inquiry methods indicated a significant increase in intellectual responses over a 15-week semester. Although the results show an increase in intellectual growth as a result of participating in the program, Hill acknowledged that growth in the experimental group might have been the result of a pre-existing disposition toward growth.

Similarly, when Bessier (2000) researched the impact of an educational inquiry course, she found that preservice teachers are “capable of complex activity … to gain richer understandings of educational practice” (p. 8). In her study, each of the 22 preservice teachers was successfully able to complete a cycle of posing a question, gathering data, analyzing data, and arriving at a conclusion. Bessier corroborated Hill’s (2000) conclusion that teacher educators need to provide more opportunities for preservice teachers to view themselves as intellectually capable and practically responsible for posing and solving problems as practitioners. “Preservice teachers need to define themselves as thinkers, learners, practitioners, and leaders in the field of
education” (Bessier, p. 8), and research using inquiry in the content areas demonstrates one avenue that exists with the rich possibilities for teacher educators.

Chapter Summary

The issue of preservice teacher preparation is complex. After twenty years of research focused on the issue of how preservice candidates learn to teach, the data suggest that preservice teachers enter the profession of teaching with experiences, knowledge, dispositions, beliefs, attitudes, and perceptions, all of which influence their expectations and subsequent teaching behaviors (Johnston, 1992; Lortie, 1975; Minor, Onwuegbuzie & Witcher; 2002; Whitebeck, 2000). In the apprenticeship of observation, beliefs about teaching are developed over many years of watching the act of teaching (Lortie, 1975). As a result of the “apprenticeship,” preservice teachers believe they already know what teaching is about before entering the classroom in the teacher’s role (Pajares, 1992; Richardson, 1996). When synthesized, the research reveals that development of reflective teaching abilities requires that the core beliefs held by preservice teachers be examined in the light of their practicum experiences. Doing this initiates the cyclical process of reflective teaching (Cruickshank, 1985).

Researchers also agree that reflection, whether seen as developmental or as growth levels, is an essential component in the development of preservice teachers as professionals (Cruickshank, 1985; Hatton & Smith, 1995; Kemmis, 1985; Tsangaridou & Sullivan, 1994; Van Manen, 1977; Zeichner & Liston, 1987). As the teacher acknowledges the influence of specific actions of his or her work, new sensitivities are developed that entail recognition, examination, and rumination over the implications of
one’s beliefs, experiences, attitudes, knowledge, and values (Bray, 2002; Jackson & Wasson, 2003; Jones & Vesilind, 1996; Sleeter, 1992; Zeichner & Liston, 1996).

One approach to developing the skill of reflective teaching has been inquiry into practice. Research results from implementing inquiry projects with preservice teachers showed increasing teacher ownership of learning through active discovery according to their own needs and interests, expanding learning opportunities for students, constructing learning communities in a trusting environment, and developing relationships that allowed the preservice teachers to revisit practice and refine learning expectations for students (Sanchez & Nichols, 2003; Gitlin et al., 1999; Ellsworth, 2002; Breidenstein et al., 2001).

Cochran-Smith (1991a) also reported on the effectiveness of inviting preservice teachers into reflective discourse by redefining the role of the preservice teacher to one in which they “construct their own emerging theories of teaching and learning, call into question conventional practices, write about their work, and participate with their experienced mentors as inquiring professionals” (p. 305). Participating in this community of inquiry necessitates that each participant have a hypothesis related to the answer, but still remain “open-minded” to new insights and further interrogation (Dewey, 1933; Olsen, 2000; Lave & Wenger, 2003; Vygotsky, 1978). Steele (1994, p. 31) adds that “cognitive conflict” causes preservice teachers to confront their preconceptions and reflect on alternative options, thus extending their thinking. Splitter and Sharp (1995) further defined a community of inquiry as a cooperative attempt to inquire into problematic issues with an emphasis on dialogue. The community encourages analysis, reflection, and critical analysis to make sound judgments based on asking one’s own
questions. Although research has shown that this approach is a highly effective method of learning, precise linkages between inquiry and the community of inquiry are not yet clear.

Windschitl (2002) found “journaling must be strategically structured to prompt reflection on key aspects of students’ experiences and combined with key questions from the instructors (or their peers) to perturb the equilibrium of the students’ world views” (p. 139). Researchers also acknowledge the need for writing to be socially and culturally situated, and that “talk” is an essential component of composing text, regardless of the ages of the students (Vygotsky 1978; Bakhtin, 1986; Clay, 1975; McCarthey, 1994). Kreeft (1984) concluded that dialogue journals are a “natural bridge from interactive communication to reflective thought and subsequent growth” (p. 149). Stanton (1980) suggested that by creating a dialogue setting, the teacher supports the acquisition of complex reasoning skills. The research on dialogue journals indicates that there is a context available that meets the challenges of promoting a supportive environment that in turn motivates, encourages, and sustains growth for students at the university level. The combination of inquiry into practice and the dialogue journal format shows great promise for gaining deeper understanding of the process that develops a reflective stance in preservice teachers, and should be supported with further research. Zeichner and Liston (1987) identified the need for facilitating preservice teacher growth as professionals. They also advocated the value of confronting core beliefs, questioning routine practices, and encouraging collaboration with others to make the changes necessary to meet the needs of students. In a prescient and succinct analysis, Zeichner and Liston warned then that unless teachers were trained to “assume more central roles in shaping the direction of
their own work,” the profession of teaching would continue to display a pattern of change, yet fail to achieve real or lasting improvements (p. 45).

Preservice teachers enter their practicum experiences with assumptions and beliefs developed over a lifetime of being students. These foundational beliefs are often the springboard from which decisions are made in the classroom. Previous studies have conflicting results concerning belief change, but most researchers agree that the beginning place for growth is identifying and confronting those beliefs. Reflective practice acknowledges the influence of specific actions on students, and through reexamination of practice, students’ needs are served. Reflective practice is recognized as an effective approach to teaching and is an emphasis in many teacher education programs (NCATE). However, a supporting structure for developing the practice of reflecting on core beliefs is missing in the research.

Inherent in reflective practice is a conversation either with oneself or another professional. In either case, the genuine questions explored through reflection are an essential component to working through a problem. Inquiry into practice has been studied primarily through inquiry projects, and the research does not link inquiry and conversation together. Research indicates that with dialogue journals meet the challenges of promoting a supportive environment and encourage growth in university students. Dialogue journals invite genuine questions, conversations, and build relationships. This supportive environment has been investigated for the acquisition of course material and has proven to enrich students understanding and relationships with their professors. However, dialogue journals have not been used as a supportive structure between peers or as a conduit for reflective practice.
This study builds upon the notion that belief change begins with an awareness of core beliefs, and that reflection is a key component in effective teaching. The study incorporates the use of dialogue e-mails with peers and inquiry into practice. The purpose of the study is to further extend our understanding of the process of developing reflective practice through a supportive framework and describe the effect of the structure on preservice teachers’ perceptions of teaching.
CHAPTER III: RESEARCH DESIGN

This chapter describes the design of the study and is composed of four sections. The first section restates the purpose of the study and the guiding research questions. The second section addresses the theoretical framework and participant and site selection. The third section describes the procedures for data collection and data analysis, and the fourth section describes the pilot study of instruments and the researcher perspective.

Introduction

The intent of this study was to invite the preservice teacher into the community of practice in which “learning transforms who we are and what we can do: an experience of identity…not just an accumulation of skills and information, but a process of becoming” (Wenger, 1998, p. 215). This study investigated a framework that scaffolded the preservice teachers’ understanding of inquiry into practice through subsequent reflection and dialogue with a peer. Inquiry into practice was introduced with a series of focus questions provided by the researcher. The preservice teachers investigated the focus area guided by these questions through observation and conversations in the school to which they were assigned. Through inquiry into practice, preservice teachers wrestled with their own beliefs as they observed classroom practice with the inquiry questions in mind. The study was designed to include dialogue e-mails in which preservice teachers’ interacted with a peer after inquiring into specific areas of classroom practice. They also participated in inquiry group discussions that provided opportunities for preservice teachers to engage in reflective practice. The purpose of this study was to describe
changes in the preservice teachers’ core beliefs that resulted from their participation in the inquiry process. Specifically, the guiding research questions were as follows:

1. After the implementation of a framework of inquiry based on reflective dialogue in a field experience seminar, do preservice teachers' core beliefs change? If so, how?
2. How does the framework of inquiry into practice with preservice teachers effect growth in reflective behaviors?

Research Design

The design of this study was qualitative. Descriptive analysis summarized survey data and provided an overarching view of the changes in beliefs held by preservice teachers. Gaining a full description of the framework and the resulting reflective behaviors of preservice teachers required more than a summary that can be tallied in a survey. However, tallying the data highlighted changes and gave an overall impression of change in the preservice teachers’ core beliefs. The study relied primarily on qualitative methodology in order to accurately and comprehensively describe the framework and the people experiencing the framework (Bogdan & Biklen, 2003). Qualitative inquiry means portraying a holistic picture of the phenomenon, while at the same time setting out to understand the nature of a particular set of people in a specific context (Bogdan & Biklen). The underpinning theoretical framework of phenomenology and grounded theory guided this study of preservice teachers who have experienced the phenomenon of inquiry into practice. The study was “one that focused on descriptions of what people experience and how it is that they experience what they experience” (Patton, 2002, p. 107).
Theoretical Framework

Phenomenology. The phenomenological approach has an “intentionality of consciousness” (Creswell, 1998), meaning that the preservice teachers’ perceptions of their experiences defined the reality of the object studied. Phenomenology provided the vehicle for exploring the lived experience of inquiry into practice. This study placed inquiry into practice at the hub of the reflective framework. Thus, by suspending judgments about what was real, the experience and the preservice teachers’ perception determined reality. Each participant’s perception revealed different nuances that contributed to a fuller description of the experience. Bound up in the concept of intentionality, Husserl (1931) asserted that a phenomenological approach transforms experience into consciousness when the experience is reported in a careful and thorough description of how people experience the phenomenon. Of course, descriptions of phenomena vary according to individual perspectives that are affected by the angle from which it is viewed from or prior experience (Moustakas, 1994). The object has reality, based on the perceptions held in the mind of the viewer. As a result, all our understanding of reality hinges on the subjective sensory experience of phenomena (Husserl; Patton, 2002). Relying on the interpretative nature of understanding human behavior, phenomenology emphasizes the subjective aspects of people’s behavior (Bogdan & Biklen, 1998). In other words, “the subjective experience incorporates the objective thing and becomes a person’s reality, thus the focus is on meaning making as the essence of human experience” (Patton, p. 106).

Such an orientation does not mean that perception of reality or conclusions are subjective or arbitrary, but rather a phenomenological underpinning strives to carefully
and thoroughly examine perceptions in order to then understand the essence of the experience. Such essence of phenomena has been adequately described “if the description reawakens or shows us the lived quality and significance of the experience in a fuller and deeper manner” (Van Manen, 1990, p. 10). Assertions were therefore not measured in terms of absolute truth, but in rendering the essence of the phenomenon as experienced by the study participants. In order to enter into the conceptual understandings of the preservice teachers, Geertz (1973) suggested studying the meaning individuals construct around events in their lives. This focus on preservice teachers’ lived experiences made a qualitative methodological approach an appropriate choice in order to answer the questions guiding this study.

As a participant observer, I shared in the activities of the preservice teachers in order to develop an insider’s view of what is happening, the emic perspective (Patton, 2002). This perspective not only allowed me to see what was happening, but also allowed me to feel what it was like to be a part of the program. My tasks as researcher ensured that I remained an outsider, but the combination of participant and observer enabled me to understand both the setting as an insider and at the same time to describe it to and for outsiders (Patton). Wax (1971) stated that the participant observer will at times be able to assume a mental position peripheral to both the insider and outsider and describe relationships, systems, and patterns that are not consciously apparent to the insider, who may be oblivious to the patterns that exist. However, my role as participant observer included facilitating the discussions in which the preservice teachers reflected on their new understandings as a result of the retrospective e-mail dialogues. In this manner, I had
an insider view of the process and at the same time an outsider view of the perspectives voiced in the data. Further explanation of my role is detailed later in the chapter.

**Grounded theory.** Grounded theory refers to the process of developing theory from data in the field. This process was used to understand the various perspectives of individuals who participated in the framework of inquiry into practice (Creswell, 1998; Corbin & Strauss, 1990). Researcher interviews of preservice teachers and dialogue e-mails with peers served as opportunities to access the data related to the lived experience of the framework. The design of coupling e-mail dialogue with inquiry into practice and subsequent inquiry group discussion set the stage for scaffolding preservice teachers’ entry into the community of professionals who inquire about their work every day.

Situating the study in grounded theory put the focus on steps and procedures for an inductive approach to the data. Using the systematic guidelines for collecting data described later, I built the theoretical framework in order to explain the collected data (Charmaz, 2000). Grounded theory depends on methods that take the researcher close to the lived experiences through detailed data analysis collected through meticulous study. This emphasis on the steps and procedures through inductive analysis and through constant comparative method grounds any discoveries in the empirical realm. Through the interplay between the researcher and data, grounded theory offers a framework to help provide some standardization and rigor to the analytical process (Strauss & Corbin, 1998). A grounded theoretical approach strives to provide researchers with analytical tools for handling large amounts of raw data, and emphasizes a systematic approach to facilitate the consideration of multiple meanings of the phenomenon (Denzin & Lincoln, 2000; Patton, 2002). My intent to build theory based on the data rather than test theory
distinguished this study as grounded (Patton). The emphasis of approaching the collected data by being “systematic and creative simultaneously” (Patton, p. 127) and considering multiple meanings of the phenomenon studied, assumed that the external world could be described, analyzed, and explained within the objective to arrive at meaning as experienced by the sample. Through using the criteria established by Glaser (1978), the fit, work, relevance, and modifiability of the data guided the analysis. Theoretical categories were developed from the data, and these categories fit and explained the phenomenon. Analyzing the data provided descriptions of the actual framework as perceived by the preservice teachers, lending the relevance found in grounded studies. I also modified emerging analysis of data as new information became available. Through the process of constant comparison, the analysis of this study met Glaser’s criteria for the durability of grounded theory.

Site Selection and Participants

The study took place in the college of education of a large southeastern university. The college serves 3000 undergraduate students, including the preservice teacher participants. The internship sites were chosen based on three criteria – the relationships I developed with the administrators in previous semesters, the need to find enough classrooms to fit the number of preservice teachers assigned to this section, and the geographic proximity to the university. These schools have served as intern hosts for several years, and the rapport I have developed ensured that I had no difficulty in placing the preservice teachers. Due to the increased number of preservice teachers in this section, I expanded the initial plan for assignments from two schools to four schools. All of the placements were with teachers who volunteered to host an intern in their
classroom. The population of students at the four elementary schools ranged from 938 to 1026.

Two of the sites I chose for placement were in high socioeconomic communities. The demographics for these two schools were very similar. The racial make up of the schools was predominantly white (approximately 70%), with a minority population of approximately 30%. Both schools had received a high performance rating from the state and had a high level of parent participation in the form of volunteer hours and the Parent Teacher Association membership.

The other two schools chosen were also similar in demographics. The racial breakdown as described by the administration was approximately 85% minority (Hispanic and Black) with the remaining 15% described as white. Both school qualified as Title-one schools, and the socioeconomic status of the majority of the students was described as low. In both school the majority of the students qualified for the free or reduced lunch programs. These schools differed on their performance rating. One school rated a grade of a “C” and the other school was rated an “A.” The “A” school was also a Professional Development School located on the campus of the university.

The participants involved in this study (a total of 35) were elementary education students enrolled in the Level II internship. The Level II internship is the second field experience that the preservice teachers are required to complete in the program of studies at the university. The university requires Level II preservice teachers to intern at the elementary school in an assigned classroom two days per week for approximately seven hours each day for a period of twelve weeks. The participants in this study were enrolled in one section. In addition to the elementary school internship hours, the preservice
teachers were required to attend a seminar meeting every other week throughout the semester. (See Appendix A.) Students enrolled were seniors working toward state certification as elementary school teachers of kindergarten through grade 6. Eighteen of the participants were between the ages of 20 and 23, eleven between the ages of 24 and 26, four were between the ages of 29 and 33, and two were between the ages of 38 and 41. Eighteen of the participants described themselves as White or Caucasian, eight described themselves as Hispanic, five described themselves as African-American, and two identified “other” when asked to describe their ethnicity. Only two participants’ gender was male. The vast majority of the participants were commuters who work a minimum of 20 hours a week, and were enrolled in three to five classes in addition to the Level II internship. The assignment of preservice teachers to each internship section was based on other class schedules, work, and their personal and family commitments.

Procedures for Data Collection

Pilot Study of Instruments

I conducted a pilot study to test the survey instrument, to identify the focus areas for inquiry, and to conduct a preliminary analysis of the data to ensure that the methods for data collection would elicit data that were rich in the perceptions and understandings of the preservice teachers. The pilot studies were conducted with two sections of preservice teachers and was implemented during the fall and spring semesters of the 2003-2004 school year. Strauss (1987), speaking of qualitative research proposals, stated, “No proposal should be written without preliminary data collection and analysis” (p. 286).
The survey was tested with two different groups of preservice teachers. The original survey listed a variety of statements related to teaching practice. The responses on the survey, once tallied, exposed differences in the preservice teachers’ core beliefs. I chose the areas that exposed the most dissonance as the focuses for inquiry in the final survey. These focus areas for inquiry were chosen because I hypothesized that diversity of beliefs and dissonance (Cochran-Smith, 1991b) would generate a richer discussion.

The areas for inquiry served to challenge the preservice teachers’ core beliefs to overcome what Katz (1974) has called the “excessive realism” of preservice teachers by encouraging them to use analytical skills to critique different perspectives. The pilot study of instruments provided evidence that these areas of inquiry were successful in garnering the preservice teachers’ beliefs as I tallied the Likert scale and ranking of teacher characteristics. Results from the first pilot of instruments indicated that the preservice teachers appeared to change in the intensity of their responses (Appendix O).

The initial survey addressed 15 different topics. After pooling both the “strongly agree” and “agree” ratings and the “strongly disagree” and “disagree” ratings, I identified the four areas with the most dissonance, and the survey was adjusted to focus only on these four areas. For example, question number 8 indicated that 20 preservice teachers held a favorable response while 14 held an unfavorable response (Appendix P). As a result, this tally identified the split in favorable and unfavorable beliefs, and the question topic became a focus for inquiry.

The length of the survey remained the same (containing 12 statements); however, I created three statements relating to each area of focus with some variation in emphasis. I decided to limit the statements to these four areas for the final study to narrow the focus
and developed three different statements related to each area to better identify the
nuances of beliefs. I read each survey and dialogue e-mail throughout the semester and
from the informal readings determined that the inquiry prompts facilitated thoughtful
responses. From this holistic review, I concluded that some shifts may have occurred in
the preservice teachers’ beliefs during the semester. Three statements about reflection
were then added to elicit the preservice teachers’ perceptions of reflection after a
semester-long focus using reflective practice via inquiry and e-mail dialogues.

In the pilot study, a key component to the framework was reflection, so adding
three statements about reflective practice to the existing 12 in the survey was another way
to triangulate the data that I analyzed from the e-mail dialogues. I field tested the adjusted
survey on the second group of preservice teacher in the pilot study, and the adjusted
survey proved to improve the quality of data generated by the instrument based on
tallying the results and a holistic reading of the survey. I was interested to find that when
the characteristic of “reflective” was added to the ranking portion of the survey, only one
person at the beginning of the semester ranked “reflective” as the most important
characteristic, but by the end of the semester ten preservice teachers ranked “reflective”
as most important (Appendix P).

Once the preservice teachers began the group discussion, I realized that other than
randomly listening to discussions as I rotated from group to group, I did not have
anything systematic in place to garner their perceptions after the discussion. As a result, I
added the 5-10 minute written reflection at the end of the inquiry group discussion to
better capture the effect of the inquiry discussion on preservice teachers’ beliefs. This
reflection period was also fine-tuned to include specific directions for the reflection to
guide the preservice teachers’ writing (Appendix K). I asked the preservice teachers to reflect on the discussion and record any new understandings they gained, and then reflect on the impact of the discussion in practical terms, relating their thoughts to the internship experience. These reflections were recorded on the back of the hard copy of their e-mail dialogue and placed in a folder.

Another change in the method of data collection resulted from noticing the general increase of reflective comments in the dialogue entries as the semester progressed. As a result, I fine-tuned the direction of my research. I realized that I had not included this characteristic in the original ranking portion of the survey, so I changed the characteristics listed at the end of the survey to include reflection (Appendix P). With reflection at the core of inquiry into practice, I added this characteristic to the survey in order to measure any changes in beliefs that occurred through the semester. This addition was field tested in the second group.

Additionally, I adjusted the framework of the inquiry discussions to include a list of anonymous statements taken from the dialogue e-mails. I chose the statements that were representative of the perceptions of individuals and purposefully included statements that presented the diversity of beliefs held in the entire group. I found that by reproducing the comments made in the dialogues, I validated each voice, and the preservice teachers tuned into the discussion with increased interest. They quickly identified their own beliefs in the statements and supplemented the discussion with explanation that included the context for their understandings. These statements prompted the discussion to include a variety of thinking as each small group debated and worked through the area of inquiry.
The first area of inquiry that the preservice teachers were instructed to investigate was the teacher’s role. The dichotomous nature of the first inquiry topic set the stage for inquiry into practice as a reflective wrestling with oneself over shades of gray. In addition, introduced the important topic of classroom management to the preservice teachers within the framework of genuine questions into practice. However, when I gave the first group a basic question to investigate (What is the role of a teacher: formal or informal?), I found the e-mail dialogues vague and lacking in specific details from the classroom experience. In order to elicit more focused responses, I refined the direction for the inquiry with a series of questions for the second group. These specific questions for each area were e-mailed to the preservice teachers as a guide to the inquiry into practice, and I modeled a reflective e-mail after the first seminar meeting (Appendix F, G, H, and I). These changes produced the desired effect of adding specificity to the e-mail dialogues.

Study Sequence and Survey

The study timeline (Appendix B) and the study design flowchart (Appendix C) provided an overview of both the study sequence and data collection procedures. The study used a survey (Appendix C), an interview protocol (Appendix D), e-mail dialogues, and follow-up written reflections based on inquiry group discussions as data sources. The survey was given at the beginning of the internship before the preservice teachers began their work in the schools and at the end of the semester during the final seminar meeting. All of the participants e-mailed reflective dialogues to partners according to a schedule included in the syllabus, and participants wrote a reflection after each inquiry group discussion. From the survey, five students were identified for two focus group interviews.
that occurred approximately six weeks into the semester and then again six weeks later. (Criteria for selection are discussed later in the chapter.)

The survey was designed to encourage participants to identify their stances on effective classroom practice. Two tasks divided the survey. One task required preservice teachers to examine 15 statements (12 statements are variations of four topics, and 3 statements focused on reflection), and then using a Likert-type scale determine whether they strongly agreed, agreed, disagreed, or strongly disagreed with the statements. Once they took a stance according to the scale, the survey requested that they explain why they selected the rating. Based on the original fifteen topics included in the pilot study (described earlier in the chapter), I chose the four areas that exposed the most dissonance as the focus areas for inquiry. These focus areas for inquiry were chosen because I hypothesized that diversity of beliefs and dissonance (Cochran-Smith, 1991) would generate a richer discussion and challenge the preservice teachers’ critical examination of their core beliefs as they articulated them to their partner.

The four areas of inquiry were the role of the teacher, assessment, active learning, and the impact of culture on learning. Each area of inquiry was presented three times throughout the survey. The survey design used three different statements that related to the area of inquiry but varied in emphasis. For example, the focus area of the teacher’s role included statements such as, “I believe it is the teacher’s role to establish classroom procedures,” “I believe that an effective teacher maintains a formal role (somewhat distant) in the classroom,” and, “I believe a teacher must be an active agent in reforming school and society.” The three variations related to a specific area were purposefully spaced to ensure that no two variations of survey statements related to the same main
focus area were contiguous. Metaphorically, each area of focus was like a diamond that had many faces. All of the statements related to the focus area, but different faces were offered in each statement. Narrowing the focus areas from 15 to 4, allowed for a more nuanced examination of the preservice teachers’ core beliefs. Because a key component of the framework was reflection, adding three statements about reflective practice to the survey was another way to triangulate the data that emerged from the e-mail dialogues.

The second part of the survey was a list of five characteristics that exemplary teachers exhibit as articulated by the National Board of Professional Teaching Standards (1987). The participants ranked the characteristics from most important to least important. Once the preservice teachers determined the rank order of the five characteristics, they were instructed to elaborate and explain their rationale for their selection of the most and least important characteristic. The survey was completed in approximately 30 minutes and was given during the first and last seminar meeting of the semester.

*Inquiry Assignment and E-mail Dialogues*

The Level II internship required that the preservice teachers were in the practicum classroom two full days a week. Seminar meetings were held according to the syllabus every other week except at the beginning and end of the semester, when the seminar was scheduled two weeks in a row. The seminar meeting was scheduled for two hours and was held in the assigned classroom on campus. The first part of the schedule during seminar was reserved for announcements, questions, and general debriefing of the classroom experience. At the beginning of the semester, procedures for how to do an inquiry (Appendices F, G, H, and I), how to do an e-mail dialogue (Appendix J), and how
to reflect on inquiry group discussions (Appendix K) were reviewed. As a part of the regular assignments for Level II interns, the students researched an area identified for inquiry in their field experience (Appendix L). The inquiry focus was specific (teacher’s role, assessment, culture impacting learners, and active learning), with an emphasis on exploring each inquiry in the classroom and then reflecting on their subsequent beliefs. Burnaford (1996) noted,

In order for practicing teachers to learn to reflect, weigh alternatives, and test their own assumptions about learning and teaching, they need experience in posing a problem or question, adapting that line of inquiry to a particular situation … and experiment[ing] with some designed plan to discover its implications and consequences. (p. 144)

As a community building exercise, during the first seminar meeting the dialogue partners completed a venn diagram, comparing and contrasting themselves with each other, and used the information garnered in the diagram to introduce their partner to the rest of the internship section. These same partnerships formed the dialogue pairs for the rest of the semester. I found that some of the preservice teachers enjoyed having choice in who their dialogue partner was throughout the semester, but the pairing was also a result of their random selection of a seat at the first internship seminar meeting. The venn diagram introduction was intended to create community as students revealed their similarities. This initial emphasis on similarities was also intended to ease feelings of discomfort when sharing personal reflections via e-mail based on their inquiries.

After researching the inquiry assignment (Appendix L) in their internship experience, the participants then dialogued via e-mail with their partner to share new
understandings. All of the participants explored the same inquiry of focus in their internship classroom during the same time period. The students were also assigned specific dates to e-mail one another (Appendix A). The e-mail dialogue was a reflective narrative based on preservice teachers’ inquiry into practice. Each preservice teacher brought a copy of his/her dialogue e-mail to the seminar meeting.

*Dialogue Pair of Pairs Group*

At the beginning of the semester and after the dialogue partners completed their first survey, each dialogue partnership chose another pair to form a group of four that remained intact for each seminar meeting. Once the dialogue partners completed their first inquiry, I directed the interns to sit with their dialogue partner and find another pair to sit with for the rest of the semester. I rearranged the seating for each seminar to ensure that tables were set to accommodate two pairs. The pair of pairs sat together at a table as a group during each seminar meeting to discuss their findings in inquiry groups.

I compiled a list of the key understandings from the e-mail dialogues and distributed them to the inquiry groups. Each pair of pairs examined the compilation of statements in light of their individual internship experience and formulated a position about the focused inquiry that they shared with the group. Appendix M is an example of such a list compiled during the pilot study. The pair of pairs was instructed to review the list together and share examples from the dialogue e-mails to answer the focus questions. I emphasized that the group did not have to achieve full agreement, but as they shared their discussion summary with the whole group, they were encouraged to provide the rationales for their conclusions. One member of the group reported on the group discussion; this responsibility shifted to a new person at each seminar meeting, so that by
the end of the semester each person in the foursome reported out to the whole group. As the groups reported their summaries to the seminar class, I recorded key points on an overhead. A whole group discussion ensued that was based on the positions articulated by each pair of pairs group. In this way, each group discussed positions, new understandings, and application of the information garnered through the discussion. Both the pair of pairs discussion and subsequent whole group discussion was scheduled for 25 minutes each. Immediately following the discussion, the participants were assigned 5-10 minutes for reflective writing (Appendix K).

Interviews

Based on the results of the survey analysis, five preservice teachers were purposefully selected to participate in two focus group interviews (Patton, 2001). The five participants reflected a wide range of beliefs and were chosen with the intent of identifying common patterns that cut across variations. Specifically, two students with opinions that strongly agreed with most of the statements were selected, two students with opinions that strongly disagreed with most statements were selected, and one student was chosen with opinions that were a mixture of agreement and disagreement. An effort was made to choose five participants who also ranked reflection differently. Additionally, in order to identify five participants who were able to articulate their experience during the interview process (Hycner, 1985), I originally intended to record field notes during the venn diagram introductions with particular attention to participants’ desire and ability to articulate their ideas. However, due to the large number of preservice teachers enrolled in the section, I was not able to observe very much in the short time that the partners shared.
The semi-structured interviews were audio-taped and transcribed. The interviews lasted approximately 45 minutes and focused on their changes in beliefs about classroom practices that emerge in the dialogue e-mail entries and written reflections. I followed the same semi-structured interview protocol (Appendix E) for both focus group interviews. These interviews were held in the same classroom in which we met for seminar and on the same day as the seminar meeting. A schedule was arranged with the five participants once they were selected.

Data Analysis

In order to couple the research questions with the data analyses, Table 1 depicts which data were used to answer each question.

Table 9

<table>
<thead>
<tr>
<th>Research Question</th>
<th>Data Collection</th>
<th>Data Analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. After the implementation of a framework of inquiry based on reflective dialogue in a field experience seminar, do preservice teachers’ core beliefs change? If so, how?</td>
<td>1a. Survey (Appendix C)</td>
<td>1a. Likert Scale data summarized in histograms, tally characteristics rank</td>
</tr>
<tr>
<td></td>
<td>1b. E-mail dialogues</td>
<td>1b. holistic read, line-by-line coding, categories, themes</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1a. Reorganize data to lump focus area data: read, identify meaningful units, categories, themes</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1a. Select focus group: field notes, ranking, Likert scale data tally</td>
</tr>
</tbody>
</table>
The survey data were tallied and displayed in histograms in order to identify general trends and changes in the preservice teachers’ attitudes over the course of the semester. Later tables were created to show the change between the August survey and November survey. Content analysis (Corbin & Strauss, 1998; Patton, 2000) was applied to the portion of the survey where the participants explained their beliefs. The statements were reorganized into the four areas of inquiry to analyze different nuances or facets of the preservice teachers’ core beliefs for each inquiry focus. Inductive analysis involved discovering patterns, themes, and categories in the data. Inductive analysis was typical during the early stages of data collection, especially in developing codes for content analysis. I found that through my interaction with the data, numerous findings emerged.
Coding the Data

I began with coding the data. Anecdotal commentary explaining each statement on the survey was read to identify units of meaning. Each meaningful unit was coded, and those that appeared similar in content were clustered into categories for later identification of emerging themes. Once themes were identified, the meaningful units were read again and rechecked to ensure that a rigorous, systematic analysis of the data produced an accurate portrayal of the students’ perceptions related to the four areas of inquiry. The aim was to identify common themes and to build a thick and rich description of the phenomenon being studied. Similarly, content analysis (Patton, 2001) was applied to the e-mail dialogues, 5-10 minute post discussion reflections, and interview data. The written explanations on the surveys, e-mail dialogues for each focus of inquiry, written reflections after inquiry group discussion, and transcriptions of focus group interviews were read separately to gain a holistic impression of the effect of the inquiry assignment on the reflective behaviors and beliefs of the preservice teachers. The entire group of dialogue e-mails relating to an area of focus was read before any analysis of the data.

The process of analyzing the data was similar for each of the data groups. After the data group was read initially, the data were re-read, and meaningful units were identified. In order to identify units of meaning, each e-mail dialogue was read through to keep the intended context intact. Researcher notes in the margins that reflected my notion of what the data were saying was the initial cut as I analyzed the data (Huberman & Miles, 1994; Patton, 2000). The initial cut and identification of codes were similar to labeling a file system to organize the data. I found that several readings of the data were necessary before the overall impression of the text could be coded. As Patton noted,
This descriptive phase of analysis builds a foundation for the interpretative phase when meanings are extracted from the data, comparisons are made, creative frameworks for interpretation are constructed, conclusions are drawn, significance is determined, and, in some cases theory is generated.

(p. 465)

Then, each phrase that contributed to the meaning of the message was identified and labeled with a letter that represented each participant. Developing a coding system for the data entailed reading through the data for regularities and patterns. Coding the data helped organize the large amount of information. The data were coded as they were collected, and were constantly reviewed for new insights. Categories were identified that described the essence of the preservice teachers’ ideas. Instead of pasting catchy concepts on my data (Charmaz, 2000), I interacted with the data and posed questions to them while coding them. For example, as I coded the dialogue e-mails, I would ask myself, “Does this code really capture the meaning of this line?” In addition, as I placed several meaningful units together to identify an emerging category, I asked myself, “Does the context of the preservice teacher’s comments related to this focus area match the emerging category?” and, “Is this meaningful unit consistent with the others in this category?” I reread and queried myself as the categories emerged. Coding the data helped me gain new perspective on the material.

As I coded the data, I started to define and categorize emerging perspectives on the material, and categories began to take shape. As the categories emerged, they were clustered into themes. In order to deter the imposition of my own beliefs on the data, initial or open-coding procedures examining each line of the data guided new
perspectives of the material (Charmaz, 2000). Line-by-line coding sharpened the use of sensitizing concepts or the background ideas that informed the overall study (Glaser, 1978). The sensitizing concepts offered ways of “seeing, organizing, and understanding experience” (Charmaz, p. 515), in that perception was deepened, but, more importantly, the process identified beginning points for building analysis.

A peer reviewer randomly selected five dialogue e-mails from each focused inquiry and reviewed the coding of the data. The peer reviewer had over 20 years of experience teaching in the public school system. She was uniquely qualified to review the e-mail dialogues as she had been trained in holistic scoring of writing using a rubric. As a teacher of English Speakers of Other Languages for twelve years, the peer reviewer was especially sensitive to the nuances of meaning evident in written language. In addition, she had completed two qualitative research classes at the doctoral level. This independent reviewer read to confirm the codes as appropriately reflecting the essence of preservice teachers’ perspectives. The peer reviewer also reread the randomly selected dialogue e-mails to determine levels of reflectivity (described in the next section) evidenced in the data (Appendix N). Prior to the reading for levels, the reviewer and I selected random samples from the pilot study data to familiarize ourselves with the rubric on reflective levels. Once we had read the data independently, the levels were compared. Any discrepancies were discussed to identify areas of agreement and confirm consistency in the data analysis.

*Reflection Levels in the Data*

The e-mail dialogues and written reflections were read a second time to identify the level of reflection evidenced in the narratives (Carlson & Parry, 2003; Tsangaridou &
O’Sullivan, 1994; Van Mannen, 1977). These data were also displayed in a frequency distribution. The three levels of reflection (see Appendix N) were defined as the following:

- Problem solving (Surface): technical, identifies a problem and envisions a solution which removes the problem, limited reflection, restatement of classroom activities, judgement good or bad on lesson as a whole … no parts, no strategies identified. (level 1)

- Practical deliberation (Deep): appraises the whole situation, considers what is right and appropriate action for the situation of a moral question, “what course of action will prove to be the most prudent and contribute to the good, concentrates on the context of the teaching, examined aspects of the lesson (parts) seeing the individuals, looking beyond the obvious and devising strategies to accommodate individuals. (level 2)

- Speculative thought (Intense): self-conscious critique of self, dwelling on the thought process, seeing long term implications of teaching and developing strategies, action oriented in the context of the situation, the mind’s conversation with itself, ideas that come from a socially constructed world of meaning, has meanings in the social world, construction of new ideas the way we participate in communication decision making and social action. (level 3)

Analysis of pilot study reflective levels. In order to make the process of assigning a reflective level to each dialogue e-mail and written reflection visible to the reader, I
analyzed an example of an e-mail dialogue and a reflective post-discussion writing from the pilot study.

E-mail dialogue:

In my classroom the formal role is only played by the teacher when she is directly in front of the class and has begun the lesson. Formal looks like the teacher has the attention of the entire class and it sounds like she is giving students important information and speaks in a very directing and strong voice. Informal in my classroom is anytime that the teacher is not directly in front of the class. It sounds very noisy because students are out of their seats and talking … when she is in her formal role she would have to make a few short redirections…. In her informal role she would have to make numerous redirections to get kids on task…. I believe this is a major flaw…. I would be in front of the class all the time, continuously giving instructions, mini-lessons, or even reading to them…. This class needs all the attention they can get.

Analysis based on the reflective level rubric depicted the rubric characteristics (in italics) with specific statements that correlate (in quotes):

- (Surface) Restatement of classroom activities: “she is directly in front of the class, has the attention of the entire class, giving students important information, directing and strong voice, sounds very noisy, numerous redirections to get kids on task.” Envisions a solution which removes the problem: “I would be in front of the class all the time, continuously giving instructions, mini-lessons, or even reading to them.” Judgement
good and bad on the whole: “I believe this is a major flaw, this class needs all the attention they can get.”

The dialogue statements fit the rubric for the surface level reflection (level 1). There is no evidence that she is considering a moral question, or the effect of formal or informal instruction on the pupils, or devising alternative strategies to meet their individual needs.

Reflective post-discussion writing:

In my dialogue I feel that I did not fully explain what the purpose of the informal role…. I believe that there are times that I have observed my teacher in a positive informal role. I had classified “good” and “bad” teaching as formal and informal. I do believe [in] student-centered instruction, hands-on activities, and personal relationship with students…. I would like to implement my own positive informal instruction…. and gain respect and confidence from students by building personal relationships.

Analysis based on the reflective level rubric:

- (Practical): Appraises the whole situation: “I did not fully explain what the purpose of the informal role … I believe that there are times that I have observed my teacher in a positive informal role.” Considers what is right and appropriate: “I believe that there are times that I have observed my teacher in a positive informal role. I had classified ‘good’ and ‘bad’ teaching as formal and informal.” Action is a moral question: “I do believe student centered instruction, my own positive informal
instruction, gain respect and confidence from students by building personal relationships.”

The reflective post writing statements fit the rubric for the practical deliberation level reflection (level 2). There was a shift in the overall context from the instructional focus to a consideration of individuals and meeting specific needs in a personal way. As she defined the role, she looked beyond the obvious “good” and “bad” and considered the value (moral impact) of personal relationships.

Interview Data Analysis

Constant comparative analysis of the transcribed audio-tapes was employed (Bogdan & Biklen, 1992; Glaser & Strauss, 1967; Hycner, 1985; Patton, 2002) to identify the emerging themes and crystalize the data from the interviews with the surveys, e-mail dialogues, and written reflections. The transcription of data was a record of the literal statements, but once the transcription was made, I listened to the tape and noted the para-linguistic levels of communications (intonations, emphases, pauses, laughter, etc.) as much as possible in the margins. Listening to the interview as a whole involved listening to the tape several times.

In order to identify meaningful units, I condensed the responses using as much of the literal words as possible. Meaningful units as defined by Hycner (1985) are “those words, phrases, non-verbal communications which express a unique and coherent meaning clearly differentiated from that which proceeds and follows” (p. 282). Once the units of meaning were identified, each one was reread to identify the units that were relevant to the research question. I followed a rule of including any unit of meaning that I was not sure of rather than excluding something that might have proven important in a
wider context. Redundancies were eliminated to attend the literal content, but the number of times a unit of meaning occurred also indicated importance. Then the meaningful units were clustered together to identify themes (Hycner, 1985; Patton, 2000).

Richardson (1994) described the idea of crystalization as a better lens to view qualitative research design because a crystal metaphor recognizes the many facets of life’s experiences. “Crystalization provides us with a deepened, complex, thoroughly partial, understanding of the topic. Paradoxically, we know more and doubt what we know” (Richardson, 1994, p. 522). Extending the idea of crystalization instead of triangulation, Janesick (2000) suggested that a crystal metaphor more aptly describes the many faces of qualitative data. This study illustrated the value of using such a metaphor in data analysis. The collection of data was at several levels. The statistics from the survey provided an overarching view; the survey, e-mail dialogues, and written reflections depicted different perspectives of inquiry; and data from rereading each e-mail and written reflection identified a specific reflective level. The variety of levels added credibility to the findings but, more significantly, the depth and complexity of the description of the phenomenon was enhanced.

Janesick (2000) explained crystalization as part of the multifaceted nature of qualitative work comparing the different data sources to the view we have of a crystal. “What we see when we view a crystal …depends on how we view it, if we hold it up to the light or not” (p. 392). Data crystalization was accomplished by comparing and cross checking various sources of evidence (surveys, e-mail dialogues, written reflections, and focus group interviews) and rereading with a “reflective level” lens. In this way, the viability of the study was integrally connected to the description and explanation of the
Data crystalization illuminated the data through various sources, resulting in an explanation of the data that fit the description. A peer reviewer examined the analysis of the interview data to ensure that the categories and themes arrived at by the researcher were viable.

**Researcher Perspective**

My constructivist approach to grounded theory was revealed through my disciplined and sequential approach to data analysis in examining the perspectives of preservice teachers as they experienced inquiry into practice via dialogue e-mails and inquiry group discussions. Risko, Roskos, and Vukelich (2002) suggested that often preservice teachers’ reflections were “shallow and egocentric”; thus it was critical that the starting point for all of the inquiry-based discussion began with the existing beliefs of the preservice teachers. A constructivist approach to the data necessitated a “relationship with respondents in which they can cast their stories in their terms” (Charmaz, 2000, p. 525), so the data guided the research analysis. Using a constructivist approach recognizes that the categories, concepts, and theoretical levels of analysis must emerge from the researcher’s interaction with the field.

My intent was to tell the story of the people, social processes, and situations, not from the objectivity of a viewer, but rather contextually situated in both the researcher’s and the participant’s perspective. A constructivist approach to the data analysis assumes that “what we take as real is based on my perspective” (Charmaz, 2000, p. 523). By fostering my self-consciousness about my own perspective creating another reality as I interpreted the data, I was able to construct the realities “without viewing them as one-dimensional, universal, and immutable” (Charmaz, p. 523). The aim was to identify
emerging themes to describe the preservice teachers’ understanding of inquiry into practice and to build a thick and rich description of the phenomena being studied. The quest of this study was to capture the multiple realities of the participants by analyzing their diverse viewpoints. At the same time, I welcomed the perspective I brought to the data in searching for an image of reality, not the reality.

Teaching elementary school at the beginning of my career taught me the value of collaborating with peers and interrogating my practice. Through professional reading and training, collaborating with colleagues, and the lived experience of successful and unsuccessful lessons, my expertise as a classroom teacher grew. My classroom experience led me to become a model for teachers as they explored implementing a balanced language arts program. Working with teachers in the role of a workshop facilitator and staff developer led to the high value I hold for the lived experience of classroom teachers. Building on teachers’ strengths, developing trusting relationships with teachers, and honoring their voices are the core values that guide my practice. To date, my work as a teacher educator supervising interns has taught me the value of asking the questions that will guide my students in the interrogation of their own practice. Although I am sure there is expertise I can share, I am more focused on facilitating thoughtful practice.

This emphasis on facilitating thoughtful practice was an essential quality for me as the intern supervisor of the preservice teachers in the study. I recognized that as a participant observer in this research, existed the possibility that my position as the instructor might cause some preservice teachers to “say the things I want to hear” and bias the data collected, but my commitment to inquiry and collegiality was a variable that...
could also have been the motivating factor for the preservice teachers to express their
genuine beliefs. The opportunity structure of a collegial environment is intertwined with
myself as the instructor and exemplified by my attitude of shared power among the
preservice teacher, the mentor teacher, and the university supervisor. Delpit (1995)
warned, “those with power are frequently least aware of – or least willing to acknowledge
– its existence. Those with less power are often most aware of its existence” (p. 24). I
recognized it was not enough to deny the power structure implicit in the relationship
between the preservice teachers and me because in doing so I made Delpit’s point. In
addition to crystalization of the data sources, I checked my analysis with a peer reviewer
throughout the analysis process. Additionally, I chose to invite five participants into the
focus interview, even though I only needed three for a sampling of the preservice
teachers’ perspectives. By expanding my focus group to five participants, I recognized
the need to be sensitive to the issue of power and the danger of a possible conflict of
interest. Moreover, enlarging the group to five ensured that should a participant decide to
drop out of the group interview, I still had a focus group with varying beliefs.

In this vein, my role as participant observer allowed me to bring an emic
perspective to the study by capturing and being true to the lived experience of the
preservice teachers. In order to build the description, my role of participant observer was
essential. “Rather than being lamented, renounced, or concealed, the role of participant
observer should be recognized as as a legitimate, positive and practical feature of critical
interpretative work” (Dippo, 1990, p. 185).
Hillocks (1995) illustrated the importance of my participation in the research and interpretative point of view:

In any information-orientated writing, knowing what the audience already knows will make a big difference in what is expressed and what is not. When a writer can assume a knowledge base shared with an audience, much can be left unsaid that would have to be made explicit for a less knowledgable audience. (Hillocks, p. 82)

Participation in the study, as Hillocks (1995) stated, makes a big difference in the words that are shared. The shared experience of investigating practice as co-inquirers lays the groundwork for participants to naturally leave unsaid some of the fine distinctions of the experience. The assumption of a shared knowledge base cuts to the core of an issue rather than explaining the surface level as one would with an outsider. Instead of explaining the context, the speaker or writer starts the communication at a deeper level. The role of participant observer allowed me to become “explicitly aware of things usually blocked out … an insider and outsider within the context of the study thereby gathering data from both vantage points” (Janesick, 1998, p. 117). This immersion into the study (Lincoln & Guba, 1994) suggests that my role as researcher is an interpretist model of a “passionate participant actively engaged in facilitating the multivoice reconstruction of my own construction as well as those of all the other participants” (p. 115).

The value of phenomenological work, “as a manifestation of the researcher’s interests, commitments, and theoretical orientation, is what enables critique within the context of interpretative research” (Dippo, 1990, p. 185). Instead of seeing the researcher’s presence as a potential distortion of reality, and thus something to be
avoided, the perspective I brought to the data enriched the data with another lens, just as the “light” shed on the crystal (Janesick, 2000, p. 392) gives new understanding to its critical qualities. Janesick (1998) stated that once the researcher steps boldly into the life of another, he or she enters into the dance of the human experience not as an observer but as part of the experience. As a participant observer, I did not intend to run away from the dance in fear that my perspective influences the data, with the risk of “wall (ing) off other ways of knowing” (King, 1999, p. 481). Researchers who purposefully attempt to monitor their participation by recognizing their biases often imply that the automatic result of such behavior is the creation of a product that is trustworthy, reliable, and even valid. But this neglects the hidden biases inherent in the very selection of their research topic. Dippo (1990, p. 481) introduced the construct of reflexive utility to extend the viability of analyzing research beyond monitoring biases. Reflexive utility is the extent to which a study or intervention intended to empower participants can be seen to provide opportunity structures for such self-empowerment. Through the reflective level analysis, this study examines the reflexive utility of using a framework as a scaffold for developing reflective practice in preservice teachers.

Similarly, one of the guiding questions for my research hinges on the effect of opportunity structures of inquiry into practice on reflection and subsequent change. These opportunity structures were encompassed within the framework of dialogue e-mails, inquiry into practice, inquiry discussions, and reflective writing after the discussions. In order to monitor the opportunity structures provided, my participation enriched the data collected as I guided the rehearsal of reflective practice through inquiry. The importance of reflection was a major focus, and a range of different topics was investigated to
provide the opportunity structure for inviting preservice teachers into the community of reflective practitioners. Since this framework of coupling dialogue e-mails and inquiry group discussions had not been explored before, it was essential that I had an insider view. The success criterion was not in belief change that resulted from reflection, but rather the opportunity that this framework allowed for reflection and possible growth. The criteria for success were the opportunities for self-examination that in turn led to personal change or transformation. Patton (2002) suggested that “human reasoning is sufficiently complex and flexible that it is possible to research predetermined questions and test certain aspects of a program while being quite open and naturalistic in pursuing other aspects of the program” (p. 253).

Cochran-Smith (1991b) stated that through the mutual construction of the experiences in a relationship of collegiality or an atmosphere conducive to reflective discourse, the university supervisor must spend time assisting each preservice teacher in devising differing teaching strategies. With each preservice teacher collaborating in a reflective atmosphere, the very beliefs that were foundational to the understandings were shaped and redefined as new knowledge of effective teaching emerged. Hatton and Smith (1995) stated that reflective practitioners are formed when preservice teachers develop their own philosophy of teaching, investigate teaching in collaborative environments, recognize the problematic nature of teaching, demonstrate sensitivity to diverse backgrounds, monitor program implementation, and build a repertoire of skills. The intent of this study was to examine the framework that integrated dialogue e-mails and inquiry and to describe its effect in forming reflective practitioners.
To adequately analyze the opportunity structures provided required that I encourage inquiry into practice in the practicum classrooms through mutual engagement, creating a relationship between people due to participation in practice. Through negotiation of a joint enterprise, mutual accountability was another opportunity structure embedded in the study. As Janesick (1998) noted,

At the core of qualitative research is the commitment to the critical, transformative rigor that seats our perceptions of reality…. researchers must be prepared to challenge all philosophical, historical, social, and contextual levels of understanding and comfort and be prepared to shift the center of the world. (p. 124)

Articulating my rationale for including my voice in the research does not preclude the obvious concerns that arise in modernist conceptions of qualitative inquiry (Bogdan & Biklen, 1998). In an effort to assure that the results presented truly represent the values, beliefs, and norms of the participants, I framed the assignments in the following ways to lessen the likelihood that participants would say what they think I wanted to hear (Patton, 2002):

- Lessening the impact of grades by distributing pass or fail grades, with all assignments graded as a pass upon completion.
- Placing specific emphasis on the value of different perspectives to the topics. Because the study had been piloted twice, I had examples of other preservice teachers’ practice for each topic. By encouraging a brainstorming technique and by welcoming a plethora of different teachers’ approaches to the focus of inquiry, I emphasized the value of considering all perspectives.
• Modeling diverse ideas in the demonstration e-mail dialogue by placing the emphasis on the reflective framework of the dialogue rather than a “right” or “wrong” approach.

• Setting up the first discussion with an apparent dichotomy in order to illustrate the value of considering multiple factors in the classroom with a focus on a compromise between a formal and informal role for a teacher, based on a variety of factors (population, environment, discipline, etc.).

• Using excerpts from the dialogue e-mails that reflect diverse perspectives to begin inquiry group discussions (reflecting each perspective in the excerpts validated the opinions of all of the preservice teachers).

• Providing feedback to the e-mail dialogues through a smiley face icon as a completion check rather than points or grades.

• Emphasizing the importance of the mentor teachers’ evaluation as the weighted part of the grading criteria for the internship.

• Constantly valuing diversity of ideas to create a community of collegiality and invite a deeper level of communication.

• Beginning the semi-structured interview with rapport building, and holding focus group interviews rather than individual interviews to provide a more comfortable atmosphere.

An informed consent form was shared, and I lead a conversation on the research project. The voluntary nature of the preservice teachers’ participation, the right to withdraw at any time, and the confidentiality of the information gathered was discussed. The emphasis of the research was on analyzing the framework of the class structure
rather than the participants themselves. To avoid a potential conflict of interest, I communicated a genuine interest in all points of view, and I made every effort to create an atmosphere conducive to genuine conversation. I came to the research with the perspective that teacher educators needed to prepare future teachers as future educational leaders, open to multiple perspectives and able to make decisions based on multiple sources of information. For this reason, my presence in the study was essential.

Chapter Summary

The design for this study relied on qualitative methodology in order to describe and explain the perceptions of preservice teachers experiencing a framework that combined dialogue e-mails, inquiry into practice, and inquiry group discussion. The study was one that focused on descriptions of the experience to define the reality (Bogdan & Biklen, 2003; Creswell, 1998; Patton, 2002). This phenomenological approach invited the preservice teachers’ perceptions of the experience to define the essence of reflection gained through the framework. The data analysis was inductive in nature and grounded from the data in the field (Creswell, 1998; Corbin & Strauss, 1990). Situating the study in grounded theory was intended to build theory based on the data rather than test theory (Patton). A pilot study of the instruments resulted in several changes: refining of the questions pursued in the inquiry, adding post-discussion reflective writing, adjusting the ranking characteristics on the survey, and adding a structural change to include statements selected from the dialogue e-mails as a discussion prompt.

Data were collected from a pre- and post-survey, e-mail dialogues, interviews, and reflective post-discussion writings. Each of the four data sources was read separately and multiple times to gain a holistic impression of the perspectives of the preservice
teachers. During the second reading, I noted in the margins the general impressions that
the data conveyed. Coding, categorizing, and collapsing categories into themes proceeded
in a systematic manner. Dialogue e-mails and written reflections were also read to
identify reflection levels as defined by the rubric in the study (Carlson & Parry, 2003;
Kemmis, 1985; Van Mannen, 1977). The interview data were transcribed and then coded
to identify emerging themes (Bogdan & Biklen, 1992; Glaser & Strauss, 1967; Hycner,
1985; Patton, 2002).

Participants in the study were Level II preservice teachers required to intern in the
assigned classroom for two full days per week and participate in a bi-weekly seminar. As
a participant observer, I collected data based on the framework as a regular part of the
assignments for the internship. To avoid a potential conflict of interest, I communicated a
genuine interest and value in diversity of thought, and I made every effort to create an
atmosphere conducive to thoughtful consideration of all points of view.

The intent of the study was to provide a thick and rich description of the effect of
using dialogue journals, inquiry into practice, and inquiry group discussion on the
reflective behaviors and core beliefs of preservice teachers.
CHAPTER IV: RESULTS

This study was designed to investigate a framework of inquiry into practice that would scaffold preservice teachers’ development of reflective practice. Preservice teachers were asked to investigate four focus areas through observation and conversations with teachers in the school to which they were assigned for their Level II internship. The framework for this study required that the preservice teachers investigate the focus area, and then report their discoveries to a peer via e-mail. Selected statements from the dialogue e-mails were then used to prompt small group discussions related to the focus area. Following the small group discussion, the preservice teachers reflected in writing on the focus area again. The purpose of this study was to describe and explain changes in the preservice teachers’ core beliefs that resulted from their participation in the inquiry process. Specifically, the guiding research questions were as follows:

1. After the implementation of a framework of inquiry based on reflective dialogue in a field experience seminar, do preservice teachers' core beliefs change? If so, how?

2. How does the framework of inquiry into practice with preservice teachers effect growth in reflective behaviors?

This chapter is divided into two parts. The first part reports on the data related to answering question #1 which correlated to the preservice teachers’ core beliefs on the four focus areas (the teacher’s role, active learning, culture, and assessment). The data from the August Survey of Beliefs were analyzed and compared to the November Survey of Beliefs to determine whether the core beliefs of these preservice teachers related to the focus areas changed. Additionally, the e-mail dialogues and reflections written after small
group discussions were also analyzed to describe how their beliefs changed. The second part of the chapter reports on the data related to answering question #2. The data correlated to the ranking of five teacher characteristics, focus group interview data, and reflective level changes found in the e-mail dialogues and written reflections were analyzed to describe the development of reflective practice. The responses from the preservice teachers reflected the informal language patterns of these undergraduates. I used direct quotations from the preservice teachers’ writing in the data cited because the language used gives the reader a more complete picture of these participants. However, I added punctuation to aid the reader when necessary.

Part One

Part one of these analyses compared the August Survey of Beliefs to the November Survey of Beliefs. The purpose was to describe the core beliefs of these preservice teachers related to the focus areas, and secondly, to describe any changes in those core beliefs. Part one also includes an analysis of the e-mail dialogues and reflections written after small group discussions describe how their beliefs changed.

_August Survey of Beliefs Data_

The first question guiding the study was, “After the implementation of a framework of inquiry based on reflective dialogue in a field experience seminar, do preservice teachers’ core beliefs change? If so, how?” In order to answer this question, I analyzed the August Survey of Beliefs (Appendix D), dialogue e-mails, written reflections, and the Survey of Beliefs given in November. For each of the four focus area investigations, the dialogue e-mails and written reflections were collected and analyzed from each of the 35 participants. I used histograms to report the Likert data from the
survey. I believed the graphs would give the reader an overarching view of the core beliefs held by these preservice teachers related to the four focus areas (teacher’s role, active learning, culture, assessment) and reflection. I summarized the Likert data and then analyzed the explanatory statements.

Next, I analyzed the e-mail dialogues and written reflections and discussed the themes that emerged from the data related to each focus area. Finally, reporting the data from the November Survey of Beliefs followed the same organizational pattern as did the August Survey of Beliefs. Analyses of the survey began with a histogram reporting the Likert scale data. Further explanation of the histograms was followed by analyses of the statements that the participants provided to explain their Likert scale choice for each question.

Method for Analyses

The first part of the analyses was divided into three sections. The analyses began with a description of the initial survey data. I analyzed the survey data to gain an overall impression of the preservice teachers’ core beliefs related to the five focus areas. I used the explanatory statements the preservice teachers provided to explain their Likert choices and describe their beliefs. In the second section, I analyzed the dialogue e-mails and written reflections to describe the preservice teachers’ beliefs related to the focus areas as they progressed through the study. I compared the new themes that emerged from the dialogue e-mails and written reflections to the survey data for each focus area. In the third section, I analyzed the November Survey of Beliefs to identify any changes in beliefs that occurred over the course of the study.
Descriptive analyses of Likert scale data. I analyzed the Likert data to obtain an overall impression of preservice teachers’ agreements and disagreements related to the focus areas. First, I designated a letter of the alphabet to each participant (A-JJ). For each statement on the survey, participants could choose from four categories of response which included strongly agree, agree, disagree and strongly disagree. Then, I recorded the identifying letter for each participant under a category next to each question number (Appendix R). For each statement, the respondents explained their choice. From these explanations, themes emerged. The themes that emerged described the preservice teachers’ beliefs related to the following areas: the teacher’s role, active learning, culture, assessment, and reflective practice.

Data analysis of explanatory statements. I transferred the preservice teachers’ handwritten responses provided on the survey to explain their Likert scale choices to a Microsoft Word document. I grouped the questions related to each focus area together. The process of organizing the statements into groups gave me an opportunity to obtain a holistic picture of the groups’ responses related to each focus area. Then, I filed the explanatory statements for each focus area separately. I analyzed each file (teacher’s role, active learning, culture, assessment, and reflection) individually. I read the statements one at a time and identified meaningful units. For example, Intern D’s answer for question four was as follows: “A teacher needs to establish procedures in order to manage, discipline, teach the students, and be effective.” Several meaningful units were identified, including the following: “teacher needs to establish procedures to manage, discipline” and “establish procedures to teach, be effective.”
These meaningful units were then grouped into categories. Some responses included more than one meaningful unit. Thus longer explanations could have more than one meaningful unit, and one participant’s explanation could include several meaningful units. However, the second or third meaningful unit often fell into another category because of a different emphasis or meaning. Although I asked for the participants to explain their choice, occasionally they skipped answering altogether, which resulted in no meaningful units from that participant.

Once the entire set of meaningful units was put into categories, I reread the category to ensure that each meaningful unit belonged in the assigned group. At this point, I looked for similar categories and identified initial themes. I formulated a thematic title based on the overall impression of the category, and I used the participants’ words in the data to create the title. A peer reviewer checked each unit against the thematic title to verify that the unit fit the theme that I identified. This peer reviewer (a fellow doctoral student) questioned the meaningful units that she did not think belonged in the assigned theme. After negotiation and subsequent agreement, the unit was moved to another theme. Frequently, after we examined the context, we reached an agreement that the unit belonged where I had first placed it. This negotiation was especially useful in confirming categories that fit within each theme.

Thirty-six preservice teachers were enrolled in the Level II internship, and all of the preservice teachers took the survey in August and November. After I explained the study during the first seminar meeting, only one preservice teacher did not give permission for her work to be analyzed. However, she participated and completed all of the surveys, e-mail dialogues, and written reflections as part of the requirements for the
Level II internship. For each of the questions on the survey, the number of responses should total up to 35, but occasionally a participant would skip the Likert scale choice or refrain from elaborating on his or her reasoning. In each case where a preservice teacher neglected to make a Likert scale choice, I noted that discrepancy in the introduction to the figure.

August Survey of Beliefs Findings

The Survey of Beliefs data included Likert scale choices, ranking of teacher characteristics, and explanatory statements of the Likert scale choice. The preservice teachers read a statement and then chose to strongly agree, agree, disagree or strongly disagree with each one. Then, the respondents explained their choice in writing. For each focus area, I summarized the Likert data as an overview of the preservice teachers’ beliefs and then discussed the themes that emerged from the respondents’ explanations.

Teacher’s role. Three survey questions focused on the area of teacher’s role. These questions were as follows: “I believe it is the teacher’s role to establish classroom procedures” (Q. 4); “I believe that an effective teacher maintains a formal (somewhat distant) role in the classroom” (Q. 8); and “I believe a teacher must be an active agent in reforming school and society” (Q. 9). Likert scale data revealed that the preservice teachers were in general agreement. A majority of respondents agreed that the teacher’s role included establishing procedures. They disagreed that only teachers who maintain a formal role are effective. Overwhelmingly, the participants indicated that a teacher must be an active agent in school and societal reform (see Figure 1). Interestingly, the five preservice teachers who strongly disagreed or disagreed on question #4 were Interns R, V, CC, C, and GG. The two preservice teachers who agreed on question # 8 were L and
EE. And the three preservice teachers who strongly disagreed or disagreed on question #9 were Interns G, H, and A. All ten of the apparent outliers were different preservice teachers.

Figure 1

Participant responses to Likert items related to the teacher’s role (August survey)

Several themes emerged after I conducted an inductive analysis of the statements that accompanied the Likert scale choices (see Table 10). Analysis of the preservice teachers’ perceptions of the teacher’s role included four themes: “teachers have the responsibility to be active agents as they occupy and change schools”, “teachers must develop a classroom community specifically through developing relationships with students,” “teachers must be in charge,” and “teachers must be in charge … BUT.” These themes further explained the nuances in the preservice teachers’ beliefs about the teacher’s role in the classroom.
Table 10

*Explanatory data related to the teacher’s role (August survey)*

<table>
<thead>
<tr>
<th>Theme</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>The teacher has the responsibility of being an active agent</td>
<td>32</td>
</tr>
<tr>
<td>The teacher must develop a classroom community</td>
<td>23</td>
</tr>
<tr>
<td>The teacher must be in charge</td>
<td>20</td>
</tr>
<tr>
<td>The teacher must be in charge … BUT</td>
<td>12</td>
</tr>
</tbody>
</table>

Participants n = 35

Preservice teachers agreed that the teacher has the responsibility of being an active agent. Several strands of thought emerged within this theme. Thirteen preservice teachers used militaristic metaphors to explain the teacher’s role as an active agent. The following preservice teachers’ comments incorporated war-like metaphors to express their beliefs. Intern DD stated, “Teachers should advocate for what they believe should be occupying schools all over America.” Another preservice teacher commented on this notion of “occupying” schools. Intern (J) said, “Teachers must be on the front lines of reform and change to create a better society for the children they teach.” In addition, the preservice teachers included the idea that teachers directly influence the future of society. Seven preservice teachers linked the impact of a teacher to the future of society. Intern BB stated, “As a teacher the future of society is in our hands, we have the ability to shape and mold it.” Also, Intern X added, “Teachers are always changing school, and through their students they are making small changes in society.”

Eight preservice teachers defined the concept that a reformer is also a teacher involved in the students’ neighborhood community. The connection to the students’
community linked the concept of reform to the teacher’s role. Intern K stated, “In order for teachers to understand their students they must be aware of the community / society they live in.” Intern R added, “It is up to the teacher to connect school and society in which the student lives together.” Some preservice teachers identified advocating for the students as another aspect of teachers as active agents in society. “Teachers should speak out about school issues to both the school and the society. They are the ones in the classrooms day in and day out, not politicians and others. Teachers should fight for their students” (Intern Z). Interestingly, only one preservice teacher indicated that reform was not a part of the role of the teacher and stated, “I am not interested in reforming society” (Intern H).

Respondents agreed that part of the teacher’s role includes the notion that the teacher must be in charge. These preservice teachers emphasized management when describing the importance of setting up classroom procedures. Preservice teachers wrote that the teacher has a responsibility to provide the “structure” (Intern II), “stability” (Intern L), and “management and organization of the classroom” (Interns F, DD, O, D, & Y). These preservice teachers believed that a key role for the teacher is to establish authority. This authoritative role includes the teacher “controlling the rules and procedures” (Intern M) because “without the procedures [in place] students will not have any direction” (Intern W). Examples such as, “If the teacher does not establish procedures the students will have no guidance on what to do” (Intern G), and “A teacher needs to establish classroom procedures in order to manage, discipline, teach the students, and be effective” (Intern D), demonstrated the belief that the teacher’s role is directly connected to the students’ discipline.
Twenty of the preservice teachers believed that teachers needed to establish their authority because teachers were responsible for the discipline in their classrooms. “The teacher has to set the procedures for the classroom. Student input can be useful, but in the end the teacher has to decide” (Intern Y). Intern EE explained, “Some procedures are also established by the school, yet the teacher holds the responsibility.” Interestingly, when responding to question #8, these same preservice teachers disagreed that a teacher should maintain a formal role. These preservice teachers did not link a formal role to setting up procedures; rather their responses indicated that the italicized words in the question (somewhat distant) shifted their attention to the relational component of the teacher’s role. For example, Intern M stated, “The students need to feel comfortable in your classroom and teaching from a distance is not the best way to accomplish this.”

Furthermore, another theme emerged that was closely related to the idea of the teacher in charge. Twelve preservice teachers qualified the importance of being in charge with a relational component. Qualities such as being “approachable,” (Intern A) “welcoming,”(Intern P) “friendly,” (Intern O) and “not distant” (Intern HH) softened the perception of the teacher’s role as an authority in the classroom. Twelve times the respondents qualified the notion of being in charge warning, “I do believe that the teacher should keep a professional relationship with the students while being amicable and being someone they can trust and talk to” (Intern Z). Intern EE agreed, “I believe some distance/formality is needed during the first part of the year, but the teacher can loosen up later on.” Preservice teachers identified classroom management as the reason for this authoritative focus. Intern N stated, “It is easy for the teacher to take on the disciplinary role in the classroom and for the students to be afraid. I feel that the teacher should be
able to structure the classroom so that the students know when it’s time to work and know when they can be less formal with the teacher.”

This relational component was further explained in the theme that a teacher must develop a classroom community specifically through developing relationships with students. Preservice teachers believed that when students have a “say” (Intern M) in “establishing the rules” (Intern BB) their students would be “more likely to follow them later” (Intern C). Respondents agreed that the development of relationships and student comfort were the underlying elements in developing classroom community. The following preservice teachers’ excerpts from the survey mirrored the bulk of the responses. “I feel that an effective teacher should become close with the students so the students would be more comfortable and eager to learn” (Intern Y). Intern M believed, “Students need to feel comfortable in your classroom, and teaching from a distance is not the best way to accomplish this.” Intern T maintained, “The teacher’s role includes a lot more than merely setting up classroom procedures; however, once procedures are in play, students get more comfortable with a routine and their role within.” Preservice teachers also identified teacher characteristics such as caring and being a role model as elements that contributed to the role of building classroom community.

Active learning. Three survey questions focused on the area of active learning. These questions were as follows: “I believe the teacher needs to plan active participation in each lesson to be most effective in motivating student learning” (Q. 2); “I believe that the most effective teacher engages the students in active learning” (Q. 6); and “I believe that hands-on learning is basically the same thing as active learning” (Q. 14). Likert scale data revealed that a majority of the respondents agreed that planning active participation
in each lesson motivated students to learn and that exemplary teachers are lovers of learning. However, the participants were split. Approximately half of the preservice teachers agreed that active learning is the same as hands-on learning. The other half of the preservice teachers disagreed. This tally of Likert data partially described the preservice teachers’ beliefs related to active learning (see Figure 2).

Figure 2

Participant responses to Likert items related to active learning (August survey)

Analyses of the statements that explained each Likert scale choice revealed a richer description of the beliefs held by these respondents about active learning. Table 11 illustrates the themes that emerged from analyses of the explanatory statements and the number of meaningful units that corresponded to each theme.
Table 11

*Explanatory data related to active learning (August survey)*

<table>
<thead>
<tr>
<th>Theme</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Active learning is meaningful for the student.</td>
<td>40</td>
</tr>
<tr>
<td>Teacher is key to active learning.</td>
<td>27</td>
</tr>
<tr>
<td>Active learning is different from hands-on learning.</td>
<td>19</td>
</tr>
<tr>
<td>Hands-on learning is the same as active learning.</td>
<td>15</td>
</tr>
</tbody>
</table>

Participants n = 35

Two opposing views emerged from the data related to active learning. One theme equated active learning and hands-on learning. Fifteen participants agreed that although there may be slight variations in the semantics, active learning would always be a part of hands-on learning. Respondents explained, “Both involve direct participation” (Intern J), and “If you are actively doing something, then most of the time it will be hands-on learning” (Intern R). Preservice teachers who disagreed that active learning and hands-on learning were similar were not able to dismiss the nuances of different words so easily.

In each of the nineteen statements that differentiated between active learning and hands-on learning, the preservice teachers defined active learning and then drew a comparison. These respondents believed that active learning and hands-on learning were different as the following statements exemplify. “Active learning does not necessarily have to be hands-on. Active learning is MINDS-on learning” (Intern B). “Active learning involves exchanges at several other levels that hands-on learning does not cover (Intern CC). “Hands-on is more of doing activities where children work together…. active learning means children can figure things out on their own” (Intern Q). Intern Y wrote,
“Hands-on learning is working with material, but active learning is exploring and self discovery of a material.”

The theme, “active learning is meaningful for the student,” was mirrored in the following statements: “If the kids are actively involved, then they are much more likely to learn the lesson you are teaching” (Intern E); “I’m in favor of active learning because it promotes understanding” (Intern U); and “Active participation would make the lesson more authentic and meaningful to the student” (Intern B). Seven preservice teachers described the meaningful aspect specifically as a memorable experience. Intern T explained, “[students] need to be involved with their learning experience to make it memorable, unique and interesting, and students must be involved in the learning process for it to be memorable.” Fifteen preservice teachers reported that active learning increased interest and created more opportunities for student learning. Active learning was believed to be important due to increased opportunities for student learning due to “increased interest” (Interns L, P, & HH), and that “increased interest” positively affected the management of the students’ own learning (Interns DD, Y, & F).

The preservice teachers believed that the teacher’s intent to use active learning as a strategy for learning is important. The theme, “the teacher is key to active learning,” emphasized the commitment of teachers to use student participation in their lessons. The preservice teachers identified the characteristics of teachers who plan for active participation in each lesson. They also identified the advantage of the teachers’ ability to assess the students’ understanding while implementing active learning. The preservice teachers cautioned that active learning might not always be the best choice. Respondents believed that teacher characteristics necessary for active learning include the following
qualities: “enthusiastic” (Intern A), “setting an example” (Intern J), “actively teaching” (Intern M, R, & F), and “engaging” (Intern C). This emphasis on teacher qualities supported their belief that the teacher was central to the implementation of active learning.

Ten preservice teachers agreed that active learning as a teaching technique is extremely effective. They believed that active learning enables teachers to gain new knowledge about their students. These preservice teachers believed that active learning indirectly provides the teacher with needed feedback on lessons and student gains in understanding. Respondents believed active learning provides multiple opportunities for assessment. For example, Intern W wrote, “[active learning] gives [the teacher] a sign that the children are into the lesson.” Intern U explained, “[active learning] helps the teachers see if the students are learning.” Intern S explained, “[active learning] allows the teacher to see different learning styles,” and Intern O agreed that active learning “helps the teacher ensure their brains are awake” (Intern O).

Although preservice teachers believed active learning is an effective strategy for teaching, they also cautioned that the teacher is important. They believed that a teacher who relies heavily on active learning needs to beware of the management pitfalls that could be experienced without proper behavioral objectives in place. Intern H stated, “Not all lessons lend themselves to active participation. I believe that active participation is crucial; however, I do not believe it needs to be incorporated in every lesson.” Intern BB agreed: “All students learn differently, and we need to meet the needs of everyone.” In addition, Intern HH stated, “Active learning is good, but it should not be the only kind of strategy…. children benefit from all different types of methods.”
Three survey statements focused on the area of culture. These statements were as follows: “I believe a child’s cultural background has little effect on their education” (Q. 3); “I believe that all students are treated equally in schools today” (Q. 11); and “I believe that the learning ability of some children is limited because of home environment” (Q. 12). Likert scale data portrayed in Figure 3 depicts the respondents’ agreement with the notion that student’s cultural background affects their education. At the same time, preservice teachers disagreed that students are treated equally in their school experience. Two-thirds of the respondents agreed that the students’ home environment could limit the ability of students. Meanwhile, one-third of the respondents disagreed by citing other factors. The preservice teachers did not clearly define culture on the survey. Their responses focused on culture’s impact on students.

A closer examination of the preservice teachers who appeared to hold outlier beliefs revealed that the four preservice teachers who agreed or strongly agreed that culture has little effect (question #3) were Interns L, Y, EE and O. The one preservice teacher who agreed that all students are treated equally in schools on question #11 was Intern O. The ten preservice teachers who disagreed that culture limits the ability of children were Interns C, F, J, O, U, Z, HH, P, W, and H. Interestingly, only Intern O appeared as an outlier on each question.
Figure 3

Participant responses to Likert items related to culture (August survey)

![Bar chart showing participant responses to Likert items related to culture.]

Participants n = 35

Table 12 depicts the themes that emerged after I analyzed the written explanations from the August Survey of Beliefs. Respondents identified prejudices and personal experiences as factors that affect equal treatment in schools. The majority of respondents agreed that culture affects learning and that teachers have some responsibility in effecting positive learning outcomes regardless of a student’s cultural background. Two-thirds of the preservice teachers surveyed viewed the home environment or background culture of the student as a limitation. However, one-third of the respondents communicated that they believed that culture and home environment could be positive factors for learning opportunities in the classroom.
Table 12

*Explanatory data related to culture (August survey)*

<table>
<thead>
<tr>
<th>Theme</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Factors that impact equal treatment in schools</td>
<td>33</td>
</tr>
<tr>
<td>Culture affects learning</td>
<td>32</td>
</tr>
<tr>
<td>Home environment/factors that limit ability</td>
<td>22</td>
</tr>
<tr>
<td>Culture adds to the classroom experience</td>
<td>13</td>
</tr>
</tbody>
</table>

Participants n = 35

Many of the preservice teachers agreed that even though “equal treatment for all” may be a mantra for schools in 2004, their experiences indicated otherwise. The following preservice teachers wrote about this apparent discrepancy. Intern I explained, “I’ve witnessed many students not being treated equally in classrooms.” Intern F added, “I think that’s a goal, but reality shows me differently.” Twelve respondents specifically identified prejudice as the factor to be blamed for unequal treatment of students in schools. Intern Y stated, “I strongly disagree with this because there are many teachers who are unfair individuals; unfortunately, racism and prejudice still exists.” Intern E agreed, “Students should all be treated equally; however, that is not the case. Each child and each teacher comes in with their own set of prejudices and beliefs, and that is where the problem lies.” Only one preservice teacher applied this belief to her own practice when she emphatically wrote, “I know that there are inequalities, but they will not be present in my classroom!” (Intern H). Other factors the preservice teachers identified for unequal treatment were as follows: “Being labeled into specific groups” (Intern J), “Leveling students [according to] IQ, socioeconomic status, way of learning, disabilities.” (Intern U), “Different income families and different culture families” (Intern
Respondents also agreed that culture affects the students’ ability to learn in school. Most of the respondents made general statements about the impact of culture on learning without elaboration. “I believe that based on a child’s cultural background, the student may feel and understand things differently from others” (Intern R), and “The child’s background experience would greatly affect their learning” (Intern B). Some of the preservice teachers indicated that the values held at home could negatively affect learning. “Their culture has a lot to do with how they learn and how they behave towards school. If their parents were brought up not to value school, then most likely their children will not value school either” (Intern N). “Different cultures have different beliefs about education. Some cultures value it more than others” (Intern C). As these preservice teachers explained the impact of culture on learning, some emphasized the cultural difference as a barrier to overcome. Intern U explained, “Culture has a great effect because that can be a conflict between the student’s customs and the new environment.” “Some families are not always as fortunate as others or come from different countries where they do not understand English and have several resources” (Intern D).

Yet, the preservice teachers also mentioned that these differences were not within the student’s control. Intern I stated, “I agree some students such as LEP students do not have any help or support at home or even within the family and it is out of their control.” The teacher was admonished to “become familiar with the child’s cultural background and beliefs” (Intern I), “have a goal getting to know each student” (Intern FF), and “learn a little about the culture of students to better understand how to help them learn” (Intern AA), “High-stakes testing” (Intern DD), and “Some have more opportunities and others do not have the resources” (Intern D).
Q). Many of the preservice teachers focused on the teacher’s responsibility to address these cultural differences without ever referring to themselves as teachers.

The third theme that emerged from the data analysis related to culture was that the home environment limited the ability of some students to learn in school. Intern S stated, “The learning ability of some children is limited because not all parents read to their children or push them towards having a good education.” Intern N concurred, “Depending on what is being taught or not taught can affect the learning ability of the child. Intern M emphasized, “I believe that home life can cause destruction in learning for some students. If there is a bad home life, it can affect a child’s mental abilities.”

Some preservice teachers clarified the specific factors that they believed limit the students’ ability to learn: “Some children’s true ability is challenged because they are not given the adequate stimulation and guidance from home,” (Intern E); “Child abuse, neglect, poverty, and religion are just a few examples of issues that limit learning,” (Intern EE); and “Some children don’t have resources or parents who don’t really get involved in their learning environment. “This affects a great deal of what they retain and learn” (Intern G), and “Some children do not have a good home life or lack financial security for better opportunities in school” (Intern Q).

Thirteen respondents disagreed with the concept that the home environment hindered ability to learn. These preservice teachers distinguished between learning ability and “performances that may be affected by their home” (Intern H). They believed that “all students have the ability to learn,” regardless of their home environment (Interns P, O, HH, Z, & C). More emphasis was put on the “levels” of learning (Intern HH) in statements such as, “The environment can be helpful,” (Intern BB) and “Some cultures
put more emphasis on education [than on the ability to learn]” (Intern P). This perspective on the home environment emphasized the possibility that the impact of culture on a child could be positive. Intern O stood alone in voicing a strong positive comment about culture’s impact on a child’s learning. “I think all children can learn the material. If anything, I think the children’s culture adds more to the classroom and their education experience.”

Assessment. Two survey questions focused on the area of assessment stated as follows: “I believe that on-going assessment is essential for the teacher to make sound instructional decisions” (Q. 7); and “I believe that assessment directly impacts the level of learning in the classroom” (Q. 10). Likert scale data depicted in Figure 4 indicated that all of the respondents agreed that continuous assessment is essential for teachers to make sound instructional decisions. However, all of the preservice teachers did not agree on the impact that assessment has on the level of learning in the classroom.

Figure 4

Participant responses to Likert items related to assessment (August survey)

Participants n = 35
Analysis of preservice teachers’ statements related to assessment revealed three themes. Table 13 depicted the two themes and the frequency that corresponding meaningful units occurred in the data. Respondents distinguished between the impact of assessment on students’ learning and on teachers’ instructional foci. Respondents also identified difficulties related to the conclusive nature of a single assessment.

Table 13

<table>
<thead>
<tr>
<th>Theme</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assessment decisions: Student emphasis</td>
<td>27</td>
</tr>
<tr>
<td>Assessment needs to be continuous: Teacher emphasis</td>
<td>25</td>
</tr>
<tr>
<td>Difficulties with assessment</td>
<td>17</td>
</tr>
</tbody>
</table>

Participants n = 35

Respondents agreed that assessment provided the teacher more information about students. Specifically, the preservice teachers focused on the students’ understanding of concepts. The following are examples of responses from the preservice teachers. Intern II stated, “It lets the teacher know where the student is falling behind or not understanding something.” Intern G explained, “Assessing the students in different ways to know that they understand what is being taught,” and Intern J agreed: “A teacher must assess students to determine what is being understood.” This emphasis on understanding the student through assessment was also linked to student growth. Intern H stated, “Assessment is the key to growth.” Intern R commented, “Assessment always impacts the level of learning…. and can help them [the students] reach grade level goals.” Intern Q emphasized, “The more you know about each individual student, the more you can help them reach grade level goals.”
The emphasis on understanding the student better was often connected to statements about the teacher’s need for continuous assessment to modify instruction. “Instructional direction” (Intern F) and “making proper adjustments in how to teach the students” (Intern D) supported the teacher “to scaffold” (Intern O) and properly place the student in the right program, class, or lesson” (Intern M). “Improving teacher methods” (Intern U) by “adjusting their lessons” (Intern X) in order to “move at a faster / slower pace” (Intern GG) helped teachers “adjust teaching to student needs” (Intern BB). Several preservice teachers also warned that the teachers must use the assessment to adjust their lessons. For example, “This is only true if the assessment data is used to better instruction of the student. If assessments are given for assessment sake, the level of learning will not improve” (Intern B). Although the preservice teachers agreed that assessment was valuable as a guide for instructional decisions, only one preservice teacher actually documented the mentor teacher’s use of an assessment which resulted in a more effective lesson. Intern P concluded, “When a teacher assesses a student, they are also assessing themselves. If a teacher sees that all students did not do well on a certain test, she needs to reflect and change her instruction.”

These preservice teachers agreed that one assessment was not sufficient for planning instruction or making decisions about student learning. Intern I stated, “All your instruction shouldn’t be based on one assessment; the teacher must review the results and consider when planning her instruction.” Intern AA stated, “Only testing once at the beginning and once at the end tells you very little.” Intern A cautioned, “Don’t base your child’s progress on one assessment…. [only] over a period of time you can see the child’s progress.”
The preservice teachers believed that the teacher should consider additional forms of assessment. Intern K stated, “Assessment is very important but must be done in a variety of ways.” Intern N explained, “Assessment is simply a tool that is used in the classroom, and without accompanying tools, it will not impact the level of learning alone.” Intern EE emphasized, “All students learn differently, are better at some forms of assessment than others.” Intern T agreed: “There are different types that may be used … one type may not be the appropriate instrument to measure specific skills.” The preservice teachers’ emphasis on the variety and challenge of choosing the appropriate assessments for a particular lesson appeared to highlight new questions about them. Intern CC stated, “It’s the best way to see what is being learned…. the problem arises in HOW to assess students?” The difficulties with assessment theme also included two references to other factors that impact the teacher. Intern Q focused on the practical demands of the classroom: “I find this might be difficult because of time to do lessons and specials as well as other interruptions during the school year.” Intern S focused on the unique nature of some students in the statement, “Some students may not be good test takers.”

Reflection. Three survey questions focused on reflection stated as follows: “I believe that all students can learn if the teacher is committed to reflecting on practice” (Q. 1); “I believe that a teacher adopting a reflective stance to teaching far out weighs any other professional development opportunity” (Q. 5); and “I believe that all exemplary teachers are ‘lovers of learning’ themselves, and are constantly reflecting on their practice” (Q. 13). Likert data depicted in Figure 5 provided a surface level understanding of the beliefs held by these preservice teachers. All of the preservice teachers indicated
that they agreed that all students could learn from a teacher who reflects on his or her practice. The respondents were evenly split when they considered the idea that adopting a reflective stance outweighs other professional development opportunities. In addition, respondents agreed that exemplary teachers reflect on their practice, but they included the caveat that a “lover of learning” was not necessarily a characteristic of an exemplary teacher. The statements about reflection had a positive tone, emphasizing that reflection was important for a variety of reasons, but the preservice teachers did not articulate what reflection looked like in practice.

Figure 5

Participant responses to Likert items related to reflection (August survey)

![Likert Item Responses](image)

Participants n = 35

Although the Likert data indicated general agreement among the interns, the analysis of their explanations indicated that they held divergent beliefs about reflective practice. Table 14 depicted the themes and the frequency with which meaningful units related to each theme in the data. The preservice teachers believed that there are unique qualities encompassed in the reflective practitioner, and that these qualities affect the teaching process. The preservice teachers explained these qualities in the explanatory
Preservice teachers also viewed reflection as an important practice for an effective teacher. Some of the preservice teachers acknowledged reflection as an important quality, but their endorsement of reflection was tempered with some reservations. The three preservice teachers who disagreed that a reflective practitioner must be a lover of learning were Intern C, I, and BB. These preservice teachers were different from Intern GG, who alone disagreed on question # 5.

Table 14

<table>
<thead>
<tr>
<th>Theme</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teacher qualities needed for reflection</td>
<td>31</td>
</tr>
<tr>
<td>Reflection impacts the teaching process</td>
<td>32</td>
</tr>
<tr>
<td>Reflection: the best we can be</td>
<td>23</td>
</tr>
<tr>
<td>Reflection is important….But</td>
<td>18</td>
</tr>
</tbody>
</table>

Participants n = 35

Respondents identified several qualities held by a reflective practitioner. They described the qualities as follows: “Willing to think back, revise, and revisit teaching materials and techniques and accepting of failures” (Intern Z), “To love teaching and care about the students” (Intern II), “To be able to step outside the box and look at the outcomes of your lessons objectively” (Intern V), “To never stop learning” (Intern W), “To always try to improve” (Interns CC, R, & X), and “To love to learn” (Interns DD, E, O, & P). However, Interns C and J qualified the characteristic of being a lover of learning and explained, “A teacher does not necessarily have to love to learn; he or she could just love to teach” (Intern C), or “just be good at teaching” (Intern J). In addition, several preservice teachers clarified that the process of reflection required “the teacher to be open
to outside input” (Intern A) because “a reflective stance is part of our professional development” (Intern U). “Learning from mistakes … will help them grow professionally (Intern L), and “a reflective stance is important in order to be a well rounded teacher” (Intern W).

The preservice teachers also believed that reflection affects the teaching process. Intern AA stated that reflection helps teachers “refine their teaching techniques.” Several preservice teachers believed that reflection improves teaching. Intern O pointed out that noticing “what went good and bad in the teacher’s lesson was critical in order to improve.” Intern B emphasized, “Acting on the reflection will help to pinpoint the areas that need attention and improvement.” Intern T pointed out that reflection on “what went well and what still needs improvement [is needed] in order to reach each student.” Seven preservice teachers who believed that reflection improves teaching connected the impact of reflection on lessons to student learning. These preservice teachers explained that through reflection, “all students are capable of learning, and it is up to the teacher to accommodate their style of learning” (Intern Y), “all children are capable of learning if the right approach is taken” (Intern J), and “we just have to find the ways to reach the child” (Intern Q).

Respondents’ beliefs about reflection included an optimistic tone: “Teachers are always reflecting on their practice because we want to be the best we can be” (Intern FF). Many preservice teachers agreed that reflection would make them “a better teacher” (Intern D), but “a vital part of being a better teacher is reflecting … teachers are only as smart as they want to be” (Intern E). “The professional [teacher] is one who constantly learns, reflects, and changes for the better” (Intern P). A natural consequence of
reflection, according to the preservice teachers, was the positive impact on student learning. Respondents agreed that reflection would “help students retain material better” (Intern EE), “benefit all students in the classroom” (Intern HH), and “the classroom can be a learning environment for all students” (Intern V).

Lastly, 18 respondents agreed that reflection is important, but they did not believe that it outweighs other professional opportunities, experiences in the classroom, or practice. Practice is defined as “activities to learn concepts” (Intern U) and “application” (Intern D). The preservice teachers believed that reflection alone is not necessarily “connected to improvement” (Intern BB) nor was reflection more valuable to “workshops and readings on different methods.” Overall, the responses indicated that some of these preservice teachers believed that other “professional development opportunities” (Interns K, M, Y & T) could be as effective as reflection and that reflection is not intertwined with experiences in the classroom.

Summary of the August Survey

The preservice teachers’ statements indicated that there were areas of agreement and disagreement related to the five focus areas. In the August Survey of Beliefs, the tone of their responses was instructional and one-dimensional in that they were telling the reader exactly what teachers should do when facing these different aspects of teaching. All of the preservice teachers are seniors completing their final course work in education and have experienced a level-one internship. The Level I internship is a prerequisite to the Level II field experience and required that the preservice teachers experience one full day or two mornings interning in classrooms. Still, the statements were very broad and contained few references to specific students or teaching experiences.
The preservice teachers articulated their beliefs related to the five focus areas without details, and they referred to students in generic terms. For example, the respondents indicated that teachers should balance an authoritative role with caring to manage student behaviors. Few questioned the challenge of implementing these dual roles. The teacher’s responsibility to create a classroom culture of equal opportunity was also echoed throughout their responses; however, few preservice teachers actually thought this was possible. The preservice teachers did not identify any students as individuals. Rather, they categorized students together. The survey format did not ask for specifics, and the preservice teachers may have been making a choice not to write extensively due to the format. Still, the data consistently reveal patterns of lumping students together generically, and not identifying the complexity of the issues asked about in the survey.

The tenor of the preservice teachers’ responses was instructive. They informed the reader on the appropriate behaviors and beliefs that an exemplary teacher should hold. The general information rarely included a specific strategy or suggestion for implementation of this notion. The preservice teachers did communicate a value of reflection and linked the notion to students’ growth and to its effect on the teaching process. They identified specific qualities that teachers must hold to be successful at reflection. However, traits such as always striving to be better and willingness to learn were not perceived as challenges, nor were these qualities described in personal terms.
E-mail Dialogues and Written Reflections

The preservice teachers wrote a dialogue e-mail after investigating four focus areas. The dialogue e-mails were spaced two weeks apart; thus the preservice teachers had on average three days to investigate the focus area before writing to their partner. During the data collection period, there were four hurricanes that threatened the area, and schools were closed for several days. Therefore, for the inquiries related to the focus areas of a “teacher’s role” and “active learning,” the preservice teachers lost a day of investigation in their internship classroom. The dialogue e-mails were delayed a day or two due to power outages, but I had built in extra time to read and select statements from the e-mails for the seminar discussion. Thus, the power outages did not affect the framework plan for seminar discussions. At the beginning of the semester, I had to call five preservice teachers at home to get the e-mail dialogues sent correctly. Some of these preservice teachers had the wrong e-mail addresses, and others simply forgot about the assignment. After the first round, these reminder phone calls were only necessary for one or two preservice teachers.

The small group discussion occurred during seminar. Seminar was scheduled every other week, and the preservice teachers brought a hard copy of their dialogue e-mail to each meeting. I prearranged the desks into groups to accommodate four people before the seminar meeting. Each group consisted of two sets of dialogue partners, and these groups remained fixed throughout the semester. I began each seminar with general announcements related to the internship experience and a brief introduction to the focus area investigated. The selected statements were handed out, and each group read through the statements selected, discussed their thoughts about the statements, and then charted
their conclusions to share with the whole group. Appendix U is an example of some of the charts created by the small groups for whole group discussion. After the students presented their charts, a small whole group discussion occurred. At the conclusion of the whole group discussion, the preservice teachers reread their dialogue e-mail copies and reflected in writing for 10 minutes on their thinking related to the focus area.

For each focus area, as I received the dialogue e-mails, I copied and pasted them into a Microsoft Word document. Then, I copied and pasted the Word document into Ethnograph (5.0). The program, Ethnograph 5.0, shortens the number of words on each line and numbers each line for easier coding. The program also keeps a record of the code words identified. Before coding any of the data, I read through the entire Word document to get a holistic impression of the data. I reread the data again as I selected a statement from each dialogue e-mail to create a handout for the interns to discuss during seminar (Appendix X). As I read the e-mails a third time, each line was coded using a word or words that appeared in the line to capture the line’s meaning.

As I began this procedure with the data related to the first focus area, teacher’s role, I attempted to save the initial coding, but I lost the data in the saving process. I returned to the task a day later with a better understanding of the coding procedure. I reread the data and began coding the data again. Once the entire document was coded, I reread the data again, using the codebook in the program to ensure that I was coding consistently.

Using the Ethnograph program, I searched the data for the frequency with which each code was used. These coded sections were printed, and I read through each one and highlighted the sections that exemplified the code. I grouped the codes into categories.
Later, these categories were combined into themes that represented the essence of the preservice teachers’ core beliefs about the teacher’s role. After identifying these themes, I reexamined the initial survey data to note if the dialogue e-mails further explained the preservice teachers’ beliefs articulated in the survey. I repeated this process for each area of inquiry.

Similar to the analysis process for the dialogue e-mails, I first typed the written reflections after the discussion to a Word document. Then, I copied and pasted the Word document into Ethnograph (5.0). I read through the entire Word document to get a holistic impression of the data. As I read the written reflections, each line was coded using a word or words that appeared in the line to capture the line’s meaning. I searched the data for the frequency with which each code was used. These coded sections were printed, and I read through each one and highlighted the sections that were the most representative examples of the codes. I grouped the codes into categories. Later, these categories were combined into themes that represented the essence of the preservice teachers’ core beliefs about the teacher’s role.

**Dialogue E-mail Findings Focused on the Teacher’s Role**

The preservice teachers were guided by the following prompt to investigate the teacher’s role. “Dialogue 1: Investigate the statement, “An effective teacher maintains a formal role in the classroom.”

- Observe your mentor teacher and other teachers in the school.
- What role do they play … is it formal or informal?
- What does a formal/informal role look like? What does a formal/informal role sound like?
What do you believe your role should be?

Four themes that emerged from the dialogue e-mail data focused on the teacher’s role. These four themes were as follows: “Formal role defined,” “Informal role defined,” “Balanced role defined,” and “Refining role.” Table 15 portrays the frequency that preservice teachers referenced each code word within the theme.

Table 15

<table>
<thead>
<tr>
<th>Dialogue e-mail themes for the teacher’s role</th>
<th>Categories</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Theme</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Formal role defined</td>
<td>Formal Role</td>
<td>61</td>
</tr>
<tr>
<td></td>
<td>Management</td>
<td>32</td>
</tr>
<tr>
<td></td>
<td>Respect/Expectations/Rules</td>
<td>30</td>
</tr>
<tr>
<td></td>
<td>Control</td>
<td>28</td>
</tr>
<tr>
<td></td>
<td>Teacher centered/Knowledge-holder</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>Professional</td>
<td>8</td>
</tr>
<tr>
<td>Informal role defined</td>
<td>Informal role</td>
<td>61</td>
</tr>
<tr>
<td></td>
<td>Caring/Friend</td>
<td>32</td>
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<td>Student-centered</td>
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<td></td>
<td>Student comfort</td>
<td>16</td>
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<td></td>
<td>Informal benefits</td>
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<td>Balanced role defined</td>
<td>Balanced</td>
<td>54</td>
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<td></td>
<td>Role Shifts</td>
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<td>Specific time</td>
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<td></td>
<td>Draw the line</td>
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<td></td>
<td>Flexible</td>
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<td>Both are needed</td>
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<tr>
<td>Refining role</td>
<td>My role</td>
<td>16</td>
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<td>My search</td>
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<td>Questioning</td>
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<tr>
<td></td>
<td>Challenges</td>
<td>7</td>
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<td></td>
<td>My experience</td>
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</tbody>
</table>

Participants n = 35

*Formal role.* The preservice teachers defined the formal role of the teacher as one that has control of the classroom behaviors and activities. This echoed their previous
beliefs in the survey data that the teacher needs to be in charge. Included in this formal role was the belief that this role is essential to have management, control, and respect. Interestingly, even though a majority of the preservice teachers disagreed with the notion that a teacher must maintain a formal role in the August survey, this emphasis on authority was not a contradiction. The formal role was perceived as a temporary status that would shift to an informal role over time. The references to specific incidents in their internship classroom increased; moreover, the preservice teachers emphasized their experience as they explained their beliefs about the teacher’s role in the dialogue e-mail. Establishing a formal role was viewed as a necessary part of classroom management, and examples from the internship experience provided the evidence. Intern O explained,

Formal teaching is very traditional with the use of teaching up at the board and then handing out a worksheet. The teacher I observe uses the formal approach, and it is hard for me to learn from her because I want to learn more informal styles. However, the teacher was absent on Wednesday and I tried my informal teaching and the students walked all over me. I ended up having to yell at the class because they were behaving out of line, and by the end of the day my voice was almost gone. So I do see why she runs "a tight hold" in the classroom. She may feel that being a drill sergeant is the only way it will work. And maybe for first grade it is.

Intern K stated,

I do believe that the role of the teacher should be a formal one…. Students need to understand that structure is needed in the classroom. However, there is a time and place for every type of behavior…. When a student
comes to a teacher with a personal issue, a formal behavior may not be necessary, and a teacher needs to be able to make [know] the difference between the two. I agree that a teacher should be formal at the beginning of the year, because students need to understand where the teacher is coming from and understand the rules.

Informal role. In the initial survey data, the preservice teachers believed that the teacher’s role included building a community. Preservice teachers described the informal role of a teacher in more detail in the dialogue e-mails with attributes such as caring, student centered, concerned that students are comfortable, friendly and trustworthy. These attributes were held up by many of the preservice teachers as positive qualities that had a constructivist focus on student learning and building communities. In the initial survey, preservice teachers made general statements; the dialogue e-mails reflected more specificity, ownership, and examples from their experience. Typical of the preservice teachers responses, the following two interns followed this pattern and wrote,

An informal role is more student-centered, hands-on environment. The students have a lot of input into the activities and events; they do more exploring to explain facts and questions that they may have. This is a comfortable, but casual dresser who walks around the classroom observing, giving feedback and additional help to his/her students. They use a variety of manipulatives around the class. The environment is very warm, cozy, relaxing, and colorful. (Intern R)
Intern W explained,

Informal classes are student-centered. The students guide their own learning. My monitoring [mentor] teacher in particular assumes an informal role. She informs the student about any changes in the schedule. She explains why she does things a certain way, and she expresses her feelings. As a future teacher, I believe that I should assume an informal role in the classroom. I believe that students feel more comfortable in an informal classroom setting. To set an informal type of environment, I will not have my future students call me by my last name. They can call me by first name but use Ms. I think in an informal classroom students have a sense of family, and they feel that they matter, and their opinions matter.

Balanced role. These preservice teachers also began to combine the notion of formal and informal roles in the e-mail dialogues. In the survey data, only twelve respondents qualified the notion of being in charge. In contrast, the e-mail dialogues rarely mentioned a formal role without also addressing an informal role. The preservice teachers emphasized a shifting role in response to students, time of year, curriculum, and situation. This emphasis added specificity to descriptions of a balanced role. Intern HH wrote,

I am lucky to have been placed with a teacher who is a lot like me. When I spoke to her regarding her role in the classroom, she explained that first she is a teacher and, being that, she must be given respect as an adult and authority figure in her classroom. She must be able to maintain control and discipline, or "management," in order to promote the best and most
productive learning environment. Once this very important role has been established, it is extremely important to connect with each of your students on a more personal level. There should be a degree of trust and comfort established between you and your students. You spend 7.5 hours a day with these children. That is more time than many of their parents are able to devote to them. It is important for them to feel like you care about them and know them. If they connect with you, they will almost always work better for you. They will want to please you. I don't know that I would say that one role is more important than the other, but I do believe that timing is very important.

Another preservice teacher wrote,

I have observed the teacher behaving in a formal and informal manner in the classroom, and they have been extremely effective as a teacher. The teacher became informal in a small group setting or a one-on-one setting. The teacher was able to instructionally connect to the students and become more personal with them in a professional manner. It could be as simple as a smile or inside joke between the student and the teacher or as complex as realizing that a student is going through a rough time without their pet that just died and being sensitive of the subject matter in class. (Intern F)

Refining role. Although the preservice teachers expressed strong beliefs about the teacher’s role as an active agent in the society in the survey, the dialogue e-mails did not reference this notion at all. The prompt for this first focused investigation did not include any reference to being an active agent; however, the prompt did include a question that
queried about the role they should play in the classroom as a teacher. In the dialogue e-mails, the preservice teachers elaborated on their role, supporting their thoughts with examples from the internship experience. In this way, they described themselves as refining their roles through the investigation. They often cited their mentor teacher or an experience as the prompt for reflective thinking that was refining their understanding of the teacher’s role.

My mentor teacher is [maintains] a formal role model to her students. She is very enthusiastic in everything she does; she is a caring person who attends to all of her students’ needs. I noticed that my mentor teacher never came [comes] to school without looking professional. I feel that when a teacher is dressed professionally, the students respect her more…. I will always remember the impact that some of my teachers have had on me, and I hope to have the same impact on my future students. (Intern GG)

Moreover, Intern EE highlighted the mentor teacher’s balance of roles and stated,

My mentor teacher is a mix of a formal and informal teacher. When it comes down to disciplining and instruction, he leans more on the formal side…. His mix in roles seems to be working for him…. If you are too formal, the students might feel they are in the military. If you are too informal, the students might feel they can do whatever they want and not respect you. All in all, as a teacher I want to be in the middle of formality and informality.
Written Reflection Findings Focused on the Teacher’s Role

After the small group discussion based on the dialogue e-mail selected statements and a whole group sharing of charted findings, the preservice teachers spent ten minutes reflecting on their thoughts about the teacher’s role. Three main themes emerged from the written reflections after the inquiry group discussion: “The teacher’s role impacts management,” “The teacher’s role impacts instruction,” and “Refining thoughts about the teacher’s role.”

Teacher’s role impacts management. Respondents in the survey and the dialogue journals agreed that an authoritative role was necessary for classroom management. This belief was echoed in the written reflections in that management at the beginning of the year was essential to control unwanted behaviors. For instance, the preservice teachers noted, “I need to establish myself as an authority figure to decrease behavioral problems” (Intern Y). Intern E explained, “It is crucial that you establish rules and boundaries early so that your students respect and not walk all over you.” However, the emphasis on authority was tempered with the notion that this role has to shift to a more informal role as the school year progresses. Many of the preservice teachers agreed that the role of the teacher should shift from formal to informal. They believed that an authoritative role is a temporary role that gives way to the collaborative role that was earlier described in the dialogue e-mails as informal. The number of preservice teachers that defined the “formal” and “informal” roles decreased dramatically in the written reflections. Instead of defining the role as they did in the dialogue e-mails, the focus of the written reflection was application of the definitions to their practice:
This approach will affect my teaching style greatly because I was not aware of how well young students responded to discipline. I was under the impression that you should be loving and affectionate with students and you can be, but you must also set some formal boundaries for yourself as a teacher. (Intern H)

Teacher’s role impacts instruction. Throughout the written reflections, the preservice teachers emphasized the impact of the teacher’s role on instruction. The preservice teachers described the connection between their earlier thoughts about the role of the teacher and what happened in actual experience. Intern O articulated the dilemma and wrote,

After trying to be informal, I realized two things. The classroom lit up, brains were working, smiles were apparent. But then, five minutes later, I noticed that chaos was happening. Children were talking too much and the lesson got to be ineffective.

Preservice teachers changed from general descriptions of the teacher’s role to specific examples connected to the internship experience. The written reflections documented both benefits and detriments to student learning. Intern E explained the impact on instruction and stated, “Students need to be in charge of their own learning, and while lectures are needed sometimes, they are not always the answer.” Intern I found a benefit to a formal role: “The longer I am in the internship, the more I see structure is needed … There are much better ways to optimize the time in the classroom for student learning.”
Refining thoughts about the teacher’s role. Unique to the written reflections was a greater emphasis on the theme of refining ideas. These preservice teachers described themselves in a state of change. The discussion had “reinforced” (Interns H, Q, T, EE, & FF), “changed” (Interns G, V, Y, BB, & CC), and focused these preservice teachers on the role of the teacher as it applied to their future as educators.

I used to think that kids would respect the teacher as long as the lesson was fun. But the important thing to remember is, the more informal the lesson is the more formal the structure needs to be. (Intern O)

Intern G explained the change in her belief as follows:

My thoughts have changed compared to my dialogue. I can see that a classroom cannot function unless there is a combination of both formal and informal. The teacher can set rules, but at the same time learning can become a fun experience. (Intern G)

Belief changes related to the teacher’s role. In the dialogue e-mails, the preservice teachers initially defined the differences between a formal role and an informal role. Once the preservice teachers had had an opportunity to discuss their thoughts in a small group, they did not begin with a definition; rather, their written reflections included examples of how these roles would play out in their lives as teachers. In the August Survey of Beliefs data, the preservice teachers overwhelmingly agreed that there is a need to have a formal role in the classroom in order to establish rules, control, and respect, especially at the beginning of the school year. This emphasis on management was maintained in the dialogue e-mails; however, the preservice teachers stressed the importance of combining a formal role with an informal role, with examples of the need
to shift between the two throughout the day. The preservice teachers cited specific examples from the internship experience, and in the written reflections they began to apply their understanding of the teacher’s role to themselves. Interestingly, the preservice teachers accepted the role of their mentor teacher without question as a model for them to emulate in both the dialogue e-mails and the written reflections.

Dialogue E-mail Findings Focused on Active Learning

The preservice teachers were guided by the following prompt to investigate active learning. Dialogue 2: Research the statement, “The most effective teacher engages students in active learning.”

- Goodlad (1984) found that 70% of the school day is talk, and 75% of that talk is teacher talk.
- Why do educators say active learning is effective?
- Monitor your classroom for a day, and write down when the students are learning.
- What are the behaviors or evidence that tells you the students are learning?
- Monitor your interactions with the students, and notice the percentage of teacher talk.
- What is active learning, and is it important?

After the second round of dialogue e-mails related to active learning, the preservice teachers further elaborated on active learning themes. Three main themes emerged from the preservice teachers’ dialogues e-mails (see Table 16): “Defining active learning,” “Active learning impacts learning” and “The teacher is key to active learning.”
Table 16

*Dialogue e-mail themes for active learning*

<table>
<thead>
<tr>
<th>Theme</th>
<th>Categories</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Defining active learning</td>
<td>Student centered</td>
<td>36</td>
</tr>
<tr>
<td></td>
<td>Participating</td>
<td>27</td>
</tr>
<tr>
<td></td>
<td>Observed behaviors</td>
<td>18</td>
</tr>
<tr>
<td></td>
<td>Student talk</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>Important</td>
<td>7</td>
</tr>
<tr>
<td>Impacts learning</td>
<td>Student control</td>
<td>45</td>
</tr>
<tr>
<td></td>
<td>Think for self</td>
<td>35</td>
</tr>
<tr>
<td></td>
<td>More effective</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td>Not modeled</td>
<td>5</td>
</tr>
<tr>
<td>Impacts teaching</td>
<td>Teacher responsibility</td>
<td>38</td>
</tr>
<tr>
<td></td>
<td>Impacting instruction</td>
<td>25</td>
</tr>
<tr>
<td></td>
<td>Teacher talk</td>
<td>14</td>
</tr>
<tr>
<td></td>
<td>Passive</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>Assessment</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>Hands on/minds on</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>Test impact</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>But how?</td>
<td>2</td>
</tr>
</tbody>
</table>

Participants n = 35

*Defining active learning.* In the dialogue e-mails many respondents began their communiqué with a definition of active learning. A primary category that emerged from defining active learning was the component of active learning as a student-centered activity. Intern P explained that students engaged in active learning “work at their own pace.” Intern F stated that active learning takes place in stages:

First there is awareness in which the student is exposed to concept and ideas. Then there is exploration where students need opportunities to interact with these concepts and ideas on a personal level. The next step in inquiry is where the students require support in their efforts to achieve mastery, and the last step is utilization, where the students must use and
refine their skills and understandings in real situations…. This routine is student centered.

This student centered approach was also characterized by specific behaviors. Intern M explained, “Raising their hands, nodding the heads, smiling when giving correct answer or answers that you were not thinking about but are still correct.” Intern O added, “Using their fingers to point to the words as I was reading.” Intern V specified, “Thinking, questioning, observing, making inferences, predicting, comparing, contrasting, and figuring things out for themselves with some guidance from their teachers.” Student participation in the lesson was a behavior identified 27 times throughout the dialogue e-mails as a component of active learning. In addition, the respondents agreed that student talk and discovery are essential elements of active learning. Intern H explained, “Active learning is when students take responsibility for their learning, and are discovering concepts. In active learning, teachers do not do all of the talking; they let students discover things on their own.” Intern I agreed that “children should collaborate with each other more and be a part of discovering their own learning, with the teacher trying to be more of a facilitator rather than her doing all the talking.”

Impacts learning. In the survey data, the theme, “active learning is meaningful to the student,” included statements connecting active learning to meaningful experiences in the classroom. However, in the dialogue e-mails, the preservice teachers described specifically what active learning looked like in the classroom. Throughout the respondents’ dialogue e-mails, they emphasized the key element that when students have control of their learning, this control has a major impact on achievement. Some preservice teachers specified that providing opportunities for active learning included the
following: “[To] take responsibility for their learning” (Intern H), “[To] discover knowledge for themselves” (Intern J), “[To] stimulate lifetime habits of thinking…and increasingly take responsibility for their education” (Intern K), and “[To] establish a sense of control over their [the students] own learning” (Intern Q). These opportunities were also linked to increases in student understandings evidenced in the internship classroom. Intern J stated:

Students are actively participating in order to learn new concepts and information. The many forms which active learning can take include putting on a play, building a model, working in groups, having a class discussion, etc. One thing that all of these activities have in common is that they all require children to take responsibility and ownership for their learning, and therefore they form a commitment to their own success, and achievement…. It allows children to discover knowledge for themselves, and by doing so, this type of inquiry inspires children to take hold of the knowledge and make it their own.

Intern U explained the advantages of allowing students to think for themselves,

It is important to know that I am not wasting time and I am actually guiding my students for [toward] a better understanding that they can use outside the classroom. I will guide them during the process of learning to be sure it remains meaningful to them. Active learning will provide students feedback where they will find evidence, justify it, provide additional examples and relate to previous experiences. I also think that it
is important to provide lessons including activities that will develop their
critical thinking through questioning and problem solving.

*Impacts teaching.* The preservice teachers overwhelmingly agreed that active
learning was not only very effective (Intern HH, Z, & E) but also more effective (Intern
C, D, G & J) than teaching through a lecture or “passive” approach. The emphasis on
instruction refocused the preservice teachers on specific strategies for classroom lessons.
Intern A explained that her teacher “asks each student what they are going to write before
they can leave the carpet and start writing” in order to engage the students in active
learning. Intern C focused on the type of questions that invited active learning in the
statement, “The children are asked probing questions that they need to really think about
to find the answer.” Intern F explained, “With the learning focus on the student the
teacher tailors instruction to facilitate learning.” Intern O described how she adapted a
new approach to implement active learning and the impact of this technique on her
lesson. “I tried to think of ways to keep them on their toes. One example was when I had
them close their eyes to help me spell September.” Intern DD warned that teachers need
to be “very selective on our activities…. They must provide the children with educational
purposes as well as enjoyment.”

Interestingly, several preservice teachers contrasted active learning to “passive”
learning experiences in which “passive learning is a way of teaching the students through
worksheets” (Intern G), or “when a teacher is giving a lecture or explaining a concept
…The students may be looking at the teacher and you think they are listening…. but this
is not always the case.” (Intern J) Intern T described passive instruction as “students
filling out worksheets and listening to instructions…. the teacher did most of the talking.”
This focus on the instructional implications also included insights into the assessment opportunities that active learning provides. Intern R observed, “Students are able to help one another, and the teachers can see which students understand the lesson and which students are having difficulty with it.” Intern W explained:

Active learning is accompanied by certain behaviors. For one, when the students are actively learning in my class, all eyes are on the teacher. All the students’ hands are raised to answer questions, or students raise their hands to ask questions. I think active learning is important because it is a form of informal assessment. Through active learning the teacher can tell whether the students are grasping the material or not.

The survey data included themes that differentiated between hands-on learning and active learning. This difference was not articulated in the dialogue e-mails except for Intern F who stated, “Active learning is when a student bridges the new information with their prior knowledge. Active learning can take place with hands-on activities, cooperative learning, and other student based activities.” A few preservice teachers linked assessment opportunities to “hands-on” activities. Intern H stated, “It is much easier to monitor student learning when they [students] are actively participating. When students are doing a hands-on activity, it is much easier to monitor a student’s level of learning.” Yet another preservice teacher linked hands-on activities to increased learning: “More than likely you retained that information because there was some type of active engagement linked to it, like a song, or dance, hand-on activity, role-play, etc.” (Intern D).
In the survey data, the participants indicated that the teacher was key to active learning. In the dialogue e-mails, the brief, general answers provided in the survey changed to include more specificity connected to their internship experience. The complexity of providing students with the opportunity to engage in active learning and opportunities for student talk and expression and still guide the direction of the lesson contributed to a multifaceted understanding of the teacher’s impact on active learning. Intern W expressed the contradiction and stated,

Teacher talk is the nature of the profession. Teachers guide the students towards what the teacher wants. In order to guide the students, teachers have to give instruction or directions, so the teacher will receive the end product that he or she desires.

Intern V agreed: “Higher grades [levels], I would think, would require far more talking on the part of the teacher concerning providing students with background knowledge and new concepts.” Intern M explained why teachers “needed” to do so much talking, “The teacher talk time is about 75% to introduce, explain, and give instructions especially on new materials.” Interestingly, even after defending the concept of teacher talk, the preservice teachers also expressed concern over the negative impact of a student passively listening instead of actively participating in the lesson. Intern FF stated,

When students simply sit at their desks and listen to lectures, they often cannot grasp the actual meaning, leaving their minds to wander off into space. We all can relate to this as adults going to college. Think of how much more difficult this must be for children. I believe we all learn better by actually "doing" versus " listening to.
In the same vein, the respondents agreed that the teacher has a distinct responsibility to foster active learning. The preservice teachers described this responsibility in the following ways: “It is my job to get you all to think” (Intern D), “Teachers need to reevaluate instruction and teaching techniques” (Intern H), “[It is] the teacher’s responsibility to try to make sure that the students are staying on task and really taking part in the active learning” (Intern I), and “Teachers are capable of teaching students through active learning; however, they would have to change their views and teach in a much different way than they were taught” (Intern P).

However, the complexity of the teacher implementing active learning raised the question “but how?” in several of the preservice teachers’ dialogue e-mails. Intern II stated,

I tried so hard to get the students to talk more. I found myself having to ask provoking questions and saying certain comments just to get the students to talk more and be more involved. Consequently, I was in fact talking even more than I normally would. Even though I believe this to be a challenge, I think that in order to get the students to be actively involved, a teacher has to ask questions throughout the lesson and say comments that will provoke certain comments.

Intern W questioned, “Active learning is effective because the information that students gain will stay with them longer than information that is received through rote learning. The question is how do you if students are involved in active learning?” [sic].
Another preservice teacher explained,

So, for its efficiency, effectiveness, and overall maturity, I dig active learning. My only concern is: How long does it take for me to produce this type of environment? Also, where am I going to learn to practice this technique? How long will it be before I become proficient at it? How do children who come out of these types of environment end up? (Intern CC)

Although the respondents believed there was a value in active learning, the dialogue e-mails appeared to raise significant questions in their minds about the implementation. This questioning of the teaching practice was not evident in the earlier round of dialogue e-mails that focused on the teacher’s role.

*Written Reflection Findings Focused on Active Learning*

After the group discussion, the themes that emerged from the analyses of the written reflections paralleled the themes in the dialogue e-mails. The preservice teachers clarified and elaborated on their understanding of active learning. Also, there was the added depth from a multitude of experiences in the classroom.

*Clarifying active learning.* Instead of defining active learning by identifying its specific components, the preservice teachers clarified their understanding of active learning as they referenced students’ thinking as a key factor. Intern D stated, “We should focus more on ‘student talk’ and allow them to ask questions, have group discussions, debates, and engage every moment that they can.” Intern CC explained,

Active learning is more of a thinking process and prompts to get children to do things on their own. I have come to the conclusion that active
learning is when your mind’s [turned] on. Active learning is thinking for
yourself, understanding the concepts, process and quality. I realize that if
students are able to create or produce it [that] does not [necessarily] mean
they are actively learning.

This focus on student thinking clarified the concept of active learning as more of a
“minds on” activity rather than one that involved manipulatives or a physical
involvement. The following preservice teacher articulated changes in her thinking about
active learning: “This discussion has changed my mind about what defines active
learning. I used to think that active learning meant using manipulatives, but now I think
that active learning simply means that students are participating, whether that takes the
form of a class discussion or center time” (Intern J). Intern D agreed: “Learning doesn’t
always have to consist of physically engaging in a hand-on activity or with a
manipulative,” and Intern FF stated,

Active learning must involve the mind and be relevant to the lesson or
objectives being taught. Silly games or tasks that have nothing to do with
the topic are not useful. Active learning does not have to be hands on.

Students can be actively engaged solving problems in their minds.

Clarifying the impact on learning. Further refining of the concept of active
learning included the notion that active learning “coincides with the social process of
learning” (Intern A), active learning requires that a “student’s needs come first” (Intern
M), and active learning is dependent on a greater emphasis on student talk such as
“student initiated questions, debates, group discussions and engagement in every moment
possible” (Intern D).
Although there were some preservice teachers that identified clear answers to their questions about structuring active learning in the classroom, several preservice teachers began to focus on specific instances and question the effectiveness of active learning. Intern I explained her observations of the internship class: “Probably not all of them will actually read it [assigned reading]…Active learning may not include everyone in the reading so how will they then participate in the discussion?” This question focused on a specific lesson and concern for the students’ learning. Intern J expressed her concern: “I think that ensuring that students are engaged and maintaining active learning are some of the most difficult aspects of teaching.” Further reading of her written reflection revealed that this preservice teacher was reflecting on the students in her internship classroom. In addition, Intern Y asked, “I still wonder how you can be sure that students are actively learning….I guess you can ask questions to assess their understanding.” This questioning of the technique was unique to any reflections thus far in the progression of the study. Some of the preservice teachers’ questions were derived from their observations in the internship classroom and others through their interactions with other preservice teachers in the discussion group.

_Clarifying the impact on teaching._ After the discussion, the preservice teachers critiqued their thinking of how active learning affects instruction. They examined both good and bad examples of active learning in the classroom. This critique added depth to their understanding of implementing active learning. Intern E cautioned,

I think that learning centers are great examples of active learning only if they are teaching the students something. Matching games, coloring pictures, and playing dominoes are not examples of good learning centers.
These should be things that the students play and do on fun Friday, not everyday.

During the first round of dialogue e-mails and written reflections, the preservice teachers’ reflections appeared to accept the mentor teacher as the expert, but after the second round of inquiry, these preservice teachers began to question the activities that they observed in the classroom. These questions expanded the preservice teachers’ critiques. This elaboration resulted in exploring new solutions to the problems that were identified in the discussion group. Intern JJ’s critique included a possible solution:

[One solution is] getting the students up and have them act out the poem instead of just reading it aloud. These are things that teachers sometimes miss when making lesson plans. I see my teacher doing things that may seem boring and uninteresting. If she would only do more active involvement, then the students might not be as bored as they look when they do an assignment. (Intern JJ)

Intern II explained that “I really need to use more manipulatives with my students…. so many other ways and good ideas … good ideas to incorporate active learning in all subjects.” Intern A summarized her thinking after the discussion stating, “I want to take a closer look at the centers for the classroom. Are they appropriate for learning? Also, what kinds of questions can I ask to provoke thought when reading aloud?” Although the preservice teachers reiterated that active learning is “important” (Intern E), “critical for learning” (Interns H, K, P, & Y), and “met the needs of all students” (Intern Z), they also indicated that they were going to investigate the concept more as a result of the discussion.
Finally, unique to the written reflections was the notion that active learning required a highly structured plan for implementation to occur and to be productive in the classroom. Intern J stated, “Active learning requires a lot more of the teacher with regards to planning.” The following preservice teachers identified “structure” as an essential component for the successful implementation and answered questions raised in their dialogue e-mails about “how to?”

I got great ideas that I can use when I become a teacher or even now during my internship. An important idea was discussed that it really made me think about how important it is for us as teachers to know how to structure our lessons (Intern U).

Intern FF explained,

Students can be actively engaged solving problems in their minds. Active learning is also not a simple process for teachers to practice, for the teacher must be very organized and must develop behavioral objectives for the students to follow. Active learning must be highly structured, more so than learning through lecturing, for the classroom could become easily dysfunctional. The students should understand what is expected of them beforehand and what the objectives and expectations are.

Intern E emphasized the impact on students and wrote,

Structure is a key element of active learning and must be maintained throughout the process. I think that learning centers are great examples of active learning only if they are teaching the students something…. I still do believe that some teacher talk is needed. This teacher talk can still be
used actively if the teacher asks questions during the lecture. Most teachers would find that if they implemented this, then maybe they would spend less time disciplining their students. Let the students take charge of their own learning.

Intern I stated, “I would like to start implementing more group active learning between the students in my class, but I feel they have to take baby steps and be trained on how to [do so].” The preservice teachers agreed that the teacher is key to the successful implementation of active learning. The discussion provided the opportunity to identify solutions in the form of careful planning and the need for increased structure. In addition, the discussion appeared to highlight new questions related to the implementation with specific students. The cyclical process refined and redirected their questions toward meeting the needs of the students in their internship classrooms.

Belief changes related to active learning. The preservice teachers’ focus was decidedly more student-centered in the second round of dialogue e-mails. The definitions of active learning identified essential characteristics of active learning which included student behaviors. The preservice teachers also focused on specific strategies to implement active learning. This emphasis on teaching strategies highlighted the teacher’s responsibilities to foster student learning in lessons. As a result of this increased student focus, some of the preservice teachers began to question themselves about the specifics of implementing active learning.

This student-centered focus guided many of the preservice teachers’ refinement of the definition of active learning to include as a key feature student thinking. In the written reflections, the preservice teachers clarified their understanding of strategies for
implementing active learning with specific instances from their internship experience. As a result, more questions were raised related to both active learning implementation and the mentor teacher’s use of active learning in lessons. This questioning implied some criticism of the mentor teacher that had not been evident in the earlier round of investigation. Additionally, the preservice teachers proposed answers to the questions raised and indicated that they planned to continue to investigate. This was the first evidence of the cyclical process of reflective practice in the preservice teachers’ writing.

**Dialogue E-mail Findings Focused on Culture**

The preservice teachers were guided by the following prompt to investigate culture: “Dialogue 3: Is the learning ability for some students hindered by their culture?”

- Try to define the culture of the students in your classroom (the culture of home, society, school).
- Monitor the following actions on the chart for the teacher you work with for one hour, and then ask your mentor teacher to choose two different times during the next few days to monitor you for an hour.
- Make a chart of all the students’ names on the left side of the paper. Record a tally mark for each time the teacher evidences a behavior.

<table>
<thead>
<tr>
<th>Call on</th>
<th>Observe</th>
<th>Smile at</th>
<th>Talk with</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mary</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Terrance</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- Look over the results before dialoguing with your partner, and look for patterns.
- Have you learned anything about yourself?
The third round of dialogue e-mails focused on the impact of culture in the classroom. They also explained the themes related to culture that emerged from the survey data. Three main themes emerged from the preservice teachers’ dialogue e-mails: “Culture plays a role,” “How culture impacts teachers,” and “Noticing the realities.” (see Table 17). These themes were explained within the context of the internship experience.

Table 17

<table>
<thead>
<tr>
<th>Theme</th>
<th>Categories</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Culture defined</td>
<td>Treated equally</td>
<td>18</td>
</tr>
<tr>
<td></td>
<td>Definitions</td>
<td>15</td>
</tr>
<tr>
<td>How culture impacts</td>
<td>Affects learning</td>
<td>26</td>
</tr>
<tr>
<td></td>
<td>Raised hands</td>
<td>16</td>
</tr>
<tr>
<td></td>
<td>Level of student</td>
<td>11</td>
</tr>
<tr>
<td></td>
<td>Favors gender</td>
<td>11</td>
</tr>
<tr>
<td></td>
<td>Personal qualities</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td>ESOL</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>Does not affect learning</td>
<td>6</td>
</tr>
<tr>
<td>Noticing the realities</td>
<td>Now I realize / surprise</td>
<td>22</td>
</tr>
<tr>
<td></td>
<td>I have discovered</td>
<td>11</td>
</tr>
<tr>
<td></td>
<td>New strategies</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td>I will try</td>
<td>11</td>
</tr>
<tr>
<td></td>
<td>Teacher responsibility</td>
<td>5</td>
</tr>
</tbody>
</table>

Participants n = 35

Culture defined. Fewer than half of the preservice teachers began their dialogue e-mail with a definition of the focus area, in this case, culture. Unique to the e-mail dialogues related to culture was a definition of culture in the body of the dialogue e-mail. The definition was often embedded in the preservice teachers’ comments related to the data they had collected about themselves. The preservice teachers held a wide range of definitions for culture. Intern D explained,
Culture plays a major role in an individual and the way in which one tends to live their life. Culture sculptures our thoughts, the way we perceive certain things, how we act, talk, traditions we take on, and the routines we take part in from day to day. Culture can be defined as a group of people who share traits and beliefs. A culture can be religious, social, ethnic, age, etc.

Other preservice teachers’ definitions included the following: “socio-economic status” (Intern Y), “intellectual ability and American customs” (Intern W), “religion, language, and home life” (Intern K), “coming from another country” (Intern E), and “the school as a whole oozes of white, upper-class values” (Intern EE).

Of those preservice teachers who embedded their definitions of culture, the range of definitions was equally as wide. Intern F stated, “In reflecting on the results, my bias was not with an ethnic culture; it was with the quiet students.” Intern G stated, “I did notice a cultural bias when it was in reference to smiling; I smiled more at my ESOL students.” Intern K explained, “The way I felt culture may affect who you call on is that if the student lacks background knowledge from home, they will have a harder time making connections. A culture can consist of many different attributes such as religious, social and ethnic.”

Many preservice teachers included in the definition of culture the notion of equal treatment. The inclusion of this notion of equal treatment may have been the result of the prompt for investigation since the preservice teachers were making charts of their behaviors toward students. Eighteen preservice teachers emphasized the equal treatment as part of the definition of culture. For example, Intern C stated, “In the classroom
everyone is treated like an equal. It doesn’t matter what color, race, or ethnicity the student is…. I don’t feel that my expectations of any child are influenced by their culture.” Intern K agreed: “As I work with my students, I make an effort to include all my students in an equal fashion. So to me, the students’ cultural background doesn’t interfere with the way I teach.” This notion that in the preservice teachers’ personal experience children were always treated equally was also emphasized in the dialogue e-mails 18 times. Intern C stated, “In the classroom, everyone is treated like an equal. It doesn’t matter what color, race, ethnicity the student is.”

Most of the respondents qualified this equal treatment by later noting students who needed additional attention, such as the extenuating circumstances of “an ESOL student” (Intern T), or “my teacher picks on ESOL students more to build their confidence and interaction” (Intern Y). Yet, these preservice teachers held to the belief that this was still equal treatment. Interestingly, Intern Q agreed initially with this notion that culture (emphasis on equal treatment) did not influence their teaching, but later in the dialogue e-mail she voiced something quite different. Intern Q stated,

After reflecting on the cultures of the students in my class and being observed, I realized that culture does not have an impact on my teaching. My teacher and I treat the students in the class equally. What is expected from [one] student is expected for all. Personally, I think it is a waste of time to focus [on] how you treat a student based on culture unless the student comes from a culture with wide differences from ours, which require you as a teacher to teach the ways of our own culture. [She continued later in the dialogue e-mail.] I do think that culture impacts the
student in my class academically. For instance, two of the students in my class are second language learners, so they are reading below third grade level.

*How culture impacts.* The preservice teachers were unevenly split on the notion that culture hinders learning. Twenty-six statements from the preservice teachers indicated that culture does hinder learning in the classroom. The following preservice teacher dialogue e-mails mirror the essence of this belief. Intern A stated, “It plays a big role…. many students do not speak English at home.” Intern Y explained, “Culture impacts all students…different and varied experiences… students bring their individual life paths into the classroom.” Intern GG added: “My expectations were connected to the student’s culture.”

The preservice teachers noted that the students who raised their hands were often also the students the teacher recognized and called on most often. Noticing the students called on most often or the ones that were neglected helped the respondents identify characteristics or “sub-cultures.” The preservice teachers recognized that these subcultures impacted their responses to students and indirectly impacted the students’ learning. The following dialogue e-mails explain the notion of sub-cultures.

I realized that I do not necessarily have any set patterns except that I tend to call on the children that seem to know the most, more often. I think I do this because they are often the ones [the students] with their hands waving in the air. After seeing this chart, I have tried to call on the other students more, even if they do not have their hands in the air. I also realized that I
tend to talk with and observe the students that act up the most more [often] than I do the other students. (Intern E)

Intern F stated, “In reflecting on the results, my bias was not with an ethnic culture; it was with the quiet students. I found that if they did not raise their hands to participate, I did not call on them.” The idea that culture was more than ethnicity came to light as the preservice teachers noted their tendency to favor a particular gender. Intern EE explained,

I have always heard the statistics of female teachers calling on boys and not giving girls a chance. I was trying to avoid that statistic, but all I did was change it around by choosing most of the girls than boys.

Intern I found,

I had a predisposition to call on the female students more often. So I thought about it, and I tried to determine why that could be. I decided that I tend to choose the female participants over the male participants because they always answer the question I am actually asking, rather than simply calling out and or disrupting the lesson to get attention. I believe that the many of the boys in my class do not get enough attention at home and act out at school to get attention.

The preservice teachers who believed that culture does impact learning outnumbered the six respondents who disagreed. Only a few preservice teachers articulated the belief that culture did not impact the learning of students. These beliefs were often couched within the investigation into the preservice teacher’s own behaviors in the classroom. Intern B stated, “It seems that culture didn’t play into my
interactions… at least I cannot find any explicit patterns in my data.” Intern E commented,

I do not think that my expectations are connected to the child’s culture because I believe all students can learn. I did not notice any cultural trends in my behaviors with students. I sometimes have to go over the directions with the ESOL students more than once, but I do not feel as if that is necessarily culturally based. Culture in our classroom does not seem to impact the students very much.

Intern Y stated, “I don’t really think that culture biases my opinion of my students or their learning.” The references to the lack of impact of culture on students’ learning were always linked to the data collected. Intern II stated, “From looking at the chart that the teacher had done for me, I did not see any differences when it had to do with the children’s cultures.”

Noticing the realities. The preservice teachers had an intense desire to be fair and equal in their treatment of students. Perhaps this emphasis on equal treatment came from the chart that the mentor teacher created as the preservice teacher taught a lesson. Although I did not articulate a judgment that the data should indicate that each student was called on, smiled at, etc., the responses from the preservice teachers implied that the chart should reflect equal treatment for all students.

The preservice teachers consistently identified new strategies once they examined the data that were collected on the chart during their lessons. Throughout the dialogue e-mails, the preservice teachers began their comments with “now that I realize” (Interns E, K, T & W) and “I was surprised” (Intern A, Y, & B) to identify strategies that they would
change in the future. These strategies linked their experience in the internship to the reflective process prompted by the data collection and the dialogue e-mails. In each of the following cases, the preservice teacher reflected on the data, connected it to the impact of culture on student learning, and proceeded to propose a new strategy.

What I learned about myself from this exercise was to devise a way for all students to be called on, and draw out the quiet ones to participate. I have thought about using the name on a Popsicle stick in a can and drawing out a stick to call on until everyone is called on. Also, I try the same seat in every group rotation throughout the lesson. It was helpful to expose my oversight on my two quiet students (Intern F).

Intern J explained,

In order to counteract this problem I sat down with my interning teacher and I decided that I would start rewarding people who actively participate in the lesson, and I would start punishing people who were disruptive. By taking a more active approach to this problem, by treating disruption just like any other rule breaking, I hope that the students will get the message that they cannot use the classroom as a stage for negative, attention-seeking behavior.

Intern Y wrote,

I learned that I need to call on all students, not just the ones raising their hands. Obviously these students know the answer, so I should pick a student who is struggling and help lead them to the correct answer.
Intern EE set goals for herself and stated,

I definitely need to pay more attention to my quiet African American female students. Also, I need to pay attention to the students who are quiet and stay on task. I guess I assume[d] that because they are on-task they understand the information, but that is not always the case.

Written Reflection Findings Related to Culture

After a rich discussion on the topic of culture in which the preservice teachers shared their findings reported in the dialogue e-mails, the written reflections shifted in focus from the easy fix of a new strategy (classroom technique) to a self-conscious critique of self. In the written reflections, the responses resembled a conversation in which the preservice teachers debated with themselves about the notion of culture and its impact on students.

New definitions of culture. In their dialogue e-mails, the preservice teachers had identified a variety of definitions of culture. In the written reflections, the articulation of a definition for culture became the starting point for their self-critique. Intern BB noted, “We don’t realize that culture is more than race …. I do not expect myself or other teachers to not have stereotypes or be biased toward a certain group; however, we need to be aware!!” Similarly, Intern E stated, “I feel like there is more to culture than I originally looked at …. Culture is more than just race …. I do think that my use of alternating between girls and boys during questions is a good way to involve both genders equally.” Intern B redefined her notion of culture and stated,

After the discussion and reflection on the inquiry dialogues, culture can be defined in many ways with no one characteristic being more important.
than the other. Culture is in the classroom. The classroom is culture and creates a new classroom of its own. Your instruction, classroom décor, structure, and curriculum might stay the same from one school year to the next, but the classroom culture will inevitably change from year to year.

Culture is people. Culture in the class refers to you the teacher, your group of students and their interactions with you and each other. I was being honest when I thought that “I don’t see the students’ skin color, race, ethnicity, and religion, while I am teaching.”

*Clarifying culture’s impact.* These written reflections often included questioning their own ideas as one would in a conversation with another. Intern F began with a question and continued to interrogate her thoughts throughout the reflective writing:

How am I going to develop a multicultural classroom that both isolates and respects my students’ differences? I struggle with the thought of “calling out” a student based on their culture and diversity. I would like to instill respect and tolerance for our children in the classroom. The challenge of creating a classroom environment that embraces the students’ differences and enhances the overall culture of the school is huge. At what point is the balance going to tilt too much [toward] individualism and not enough school culture assimilation?

Intern I stated,

I am actually being biased to the high academic ones. Also by calling on the off-task students, I may be sending the wrong signal to the ones that are on task. So I ask myself, where is the happy medium? Although we try
not to be biased, we seem to do it anyways even though we don’t mean any harm by it. Do we treat all students equal? [sic]

Some of the preservice teachers recognized their personal biases. This understanding stretched the notion of how culture influences the classroom. Intern Z’s written reflection mirrored the preservice teachers’ notion that to negate the reality of stereotyping students could be disingenuous:

When I think about culture I feel everyone tries to say the “politically correct” thing when they try to address it. It’s always I don’t let race, gender, socioeconomic status, or anything else affect the way I treat people. I think that is so untrue not only to the audience who is listening, but to themselves as well. Even I stereotyped within my own culture and include myself as an exception. When I see a student coming to school late and have only one parent present in the household, I tend to expect a certain behavior, although I came from the same background and would not behave in the same manner. Society is responsible for the way we judge each other. I feel the same way as stated in the quote. When someone looks at me, I don’t want to hear that they don’t see a black male. When they say that, it’s like saying a black male is a bad thing.

Intern V agreed: “It made me realize a lot about myself, my peers, and teachers in general …. [I] think categorize and sort relate and label anything and everything …. It’s what we do with this information that counts.” Intern FF stated, “We don’t realize that culture is not necessarily just race or ethnicity …. we should not simply display a façade of cultural understanding.”
Reexamining the realities. The preservice teachers’ critique of self revealed a personal discontent with the realities described earlier in the dialogue e-mails. Intern G commented, “The topic is culture, but we would speak as if we had to walk on eggshells …. I want to make sure color is not something I see to create assumptions and conclusions …. In a perfect world I would say that full equality is practiced but I know that it is impossible.” Intern I stated, “This really did make me think about how I call on the students based upon what I perceive them to be. By calling on low-academic students to try to reinforce the learning for them, I am actually being biased to the high academic ones.”

Intern HH explained,

I found that I have made prejudicial assumptions regarding students who have recently entered my classroom. Those assumptions could have been detrimental for those students. Luckily, I realized what I was doing. The problem, however, is that many teachers do not. In fact, many are in denial that these prejudices and biases even exist. We would all like to think that we live in a perfect world, but the reality is, we don’t. It is far from perfect, but if we take personal responsibility and make an effort to change our thought process and our actions, then we could be much more effective teachers and members of society.

Belief changes related to culture. Throughout the dialogue e-mails, the preservice teachers emphasized the observable behaviors and concrete solutions to the problems they had identified related to culture. In contrast, the written reflections took on a different tone. The respondents still identified solutions, but they included a very personal
critique of self in the process. The self-critique still included new definitions of culture, clarifying culture’s impact on learning and reexamining the realities which paralleled the themes in the dialogue e-mails. However, the solutions in the written reflections were not settled conclusions. Rather, the preservice teachers ended their written reflections with a new direction for inquiry in the classroom. Solutions were not perceived as final. Instead, the preservice teachers’ solutions were possibilities. This flexibility moved the preservice teachers toward the belief that finding a solution related to cultures’ impact on students was more of a journey toward the next question than a destination.

Dialogue E-mail Findings Focused on Assessment

The preservice teachers were guided by the following prompt to investigate assessment: “Dialogue 4: What does on-going assessment look like?”

- How did you incorporate assessment into your lessons?
- Research the assessments used in your classroom; do they really give the teacher an accurate picture of the student?
- Think through the assessments you will use in the classroom; how will you organize the data collected? Be specific.

The fourth round of dialogue e-mails, which related to the impact of assessment in the classroom, expanded on themes identified in the survey data. Three themes emerged from the preservice teachers’ dialogues e-mails (see Table 18): “Informs the teacher,” “ Doesn’t inform the teacher,” and “A complex issue.” These themes differed from the August survey data with the inclusion of specific details related to their experience in the internship classroom. In addition, unlike the previous three rounds of investigation, the dialogue e-mails that related to assessment did not begin with a definition of assessment.
Rather, the preservice teachers implied the meaning of assessment as they reported on specific examples in their internship experience.

Table 18

*Dialogue e-mail themes for assessment*

<table>
<thead>
<tr>
<th>Theme</th>
<th>Categories</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Informs the teacher</td>
<td>Who is understanding the lesson</td>
<td>46</td>
</tr>
<tr>
<td></td>
<td>Portfolios/organization</td>
<td>30</td>
</tr>
<tr>
<td></td>
<td>Observation</td>
<td>22</td>
</tr>
<tr>
<td></td>
<td>Parent connection</td>
<td>14</td>
</tr>
<tr>
<td></td>
<td>Impacts instruction</td>
<td>8</td>
</tr>
<tr>
<td>Doesn’t inform the teacher</td>
<td>Formal assessments</td>
<td>11</td>
</tr>
<tr>
<td></td>
<td>Only one assessment</td>
<td>11</td>
</tr>
<tr>
<td></td>
<td>Wrong conclusions</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td>Worksheets/dittos</td>
<td>8</td>
</tr>
<tr>
<td>A complex issue</td>
<td>Assessment examples</td>
<td>18</td>
</tr>
<tr>
<td></td>
<td>What works for my teacher</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td>Need for flexibility</td>
<td>18</td>
</tr>
<tr>
<td></td>
<td>Taking a closer look</td>
<td>18</td>
</tr>
<tr>
<td></td>
<td>Writing</td>
<td>9</td>
</tr>
</tbody>
</table>

Participants n = 35

*Informs the teacher.* All of the preservice teachers voiced the belief that assessment is valuable. The preservice teachers connected their experiences in the internship classroom with their assessment investigation to explain that assessment provided important information for the teacher. The following examples from the dialogue e-mails mirror the preservice teachers’ thinking as they linked internship experiences to assessment. They emphasized how those experiences informed either themselves or the mentor teacher.

Intern N explained, “I had a notebook while teaching a lesson to make notes about different things so that I could see who is getting it and so I can teach until everyone
knows what is being taught.” Intern A stated, “I have seemed to learn a lot about each student as I walk around observing them. You see things like off task behavior, gluing things in the wrong space, or completely cutting the picture in half when they were to cut around it.” Intern I agreed:

I can keep samples and be able to use them for assessing when looking to see if the student is making progress and showing growth. Not all students will make A's, but it is important that you can see that they are making progress from where they started.

Intern AA stated, “She rarely collects work that the students complete …. While they are working, we monitor the students and see whether they understand the lesson by observing them and their work.” The respondents cited observation as an assessment frequently used in their internship classroom. The consensus of responses indicated that the preservice teachers valued observation as a type of assessment. Although several preservice teachers identified their mentor teacher’s use of assessment as a non-example, their dialogue e-mails still documented the belief that observing students was an effective assessment. Intern DD explained:

I use observation. I question the children throughout the lesson to ensure understanding. When I come to a student who does not understand, I will give a quick mini lesson to the child if time [is] available, or I go back and help them when the other students get started on their class work. When [the mentor teacher] she gives students quizzes and test from the book, [they are] for grades. I do not feel that they are accurate because [for] the two tests I was present for, she gave the children the answers to 3/4 of the
test. So they were really tested on their ability to copy. Sadly, a lot of the children still did very poorly. Therefore I don't believe her assessment to be an accurate picture of what the children know.

Some preservice teachers described collaborative experiences with their mentor teacher using the observation assessments. The following excerpt from Intern JJ’s dialogue e-mail is an example of the collaborative assessments she experienced:

The teacher I work with tells me who she has assessed when I was not there and then I can work on another student. We always share our notes and discuss what we are thinking and what we have discovered. The students do not know that we are focusing on them, so there is no stress on their part. When we do a group lesson and ask questions, I always make note who knew the answers and who was getting stuck on the questions.

(Intern JJ)

The preservice teachers also identified specific ways that they could organize the information. They mentioned portfolios and the need for an organized approach 30 times in the dialogue e-mails. In contrast to the survey data in which their emphasis focused on the general value of assessments, in the dialogue journal e-mails, the preservice teachers specifically identified the types of assessments available for teachers. The preservice teachers highlighted the need for a plan and an organizational structure for assessments. Intern R stated, “When I have my own class, all of the students will have a portfolio with areas divided which will include the subjects and behavior … and any notes that I have written about the students progress in work and behavior.” Intern S specified, “I will write the grades in my grade book. I will collect all of the tests and make copies of them.
I will send the original copy home and keep the other copy in a separate folder for each of my students. I will keep the folders in a filing cabinet.” Intern CC described her plan for organization: “I will organize my data chronologically (and by topic), which should help show me how much improvement they [the students] have made in the course of a specified time period.”

The preservice teachers agreed that an organizational structure was valuable because once the assessments were organized, communicating student achievement would be easier. This structure would also provide the evidence needed to conference with parents about a student’s progress. Intern G stated, “It is very important to keep a portfolio for each individual student. This will allow teachers to assess the students’ progress overall, and can also be proof for teachers when they are having parent-teacher conferences.” Intern K agreed: “I feel to become a successful teacher one must be organized in their classroom set up, so I would keep my assessment neatly organized in a binder, so if parents come in to check their child's progress, I will have it there for them.” Some preservice teachers emphasized the need to prove that their evaluation of a student’s achievement was accurate. Intern D added, “As teachers, we are held accountable for a lot of things, and we have to be able to have specific proof and documentation to back us up. That is why assessments are so important and should be thoroughly thought of [about] to provide valid feedback.”

Interestingly, only eight preservice teachers associated the notion of increased information garnered through on-going assessment with specific instructional decisions. Each of the preservice teachers who linked assessment to instructional decisions
described the process by citing their mentor teacher. In each case, the respondents’ mentor teacher’s modeling demonstrated this link.

Intern T explained,

The teacher reviews the outcome from each student and focuses her lessons on improvement of the needed skills. I think that her method is very effective; she can tell which children are having trouble and assess them on their progress month to month. I would like to use a similar form of ongoing assessment in my classroom.

Intern U described her experience:

With this combination the teacher is able to assign grades, provide additional information about a topic and design future lessons and assessments. I will use the same methods that my teacher is using in the classroom. I will add a notebook where I will write observations for each child every day that will provide feedback about the student’s progress.

*Doesn’t inform the teacher.* In the survey data, the preservice teacher agreed that one assessment was not enough. The limitations associated with assessment stretched the preservice teachers’ beliefs that one assessment was not sufficient to understand a student’s learning level. Additionally, the preservice teachers highlighted formal assessments, worksheets, and dittos as examples of relying on one type assessment with students.

The preservice teachers demonstrated the ineffectiveness of using a formal assessment as they reflected on their mentor teacher and the observed practices in the internship classroom. Intern J explained the limitations of having a spelling test at the end
of the week. “The spelling test only assesses the student's knowledge of how the word is spelled, but not necessarily what it means” (Intern J). Intern I added, “According to my research, these types of assessment do not assess for higher level thinking skills, and according to Bloom's taxonomy, they do not assess the students creatively or completely.” These preservice teachers began to examine the teaching practices of the mentor teacher and arrive at conclusions that looked beneath the surface of a lesson. Intern N stated, “On-going assessment in the classroom that I am in is not there. The teacher is unaware of the levels of the students and does nothing to assess them other than unit chapter tests at the end of the units.” Overwhelmingly, these critiques of current practice contained a concern for the wrong conclusions arrived at by the mentor teacher. The following two excerpts mirror the concerns raised about assessment. Intern B explained,

As far as my classroom teacher's assessments, I am still unaware exactly how she can feel that she has an accurate picture of each student's academic achievement and progress. I find that she focuses on adding unit test scores and homework sheet scores into her computerized grade book, though the sources for these grades seem unstable and incomplete in displaying the student's learning. The only assessments that I have witnessed have been mass-produced dittos that test vocabulary words for a student's grade and worksheets for their math grade. (She teaches Math, Science, and Social Studies.) To make matters worse, she doesn't seem to analyze the test data individually--especially in math--to see where and why the student is making a mistake. Sometimes, I grade the tests and she
just uses the number score, but doesn't look much further into the assessment. In fact, on a math test I discovered that one student got almost every problem wrong because she wrote the numbers reversed (542 instead of 245).

Intern Z stated her concern related to the subject area:

I think when it comes to reading, you can get an accurate assessment. On the other hand, when you're dealing with subjects like Social Studies, assessment can be affected by directions. For example, they [the students] were given a test on latitude and longitude, but they had trouble with it. When the directions were clarified to them, then the task was not as difficult. In my lesson, I used a worksheet as a form of assessment for a math lesson. For that lesson, I think that was the most effective type of assessment. In my classroom, I probably would vary in assessing because there's not just one way that would work for everything.

A complex issue. Finally, although this was the last focus area to be investigated during the semester, the preservice teachers’ beliefs about assessment were similar to the August survey nearly nine weeks earlier. The preservice teachers did not use the word “complex” in their dialogue e-mails; however, in their articulation of the wide range of assessments, the need to be flexible in the challenge of choosing the correct assessment was best summarized with their growing recognition that the issue of assessment is complex.

Intern W stated, “There are so many areas of academics that teachers can perform assessments on. There is reading, math, science, etc.” Intern L agreed: “I have noticed
that it is hard for a teacher to do a million things at once, and keeping a running record on students is kind of hard to do.” Intern R explained the wide range of assessments used “In the classroom that I am interning in, the teacher gives her students running records everyday, spelling tests every Friday, math tests at the midpoint of each unit, and social studies and science tests at the end of each unit.” Intern S articulated her concern in making the appropriate choice of assessment:

I am not sure if the type of assessment my teacher is using is accurate because when she does give a subtopic assessment for math, for example, she coaches them along the way as if she is telling them the answer without actually saying the answer straight out.

This notion of complexity elaborated on the August survey data theme that identified difficulties with assessment. Unique to the dialogue e-mail data were specific examples from the internship classroom and notations about what really works. The preservice teachers listed the different options that could be used for assessment. Intern O listed “running records, worksheets, weekly tests, center work, independent work, and journal entries.” Intern AA found that “assessment does not always mean formal (standardized tests or collection of grades from assignments) …. [It] can be observation of students while involved in an activity.” The preservice teachers described what worked for the mentor teacher and identified the need for flexibility in choosing an assessment. Intern G’s comment mirrored many of the dialogue e-mails that linked her observations to the teacher’s assessments:

To obtain assessment for each student individually is very difficult if the teacher tries to do it on a daily basis; this is why the teacher should teach a
lesson and think of multiple ways to assess the students as a whole and
[as] individual[s]. To evaluate the students as a whole can allow the
teacher to evaluate the types of learning styles he or she has throughout
the classroom. Individual can be through writing, homework, quiz, exams,
sometimes but not always, worksheets. There are times when the
worksheets cannot be avoided, but teachers should try to stay away from
them as much as possible. The teacher in my internship is excellent with
assessment. She creates fun activities, which have full assessment
throughout the lesson. The best part of it all is that the students do not
know they are being assessed. My observing teacher varies [assessment]
going through out the room, for example, learning centers, morning work,
journals, etc. With those fun activities she asks questions that she feels the
students did not grasp when she taught the lesson. The learning center is a
group assessment, and the journals or morning work is individual.

Several interns also arrived at the same idea that flexibility was essential even
when the mentor teacher did not model this quality. In these cases, the preservice
teachers’ critique of the mentor teacher served as a springboard for thoughtful reflection
about the difficulty of implementing effective assessment.

Intern D stated:

I do not feel that the assessment she uses gives an accurate picture of what
the students understand in the classroom …. You can be standing over a
child for one minute, and they could have the answer right, but the process
or method they use in getting that answer could be completely wrong …. I think it is important to be versatile in your assessments.

Similarly, Intern M explained,

I do not think that all of the assessment techniques used by my teacher are always affective and accurate of the skills and knowledge of all of her students. For instance, one of her children scored low on the running record test for reading but is actually reading at a higher level. As a result, he is placed with lower level students in his reading group. This is a disadvantage to the student because he is forced to be in a group lower than his abilities. As of yet, the teacher has taken no further steps in moving the student into a higher reading group. In my opinion, other types of assessments should be used to help decide on what level a student is reading. Although running records and accelerated reader (AR) test is the most common test, I think the teacher should use other methods to evaluate her students.

Written Reflection Findings Related to Assessment

After the small group discussion focused on the dialogue statements selected from the dialogue e-mails on the topic of assessment, the preservice teachers’ written reflections shifted from identifying the teacher’s uses of assessments to the actual reasons for assessment in the classroom. In the written reflections, the preservice teachers began to critique themselves, instead of the mentor teacher. Through this new lens, the preservice teachers further explained the themes identified in the dialogue e-mails.
Informs the teacher to prove. The first theme in the dialogue e-mails of “Informs the teacher” was elaborated in the written reflections. In their written reflections, the preservice teachers shifted from the focus on gathering data on students to using the data to demonstrate to parents and others outside the classroom that the teacher arrived at sound conclusions about the students. This linkage between assessment and accountability was evident in the following written reflections:

You have to be certain on what type of things you are looking for when you are observing your students. You could also do running records, gather students’ work, make portfolios, use student journals to assess writing skills and spelling development. Assessment is a process, ongoing, testing on material covered, etc. That gives an accurate progress of the students in your class; it gives hard evidence to your standards, placements, and making grades at the end of each quarter for your students. Parents, administrators and other faculty are able to see why a student is placed where they [sic] are (Intern R).

Intern D explained the need to be ready to report to parents:

Assessment needs to be an ongoing process of records and information that you organize in a structured manner, so that when you refer back to it, you can clearly understand what was going on. Assessments need to unbiased for both you and your students’ benefit …. You need them to show parents and the administration that you have knowledge about your students, their needs and abilities.
Limitations can be overcome. The preservice teachers elaborated on the theme, “one assessment doesn’t inform the teacher,” in the dialogue e-mails with an optimistic tone. Instead of critiquing the mentor teacher, the act of examining the preservice teachers’ own classroom practice revealed the belief that as long as they were flexible, the multifaceted nature of assessment gave the preservice teachers options. The preservice teachers articulated this optimistic view 22 times. The following excerpts exemplified the comments of many in the group.

There are many different types, and I know that each one of them can’t be performed each day. What I’ve come to realize is that no matter what the lesson is, it’s important to have a good record of how your students are progressing. Since each student is different, I’m sure that with time all the assessments will be different too. (Intern L)

Intern EE wrote,

Assessment is extremely important. Without assessment we do not know where the child stands or if they [the students] are actually learning. True teaching involves assessment. I plan to assess continually. I will use many different ways to assess my students. I plan to assess informally such as using portfolios, anecdotal notes, and observation. I will also assess formally with pretests, posttests, running records, and rubrics. I want my assessments to be varied in order to depict my students accurately.

Complexity of assessing in instructional decisions. Finally, the preservice teachers’ examined assessment through the lens of their own experiences and realized the complexity of assessment guiding instructional decisions. Instead of focusing on
examples or the need for flexibility, the preservice teachers focused on the students and
the impact of assessment on the instructional decisions. In the dialogue e-mails, only
eight preservice teachers linked assessment to guiding instructional decisions. After the
discussion, 32 respondents commented on the direct impact that assessment had on
influencing the teacher’s instructional decisions. Some interns voiced the belief that
assessment would guide instructional decisions about the grouping of students:

The teacher needs to check for confusion and see if the students need extra
practice. The teacher uses the notes to plan for future lessons. If the whole
class is struggling, then the teacher needs to do a class lesson. If a few
students are struggling, then the teacher needs to do a mini-group lesson.
If it is one student then it needs to be a one-on-one conference. (Intern O)

Other interns voiced the belief that this linkage between assessment and instructional
decisions had an impact on specific teaching strategies.

Once the teacher can create a rubric for what she wants the children to do
by the end of the grading period, then it will make assessing the child
easier. This will then lead to modify her teaching strategies to better
provide the student with learning and comprehending the material. (Intern
BB)

This belief that the teacher must adjust instruction based on assessments clarified
the need for including assessment in every lesson. The following preservice teachers
emphasized assessment as an ongoing, continuous, and everyday component to effective
instruction:
I also like the idea of keeping a subject folder for each student that you can make notes in. These notes would be about confusions, places where they [the students] may need extra practice, or even just notes for you to remember to go back and check for understanding. I think that assessment can occur in multiple ways. I believe that as long as there is an assessment for each lesson you do, then you are definitely on the right track. (Intern E)

Intern I agreed:

I used to think it was just about taking a test. I now see that it is ongoing and it needs to be the focus of every lesson. Many times we focus so much on teaching the information that we forget about actually assessing it. There must be data (such as anecdotal notes, running records, portfolios) to show how you came about your assessment. I also learned that it should guide your instruction.

Intern FF explained the impact of the discussion on her beliefs:

After our discussion today, I discovered that my teacher or I did not use many of the various forms of assessment presented. I never even discussed most of them. For example, simple kid watching is often a form of assessment that I overlook and do not take notes on. Also during reading when in groups or individually, I should be assessing what students are doing. I have never done this.

Belief changes related to assessment. The preservice teachers’ beliefs initially focused on defining assessment and used examples from their internship experiences.
These preservice teachers continued to provide specific details from their internship experiences in the dialogue e-mails related to assessment. Some preservice teachers included critique of their mentor teacher when they noticed the assessments used in the internship classroom. The critiques of the mentor teacher provided a springboard for reflection and modified their beliefs about the definitions arrived at in the dialogue e-mails. The preservice teachers as a group identified pros and cons of the assessments used in the internship classroom. Moreover, they began to look beneath the surface of the classroom practices and note concerns for students who were being evaluated incorrectly. Few of the preservice teachers linked assessment to the teacher’s instructional decisions in the dialogue e-mails, but this dramatically shifted after the small group discussion.

In the written reflections, the preservice teachers’ critique of the mentor teacher appeared to serve as a springboard for reflection on the preservice teachers’ own practice. As a result, the preservice teachers’ self-critique resulted in a shift from identifying different kinds of assessments to the reasons for assessments to be used in the classroom. This stressed the reasons for assessments and focused the preservice teachers on the specific students in their internship classrooms. Most of the preservice teachers focused on overcoming the limitations that they had observed in the dialogue e-mails through a problem-solving process with other preservice teachers in the small group discussion. These preservice teachers developed a refined approach to assessment to include the notion that assessment is on-going, continuous, and an everyday component to effective instruction. In this way, the preservice teachers modified their beliefs.
Summary of E-mail Dialogue and Written Reflection Changes in Beliefs

In the first dialogue e-mails, the preservice teachers began by defining the focus area. The emphasis on management and maintaining control dominated their comments. The dialogue e-mails reflected more specificity, ownership, and examples from experience than the survey data. The preservice teachers supported their beliefs with specific examples. The respondents also voiced flexibility in their beliefs, adding that the situation, time of year, or individual students could change their stance on an issue.

These nuances were further developed in the written reflections, and the preservice teachers provided the rationale for a stance that depended more on the situation or student than an absolute rule to be followed. Again, specificity that reflected the internship experience was added. In other words, as the preservice teachers investigated the next focus area, they added specific instructional techniques to their repertoire of teaching strategies. The respondents also began to notice the complexity of an issue as they articulated their beliefs. Rather than making generalizations about students and beliefs related to the focus areas, the preservice teachers’ beliefs changed to include alternative approaches.

These new understandings raised questions about implementation and practical applications within the classroom reality. The preservice teachers’ questioning initially was focused on their mentor teachers and the internship experiences. Instead of accepting the mentor teacher as the expert as documented in the first dialogue-mails, these preservice teachers began to critique the mentor teacher’s teaching practices related to the focus area under investigation. As the preservice teachers began to question the mentor teachers’ techniques, the answers often led them to question their own practice. The
questioning of technique refined and redirected their questions toward meeting the needs of the students in their internship classrooms.

By the time the preservice teachers had been through two rounds of dialogue e-mails and written reflections, the preservice teachers’ foci had shifted from the teacher alone to the impact that the teacher had on students. By examining their own reactions to students as they taught, these preservice teachers identified new strategies for addressing the needs of their students. In these each cases, the preservice teachers noticed a pattern in the data, connected it to the impact on the student, and proceeded to propose a new strategy. Moreover, the new strategy was not viewed as a final solution but a possibility to be explored.

This shift away from the easy fix to a self-conscious critique of self resembled a conversation in which the preservice teachers debated with themselves. The descriptions of new strategies often included questions that interrogated their new ideas. The solution or new strategy was viewed not as the only approach; in fact, the solutions were embedded in the notion that this approach was more of a journey toward the next question. Overwhelmingly, the emphasis shifted from the perspective of being an expert teacher to becoming a student-centered teacher. This emphasis on student learning became more important than merely defining the focus area under question. With this focus on the student rising in importance, the critiques on current practice contained concern for the students learning. The complexity of meeting the needs of all the students was highlighted as the preservice teachers emphasized the flexibility that results from thoughtful reflection. This self-critique was optimistic in tenor. The examination of each focus area illuminated the many different approaches that could be tried. Focusing on the
instructional decisions shifted the importance of proving their decisions to outsiders to a proactive stance of meeting the needs of their students.

*November Survey of Beliefs Data*

At the end of the semester, the preservice teachers completed the survey again. The survey was a duplicate of the Survey of Beliefs given in August. Again, the preservice teachers read the statements, recorded whether they strongly agreed, agreed, disagreed, or strongly disagreed, and then provided written explanations for their responses. For each focus area, the data was organized in tables to help the reader compare the changes in the preservice teachers’ Likert choices from the August survey to the November survey. These tables depict the data collected for each question related to the focus area and are organized into one figure. In each of the figures, the shaded cells show the number of preservice teachers who did not change their level of agreement/disagreement between the August and November surveys. Additionally, if a preservice teacher reversed a belief from general agreement to disagreement or visa versa, I identified the change as a “reversal change” in the summary table. However, if the preservice teacher changed the response from strongly agree to agree but stayed in general agreement or disagreement, simply changing the level of agreement, I identified the change as an “incremental change” in the summary table.

*Teacher’s role*

I analyzed the three survey questions related to the teacher’s role together. First, I tallied the Likert data. In all three questions, the Likert scale data indicated shifts in some of the preservice teachers’ beliefs related to the teacher’s role (see Table 19). However, a like number in Q. 4 (17) and Q. 9 (16) remained the same. Five preservice teachers
indicated a reversal change for Q. 4, and seven preservice teachers indicated a reversal change for Q. 9. Interestingly, for these two questions, the same number of preservice teachers (12) indicated that their beliefs had changed incrementally. After a semester in the classroom, some of the preservice teachers (17) designated a measure of change in their belief that the teacher role includes setting up classroom procedures (Q. 4). A similar number of preservice teachers (19) indicated that their belief that the teacher should be an active agent reforming society had changed either as a reversal change or an incremental change (Q. 9).

Twelve preservice teachers remained the same on Q. 8. Thirteen preservice teachers indicated a reversal change when considering their belief that a teacher should maintain a formal (somewhat distant) role in the classroom (Q. 8). An additional 10 preservice teachers indicated an incremental change in their beliefs. The inquiry into practice prompt that guided their investigation of the teacher’s role focused specifically on a formal or informal role. This specific emphasis on the formal and informal role of the teacher was the basis for the dialogue e-mails and written reflections. Interestingly, a greater number (13) of reversal changes were evident on this specific question. Twenty-three preservice teachers indicated that their belief had changed either incrementally or as a reversal change. Two of the preservice teachers who were outliers in the August Survey of Beliefs remained the same in the November Survey (Intern CC on Q. 4, and Intern H on Q. 9).
Table 19

Belief changes between August and November survey (teacher’s role)

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<td>SDA</td>
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<tr>
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<td>1</td>
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<tr>
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<td>A</td>
<td>DA</td>
<td>SDA</td>
</tr>
<tr>
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<td>0</td>
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<td>0</td>
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<td>Q. 8</td>
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<td>6</td>
<td>8</td>
<td>3</td>
</tr>
<tr>
<td>SDA</td>
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<td>1</td>
<td>7</td>
<td>4</td>
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<table>
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<td>A</td>
<td>DA</td>
<td>SDA</td>
</tr>
<tr>
<td>August</td>
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<td>6</td>
<td>0</td>
<td>0</td>
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<tr>
<td>Q. 9</td>
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<td>0</td>
<td>0</td>
<td>0</td>
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</table>

Summary of changes related to the teacher’s role

<table>
<thead>
<tr>
<th></th>
<th>Same</th>
<th>Reversal change</th>
<th>Incremental change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q. 4</td>
<td>17</td>
<td>5</td>
<td>12</td>
</tr>
<tr>
<td>Q. 8</td>
<td>12</td>
<td>13</td>
<td>10</td>
</tr>
<tr>
<td>Q. 9</td>
<td>16</td>
<td>7</td>
<td>12</td>
</tr>
</tbody>
</table>

Participants n = 35 (Q.8 & Q.9), n = 34 (Q.4)

After an inductive analysis of the written statements related to teacher’s role, three themes emerged. Table 20 depicts the themes that emerged and the frequency that the belief was articulated in the data. The preservice teachers identified three components to the teacher’s role. “The teacher is the arbiter of the rules,” “The teacher is a reformer,” and “The teacher needs to have balance.”
Table 20

<table>
<thead>
<tr>
<th>Theme</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>The teacher is the arbiter of rules.</td>
<td>38</td>
</tr>
<tr>
<td>The teacher is a reformer.</td>
<td>35</td>
</tr>
<tr>
<td>The teacher needs to balance.</td>
<td>30</td>
</tr>
</tbody>
</table>

Participants n = 35

*The teacher is the arbiter of rules.* After a semester in the internship classroom, 25 preservice teachers stated that the teacher is responsible for the rules and management of the students. The following preservice teachers mirrored the tenor of the dialogue journal responses. Intern HH stated, “A teacher should definitely set the scene. There is no compromising when it comes to rules and discipline.” Intern G agreed: “Teachers need to set the rules from day one and stick by them. The teacher should make no exceptions; rules are rules.” Fourteen preservice teachers further explained that management was the reason for the certainty of their opinions. Intern II stated, “If the teacher does not establish rules, then the classroom will be chaos.” Intern T also explained, “Without procedures the students will be lost. They will not know what is expected of them…. By having established procedures you will have better classroom management, less misbehaviors.” This notion of avoiding “complete chaos” was linked with the concept that “if rules are not set in place by the teacher, then the classroom will reflect mismanagement” (Intern D).

However, 13 preservice teachers who agreed that the rules established by the teacher also emphasized the need to include student input. The concept of management
was still preeminent in their belief, even when they emphasized that the students needed to have a voice in the rules. Intern AA explained,

I believe that the teacher should establish the rules prior to first day of school. The rules should be explicit. After the year has begun, the teacher may choose to add additional rules with the student's help. This will help students realize that the classroom also belongs to them…. If the students are the ones that make up the rule, they are more likely to follow it and remind each other of it.

Intern S echoed this belief in her statement,

It is a teacher’s role to establish classroom procedures, but sometimes it is good if the teachers and the students create them together. This way, they already know that they should follow the rules because they helped establish them.

*The teacher is a reformer.* In the August Survey of Beliefs, the preservice teachers commented on the role of the teacher as an active agent reforming society more frequently than any other theme. However, in the November survey, this notion of societal reform changed to a focus on the students in the internship classroom. The theme of being a reformer as a teacher took on a new emphasis. The preservice teachers defined reform in relation to the students and community school. For example, Intern C stated that: by teaching students to be better people, you are helping to reform society.” Intern K commented, “A teacher who has a good understanding of the society that surrounds the school … will be more effective dealing with those students,” and Intern H stated, “A
teacher should be concerned with changing student attitudes, and hopefully that will bring about societal changes.”

Some preservice teachers also stressed the impact of being a role model to the students as an avenue for reform. Intern A explained, “So many things that you teach will leave the classroom and go into the outside world…. That’s why it’s important to provide the students with a good role model.” Intern HH agreed: “You set an example inside and outside the classroom. Your ultimate job is to reform society. We [teachers] are forming the future leaders of our society.” Fifteen preservice teachers still believed that the role of an active agent in society was important because the teacher’s voice needs to be heard. Intern CC explained, “Because teachers work in their schools and communities, they should have an active role in reform.” Intern T agreed: “We must stand up and let our voices be heard.”

The teacher needs to balance. Although the preservice teachers expressed unyielding beliefs that the teacher should establish the rules, their beliefs about the role of the teacher still included a balance between formal and informal approaches. These preservice teachers were not willing to agree that the teacher’s role was always as authoritative as expressed when talking about establishing rules. They agreed that finding a balance between the formal approach and informal approach was the optimum ideal. Intern Q reflected the tenor of many preservice teachers’ responses:

The teacher needs to maintain a balance of formal and informal behaviors.

If a teacher is strictly formal, student will not have the opportunity to open up to the teacher, and the teacher will not have the benefit of knowing more about the students.
Intern U explained, “There are times for everything. Sometimes a teacher can be informal and laugh … and other times the teacher needs to be formal so the students can follow the procedures established.” Intern D added, “The teacher needs to have a balance …. Once you have set up a structure for the students to follow and they respect you … then you don’t have to be distant.”

The notion that discipline was formal did not constrain these preservice teachers to a single mindset that formality is the only approach to teaching. In fact, the preservice teachers preferred a more informal teaching approach because they thought it benefited the students. Intern EE mirrored the respondents’ beliefs that balance is key to successful teaching:

A teacher should have a formal and informal role as a teacher. During lessons the teacher should be informal. During classroom management procedure, the teacher should be formal. They [sic] must be fair, firm, and consistent when implementing behavior management strategies. All other times the teacher must be informal. The student should leave the teacher’s class knowing they [sic] were respected, cared for, and valued.

Intern V elaborated on the benefit of maintaining an informal role with students: “I believe that there is a time and a place for being distant or friendlier. When students are comfortable and trust you, they are far more willing and wanting to achieve and perform at their best.”

Belief changes recorded in surveys related to the teacher’s role. A comparison of the Likert data between August and November related to the teacher’s role indicated that while a substantial number of preservice teachers did not change, an equal or greater
number of preservice teachers indicated some measure of change in their beliefs. The themes that emerged from the explanatory data in November paralleled those that emerged in August. For example, in August the theme, “The teacher has the responsibility of being an active agent” connected to “The teacher as a reformer.” However, the preservice teachers did become more student-focused in the November survey explanatory statements. Societal reform became much more specifically connected to the students in the preservice teacher’s internship classroom.

Similarly, the themes, “The teacher must be in charge” and “The teacher must be in charge … but,” from the August survey connected to “The teacher is the arbiter of the rules” in the November survey. Many of the preservice teachers having faced the realities of managing classroom behaviors appeared to have their beliefs confirmed and restated the need for the teacher to maintain control.

Finally, the theme, “The teacher needs to balance” remained the same for both the August and November surveys. However, the preservice teachers in the August survey described this balance by defining the appropriate behavior of a teacher. In the November survey, the preservice teachers described the balance between formal and informal as shifting throughout the day. The balance between the formal role and informal role of the teacher was viewed through the lens of what benefited the students. This emphasis in the November data indicated that these preservice teachers were much more student focused and specific in their understandings of the teacher’s role.

*Active Learning*

A tally of the Likert scale data indicated that 17 preservice teachers remained the same when considering that a teacher needs to plan active participation in each lesson (Q.
2), and 20 preservice teachers remained the same in their belief that the most effective teacher engages in active learning (Q. 6) (see Table 21). However, only eleven preservice teachers maintained the belief that hands-on learning was the same as active learning (Q.14). While the preservice teachers indicated only five reversal changes for Q. 2, and zero reversal changes for Q. 6; twelve preservice teachers indicated a reversal change when they considered Q. 14. Interestingly, a similar number of preservice teachers made incremental changes for each of the questions related to active learning (Q. 2: 12, Q. 6: 14, & Q. 14: 11). Comparable to the results of the questions related to the teacher’s role, after a semester of experiencing the framework of inquiry into practice, a substantial number of preservice teachers did not change. However, for two of the questions, an equal or greater number of preservice teachers shifted. While the number of preservice teachers who changed on Q. 6 was fewer than those who remained the same, still 14 indicated an incremental change. Intern I neglected to select a Likert scale choice for Question #14 on the November survey. None of the preservice teachers who were outliers in the August Survey of Beliefs were the same individuals who were outliers in the November Survey of Beliefs.

Table 21

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Summary of change related to active learning

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Participants n = 34

After an inductive analysis of the written statements related to active learning, three themes emerged. Table 22 depicts the themes and the frequency with which each meaningful unit occurred in the data. The themes from the written explanations were as follows: “Active learning in every lesson?” “Active learning increases students’ understanding” and “Active learning is more than hands-on experiences.”

Table 22

**Explanatory data related to active learning (Nov. survey)**

<table>
<thead>
<tr>
<th>Theme</th>
<th>Frequency</th>
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<tbody>
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<td>Active learning in every lesson?</td>
<td>43</td>
</tr>
<tr>
<td>Active learning increases students’ understanding.</td>
<td>31</td>
</tr>
<tr>
<td>Active learning is more than a hands-on experience.</td>
<td>28</td>
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</table>

Participants n = 35
Active learning in every lesson? The themes from the November survey reflected an increased attention to the internship experience. The preservice teachers’ number of references to the inclusion of active learning in every lesson was higher than the number of other themes. Many of the preservice teachers believed that active learning should be a part of every lesson, and they recognized that implementation of active learning required careful planning. The following explanations mirrored the typical preservice teacher’s response.

Intern B stated, “There is no reason a teacher couldn’t do this in each lesson … Planning is necessary to make sure it happens effectively.” Intern AA agreed, “Students will be most engaged and active in their learning if the teacher plans for active participation …. The teacher may ask periodic questions.” Intern M explained, “Active learning is needed in each lesson because the students need to be engaged … so that it [content] reaches their brains and actually goes in.” Intern W agreed: “A teacher needs to plan active participation in each lesson…. It will help get your class going.”

Although the preservice teachers agreed that active learning is important and the implementation of active learning provides an opportunity for students to “enjoy” (Interns JJ & P) learning and “take a break from worksheets” (Intern II), nine preservice teachers voiced reservations. The preservice teachers’ reservations included the following: “I don’t think it [active learning] should be involved in every lesson …. I don’t think its practical” (Intern HH); “Not all children learn best by taking notes” (Intern DD); “Some students learn without participating, like myself” (Intern Z); “It may not always be possible to keep them active” (Intern I); and “Active learning is an excellent way to engage students and actually get their minds working, but it is not the only way to
instruct” (Intern H). Intern Y commented, “Some hands-on learning is not active learning …. Some students can go through the motions of the hands-on activity and not learn anything about it.” Common to all of the responses with reservations was the notion that the complexity of implementing active learning demands that the teacher address the differences and the way each student approached learning. Their belief included the notion that there are some lessons in which the active learning component may not be the best addition.

*Active learning increases students’ understanding.* Another theme that emerged from the explanations was the value of active learning for the students. Some preservice teachers believed that active learning increases student understanding. They believed that students actually retain more information when they engage in active learning. The following examples reflect the typical response: “Active learning is essential in making learning worth-while…. Students who experience active learning have a greater tendency to retain the information” (Intern J); “When a student becomes actively involved in each lesson, they [sic] will have a better recollection and understanding of it” (Intern CC); and “Students learn best and remember the most when they are a part of their learning” (Intern V). Five preservice teachers also linked student motivation to implementing active learning. Intern U explained, “Active learning increases motivation.” Intern V agreed: “Students are more motivated when they are learning actively and participating in their learning. When teachers plan lessons this way, it definitely impacts students learning in a positive way.” These preservice teachers agreed that implementing active learning benefits students.
Active learning is more than a hands-on experience. Finally, by the end of the semester a majority of the preservice teachers had defined active learning as more than a hands-on learning experience. Although many the preservice teachers acknowledged that hands-on activities could also be active learning, they did not necessarily believe the converse. In other words, some of the preservice teachers believed that active learning does not require a hands-on component to the lesson. The following preservice teachers explained the difference: “Hands-on learning may be a mindless activity…. Active learning is a minds-on activity that might include a hands-on aspect” (Intern B); “Students can be involved in hands-on learning and not actively learning…. A hands-on experiment can have no educational purpose except that it is fun” (Intern DD); and “A hands-on activity does not mean that the students’ minds are on” (Intern W). Moreover, 14 of the preservice teachers specifically linked active learning to higher level thinking, or critical thinking skills. The following preservice teachers’ excerpts exemplify the beliefs of the 14:

Active learning is having students think critically. It is minds-on not just hands-on. Teachers are not tellers of information…. Active learning puts the responsibility of learning on the student … Simply because students are working with manipulatives does not translate into learning…. Active learning requires critical thinking…. If hands-on learning is to be active learning it needs to involve critical thinking. (Intern EE)

Intern FF agreed with specific references to student gains, “Active learning involves higher level thinking skills, and the students retain the information much better. Simple rote learning is ineffective, for the students are unable to utilize or make sense of what
they are learning." The preservice teachers recognized the complexity of implementing active learning. At the same time, the focus on students clarified the value of active learning in a lesson.

Belief changes recorded in surveys related to active learning. The preservice teachers’ responses in November appeared to confirm and strengthen previously held beliefs related to active learning. The Likert data indicated that while a substantial number of preservice teachers maintained the same level of belief for each question, at least a third of the participants shifted. Many times their responses mirrored the August Survey of Beliefs data except for the inclusion of critique. After investigating active learning, these preservice teachers began to question the implementation of this teaching strategy. They questioned the benefit to all children. They questioned the practical application of active learning within the demands curriculum, and they questioned the difference between hands-on learning and active learning. Moreover, this critique based on student needs allowed the preservice teachers to put their statements into the context of real teaching. In the November data, the preservice teachers referenced their internship experience as they articulated the value and complexity of implementing active learning.

Culture

The tally of Likert scale data revealed that a sizeable number of the preservice teachers maintained the same level of belief after the semester of inquiry into practice (see Table 23). Twelve preservice teachers remained the same when they considered the statement that cultural background had little effect on students (Q. 3) and that the learning ability of students is limited due to home environment (Q. 12). Eighteen preservice teachers remained the same in their belief related to the statement that all
children are treated equally in schools (Q. 11). Several preservice teachers reversed themselves from either agreeing with the statement to disagreement or visa versa (Q. 3: 7, Q. 11: 4, & Q. 12: 13). The largest number of reversal changes occurred when the preservice teachers considered whether the learning ability of students was limited by their home environment (Q. 12). A similar number of preservice teachers changed their belief incrementally from the August survey to the November survey in all three questions (Q. 3: 15, Q. 11: 13, & Q. 12: 10). Similar to the previous focus areas, after a semester in the schools, there were a substantial number of preservice teachers who remained the same. However, an equal or greater number of preservice teachers either reversed their belief or incrementally changed. Interns L, W, and O were outliers in the August survey and remained outliers for the November survey. Intern O was an outlier on all three questions in August, and she did not shift these beliefs in November.

Table 23

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Participants n = 35 / Intern I neglected to choose a Likert scale option for Question #3.

Summarized in Table 24 are the themes that emerged after an inductive analysis of the written explanations provided by respondents to explain the Likert data. The preservice teachers included a wide range of factors such as SES and poverty in their discussion about culture. As I analyzed the data, I accepted their notion of culture and focused on their beliefs about culture’s impact on learning. The three themes that emerged were as follows: “Home support affects learning,” “Teacher’s impact,” and “Reality.” These themes further explained the subtle belief changes documented in the Likert data.

Table 24

<table>
<thead>
<tr>
<th>Theme</th>
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<tbody>
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<td>Home support affects learning.</td>
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<tr>
<td>Teacher’s impact.</td>
<td>32</td>
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<td>Reality.</td>
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</table>

Participants n = 35

*Home support affects learning.* The bulk of responses included a reference to the impact of a student’s home culture on educational experiences. Unique to the November
Survey of Beliefs data was the differentiation between the various aspects of home life has an impact on a student’s education. Sixteen of the preservice teachers referenced the impact of parents who valued education on their child’s education. Intern CC stated, “If you live where education is devalued, that is probably the outlook that you will keep with you.” Intern E agreed: “I think that if school is not valued at home, then they [students] may come to the school unwilling to learn.” Intern C explained the impact in practical terms:

Some parents do not value education as much as others. They will keep their children home from school for the littlest things. They also do not make them do homework. Some do not care how the child does in school. Some parents value education, but are so busy, they don’t have the time to press the issue with their children.

Eleven preservice teachers explained the impact of the home on a student’s education and focused on literacy. They highlighted the availability or non-availability of text in the home. Intern Z explained, “Some children are less fortunate … and might not have been read to growing up, have books at home…these factors can hinder a child’s learning ability.” Intern H agreed: “A student that is read to every night and has hundreds of books to read from is going to read a lot better than a student who is never read to.” Intern O linked her recent experiences in the internship classroom to changes her beliefs:

I used to believe this until I was actually in the classroom and saw that cultural background does have an effect on a student's education…. If a student comes from a family where in the family's culture the parents do not help their children with homework and do not read to them, then this
will effect (sic) that student's learning because they [the student’s) most
likely will not do as well in class, because they are not able to get extra
help at home. However, students whose parents do help them at home will
probably do very well in the classroom and so on.

Another aspect of culture that nine preservice teachers emphasized was the
emotional toll that some students experience at home. This connection between the home
environments to the home culture expanded the definition of culture to more than the
racial or socioeconomic status of the student. Intern CC stated, “A child’s learning ability
can be hampered by their home culture. If my life at home is a living hell (screaming,
slapping, banging stuff around), I will probably be unable to concentrate at school.”
Intern FF explained, “What happens at home directly affects [sic] what happens in the
classroom. If a student had a fight with his mom, then they [the student] will not be in the
mood to learn.” Intern Z added, “A child’s cultural background plays a significant role on
their education. Their background can determine how they receive information and how
they react to authority.”

Six preservice teachers specified the aspect of speaking another language as a
limitation influencing a student’s education. This notion evoked a strong response from
Intern E who explained, “I think that it is a sad thing, but equality is not a priority in
schools today. Some students are singled out simply because they are African American
or ESOL and that just makes me sick. I feel that all children deserve the best education
possible.”

Teacher’s impact. Still a third of the preservice teachers indicated that culture
could be viewed in a positive light. In this vein, these preservice teachers felt that the
teacher’s attitude could be positive and welcome the contributions of students from
different cultural backgrounds. Intern II stated, “Every child’s culture affects classroom
activities. It is the teacher’s responsibility to make sure it is a rewarding experience.”
Intern GG agreed: “Every child can contribute something from their culture to the class.”
Intern I identified specific barriers that culture can have on a student’s education, but
these barriers were not perceived as obstacles to learning, nor did she devalue the cultural
differences:

Sometimes a student may be lacking schema or background knowledge
that is helpful or needed for lessons. Their culture may also keep them
from participation in group activities as much as we’d like them to.
Teachers should try to teach children to value everyone and their
differences. (Intern I)

The preservice teachers also noted that students deserved more from teachers.
They believed that biases and stereotyping are evident in schools. The preservice teachers
emphasized the need for teachers to know the cultural backgrounds of their students and
then use that knowledge to adjust their teaching methods. Intern Q stated:

After having the dialogue journal review during seminar, I realize that it is
very important to know about your students’ culture because it does make
a difference on how you approach the student and how the student learns
in your class…. By knowing about their culture, it will be easier to have
them [the parents] help you with their child's progress in the classroom.

These preservice teachers indicated that the teacher has responsibility for meeting
the needs of the students who come from diverse cultural backgrounds. Intern M stated,
All children come from different backgrounds, and it does effect (sic) how they learn and how you teach. The teacher has to adjust what they are teaching to meet the needs and the background knowledge of all of the students. The teacher also has to teach new things based upon what the students already know.

Often when the preservice teachers acknowledged biases in themselves and their mentor teachers, their statements had the tone of inevitability to them. Instead of noticing the behavior and suggesting a solution, these preservice teachers appeared to accept the biases as a foregone conclusion. The following responses exemplify this tone:

I believe all students are not treated equally based on their race, ethnicity, economic status, appearances, intelligence, etc. All of us are guilty of creating this inequality, for all of us are biased in some way or another.

(Intern FF)

I think people want to think that all students are treated equally, but they are not. Some teacher’s bias is based on race, religion, or ethnicity. Others bias on the student’s past. As much as we would like to think that all people are treated equal, many are still not. (Intern C)

*Reality.* The respondents also stated the belief that unequal treatment of students is a reality that exists in schools. Twenty-six preservice teachers linked their internship experience to the “reality” of unequal treatment of students. Intern D stated, “I know that all students are not being treated equally in schools today. As much as we want them to, they are not. Students are being prejudged, stereotyped, and discriminated against everyday.” Intern BB agreed:
For example, I realized in my internship that the majority of students of color are labeled as SLD. This really bothers me; however, you have to consider the whole Ebonics barrier and other cultural differences. I also saw that men teachers with their girl students are less critical, and the women teachers with their boy students are more sensitive…. This is not the case for all, but these are some observations I noted.

The preservice teachers noted that this unfair treatment occurred for a variety of reasons. “Some higher achievers are given more praise and resources” (Intern AA), some “students are a discipline problem, they don’t know English, or are behind in learning” (Intern V), and some students are simply “called on more than others” (Intern W).

Belief changes recorded in surveys related to culture. The Likert data indicated that although a sizeable number of preservice teachers maintained the same level of belief when considering the survey questions, an equal or greater number of preservice teachers changed their beliefs through either a reversal change or an incremental change. In the August survey, the preservice teachers voiced the belief that all children were not treated equally in schools today and they drew from their own experience as students to illustrate that belief. After a semester in the classroom, this belief appeared to be confirmed, but instead of referring to personal experiences as students to illustrate their beliefs, the preservice teachers referenced the students in their internship classroom.

Another belief that was confirmed for these preservice teachers was the notion that the home environment affects the learning ability of students. However, in the November survey, they differentiated between various aspects of home life that can have an impact on a student’s ability to learn. Some of the preservice teachers noted the impact
of a parent who valued education; other preservice teachers noted the impact of literacy in the home on a student’s ability to read. A few of the preservice teachers identified the emotional toll at home, and others specified the impact of speaking another language at home. The specific references to the internship classroom enriched the preservice teachers’ understanding of the influence of the home on a student’s ability to learn.

Another change that occurred in the November survey was the preservice teachers’ specific references to personal biases and prejudicial behavior toward students. The preservice teachers’ critique of self specified the teachers’ need to know the cultural backgrounds of students in the classroom in order to meet their students’ needs. In the August survey only a few preservice teachers referred to culture in a positive way, but the November survey revealed that a third of the preservice teachers changed to the belief that the culture of a student could add to the overall education of all the students in the classroom. Again, references to the internship helped the preservice teachers put their beliefs into the context of the classroom experience.

Assessment

A comparison between the Likert responses related to assessment in the August Survey of Beliefs and the November Survey of Beliefs indicated that many of the preservice teachers remained the same in their beliefs related to assessment (see Table 25). Nineteen preservice teachers maintained their original stance on the importance of assessment for making sound instructional decisions (Q. 7), and 16 preservice teachers remained the same when they considered the statement that assessment directly affects the level of learning in the classroom (Q. 10). For Q. 7 only three preservice teachers reversed their belief, yet for Q. 10 eleven preservice teachers reversed themselves. A
similar number of preservice teachers indicated an incremental change for the questions related to assessment (Q. 7: 12, & Q. 10: 8). The results from the focus area of assessment indicated a sizeable number of preservice teachers remained the same, and yet for Q. 10 the number of preservice teachers who shifted out numbered those preservice teachers that stayed the same. For Q. 7 the number of preservice teachers who changed was 15, and those that stayed the same numbered 19.

Table 25

Belief changes between August and November survey (assessment)

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Summary of change related to assessment

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<td>Q. 10</td>
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<td>11</td>
<td>8</td>
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</table>

Participants n = 34 (Q.7), 35 (Q.10)

Three themes emerged from analysis of the explanatory data related to assessment (see Table 26). The explanatory data further explain the increases in intensity of the respondents’ changes tallied in the Likert scale data. The three themes that emerged were as follows: Important to conduct over time, Assessment informs the teacher, and Informs instruction.
Table 26

*Explanatory data related to assessment (Nov. survey)*

<table>
<thead>
<tr>
<th>Theme</th>
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<td>Important to conduct over time</td>
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<tr>
<td>Assessment informs the teacher</td>
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</tr>
<tr>
<td>Informs instruction</td>
<td>21</td>
</tr>
</tbody>
</table>

Participants n = 35

*Important to conduct over time.* The concept that assessment should be continuous and reflect progress over time was a new belief the preservice teachers articulated in the November survey. In the August survey, the preservice teachers had voiced the belief that one assessment did not provide a true picture of the student’s ability. And, 11 preservice teachers again voiced this belief. Originally, these preservice teachers focused on the product of assessment. However, the emphasis on continuous assessment focused on the process of learning as opposed to the product of assessment. The following preservice teachers’ comments mirrored this idea:

I think that students need to be assessed at different points throughout the year. The teacher needs to make sure that meaningful learning is taking place. Otherwise, no learning could be taking place, and the teacher would never know if the students are not learning. (Intern Y)

Intern EE wrote,

I believe students should not be judged by one assessment. There should be multiple opportunities for students to demonstrate their knowledge. Some students are assessed better by particular assessments. There should be informal and formal assessments performed on students to give an
accurate picture of their learning. True assessment is performed throughout the year. Students' learning progresses over time. Assessments should capture this progression. Also, if students are not progressing, assessments should help the teacher to teach accordingly.

Intern E stated,

I firmly believe that ongoing assessment through things like portfolios and journals are the most effective way to make sound instructional decisions. One time assessments like tests are not the best way to go if you want to adequately assess your students. You need something that shows their progress from the start of the year to the finish of the year. This will be great for the principal to see and it should help with grades.

*Assessment informs the teacher.* After the preservice teachers investigated assessment, discussed assessment, and implemented assessment, a common thread emerged in the explanatory data was the belief that assessment informs the teacher. In the November data, the explanations included specific examples that were absent in the data collected before the internship experience. The preservice teachers also believed that assessment is critical in lesson planning. Intern EE stated, “Assessment is crucial in lesson planning…. Assessments need to be examined to check for objectives that have not been mastered by students.” Intern N agreed: “Assessment allows the teacher to plan lessons that are meaningful.”

The idea that lesson planning is linked to both the students’ learning and the ability of the teacher to teach effectively also emerged in the November data. Intern Z explained, “Through assessment, the teacher will know what is being learned and how it
should be taught. The teacher can use assessment to gauge how well she is doing teaching a subject.” This belief was echoed by Intern C: “I do not see how a teacher can move on with what she is doing if she does not know where her students are. She cannot create grades for the students either. I believe on-going assessment is essential to be a good teacher.”

The preservice teachers believed that understanding each student’s level is an essential component to monitoring oneself as a teacher. The following preservice teachers articulated this belief: “If the teacher assesses students in all of her lessons, she can know immediately what the students learned” (Intern O). “Assessments will allow us to know and see if they [the students] are actually learning” (Intern K), and “You need to check where the student is in comprehension in order to proceed in the lesson” (Intern F).

*Informs instruction.* Although the preservice teachers indicated in the August survey that assessment is important to make sound instructional decisions, the preservice teachers did not link the knowledge gained by the teacher through assessment to the teacher’s ability to adapt lessons to meet the student needs. However, the November survey data indicated that there were 21 preservice teachers who specifically connected assessments to planning instruction. These preservice teachers also included the benefits of using assessments with students and practical ideas for assessments they planned to use. Intern B stated, “Assessment can inform your instruction so that the learning level is elevated to its potential.” Intern JJ explained, “If you plan to assess a certain group of children a day, it will help you plan your instruction.” Intern M agreed: “Assessment is essential for the teacher to make appropriate decisions because they will have visible
proof of the development of each student and will know how to adapt the lessons to teach the students effectively.”

**Belief changes recorded in surveys related to assessment.** The Likert data indicated that a substantial number of preservice teachers maintained the same belief level when considering questions related to assessment. However, for Q. 10 a greater number of preservice teachers (19) indicated a change in their belief, and for Q. 7, (15) preservice teachers indicated a change. The preservice teachers appeared to confirm their earlier beliefs related to assessment in the November survey; however, these beliefs also expanded to include new emphases. For example, the preservice teachers emphasized continuous assessment rather than the use of a single measure. This emphasis on continuous assessment expanded the earlier stated belief that one assessment was not enough, and also included the notion of process rather than product. Additionally, in the November data, the explanations included specific examples that were absent the data collected before the internship experience. These preservice teachers’ expanded beliefs about assessments included specific benefits of using assessments with students, and practical ideas for assessments they planned to use.

Another expanded belief was articulated through the connection between assessment and lesson planning. Data from the August survey indicated that the preservice teachers believed that assessment and instruction are linked. However, the notion that lesson planning is connected to both the students’ learning and the ability of the teacher to adapt lessons emerged in the November data. Although the preservice teachers indicated in the August survey that assessment is important to make sound instructional decisions, the preservice teachers did not link the knowledge gained by the
teacher through assessment to the teacher’s responsibility to guide instruction. This changed in the November survey data when 21 preservice teachers specifically connected assessments to planning instruction. The focus on guiding instruction based on assessments also strengthened the preservice teachers’ beliefs that information on each student’s level of understanding is an essential component to monitoring oneself as a teacher.

*Reflection*

Reflection was not a part of the focus area inquiry, but I included statements related to reflection as a part of the survey. Although the preservice teachers did not investigate reflection as a focus area, they did practice reflection throughout the semester in their dialogue e-mails and written reflections related to each focus area. A comparison of the Likert data between the August Survey of Beliefs and the November Survey of Beliefs indicated that for two of the questions (Q. 1 & Q. 13) almost two-thirds of the participants did not change their level of belief (see Table 27). Still, on Q. 5 only eleven preservice teachers remained the same. Nine preservice teachers indicated a reversal change when they considered that all children could learn as long as the teacher is committed to reflection (Q. 1). Only four preservice teachers indicated a reversal change when they considered the statements that exemplary teachers are lovers of learning … constantly reflecting (Q. 13). Interestingly, 15 preservice teachers indicated a reversal change when they considered the statement that a reflective stance is more beneficial that any other professional development opportunity (Q. 5). Incremental changes were also recorded for each question. Fourteen preservice teachers indicated an incremental change for Q. 1, eight preservice teachers indicated an incremental change in beliefs for Q. 13,
and seven preservice teachers recorded an incremental change for Q. 5. Interestingly, more preservice teachers remained static in their belief levels when considering the three questions on reflection than the other focus areas; still, the number of preservice teachers who indicated a measure of change in their beliefs was equal or greater for Q. 1 and Q. 5. Only 12 preservice teachers indicated any level of change for Q. 13 compared to the 21 who remained the same.

Table 27

Belief changes between August and November survey (reflection)

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Summary of change related to reflection

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Participants n = 35 / Intern GG neglected to record a Likert scale choice for Question #5, and Interns Z & DD neglected to record a Likert scale choice for Question #13.
Three themes emerged from the explanatory data that further described the shift in the intensity of belief related to reflection. Table 28 depicts the themes that emerged and the frequency that meaningful units related to each theme occurred in the data. The preservice teachers agreed that reflection affects teacher planning and execution of lessons. They also agreed that reflection provides a window into the student’s understanding of information presented in a lesson. Finally, the preservice teachers indicated that reflection has personal as well as professional benefits to the teacher.

Table 28

<table>
<thead>
<tr>
<th>Theme</th>
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<tr>
<td>Reflection changes lessons.</td>
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<td>A window to the students.</td>
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<tr>
<td>Reflection changes the teacher.</td>
<td>27</td>
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</table>

Participants n = 35

Reflection changes lessons. The preservice teachers believed that teachers who reflected on their practice would adjust and change their lessons in the future. A common thread throughout the responses was the idea that when a lesson did not work out, reflection was helpful in making adjustments. Intern II stated, “If a teacher reflects, then he/she can look back at what went wrong and what could be done next time.” Intern S agreed: “Teachers who reflect on their practice are always willing to review what they have taught the kids and figure out ways to improve or make the lesson better next time.” This idea that reflection is a critical component for lesson improvement to occur was echoed throughout the explanations. “If the teacher reflects on her daily lessons…. In order to progress your teaching, you must realize what went right and what could use
more improvement. Not only would the teacher benefit but students would as well” (Intern T). “Without reflection the teacher cannot improve what things they have done with the children to improve the performance of the students” (Intern L).

The preservice teachers also referred to themselves as reflective practitioners and described the lack of reflection in their mentor teacher. “I feel that self-reflection plays such a major part in a teacher’s growth. I find myself reflecting on almost every lesson. It is so important to take the time to ask oneself why something may or may not be working” (Intern A). Another preservice teacher stated, “I think that reflecting on what you are doing is the best way to see if it [the lesson] is working or not. If a teacher (like mine) continues a lesson that is not working, then year after year the students are not learning the intended material” (Intern E). Intern O explained:

I think that the best way to become a better educator is by reflecting daily. When I reflect, I am able to find out what I did well by thinking back on the day. Reflection is so powerful because it gives you time to find out what you did not do right and how to make it better. If all teachers take the time to brainstorm and reflect on their teaching, then there will be a greater chance that all students will benefit because the next lesson they participate in will be molded to meet their specific needs.

_A window to the students._ This notion of lesson adjustment based on reflection was linked to the idea that reflection informs the teacher about the students’ strengths and weaknesses. They also believed that knowledge helps the teacher guide the student, and this awareness results in increases in the students’ learning. Intern BB stated, “I believe that a teacher should have a reflective stance on teaching…. For example, assessing
yourself and your students … can help a teacher to better understand the students and also to help the students better understand the material.” Intern S explained,

If all teachers review and go over the material with the students, and reflect on what they are supposed to do, then this will give the students the extra help and they will understand the assignment better. The more reflecting that a teacher does, the more the students will understand. [sic]

Five of the preservice teachers who emphasized that the value of reflection is in knowing students better also warned that reflecting alone is not enough. These preservice teachers believed that for reflection to be productive and meaningful, the teacher had to “reflect and act on the reflection” (Intern B). Intern K agreed: “Although a teacher may reflect on her teaching practice, if she does not put to use what she reflected about…. It will not be useful for the classroom.” Intern AA explained:

Teachers should reflect on what they do. The important part is that the teachers do something about what they reflected upon. Just reflecting and not acting on it is not sufficient. Truly reflecting requires you to make a change to fix something or to enhance it. I feel that when you reflect, you are taking a special and true interest in your practice and in your students. It shows that you are willing to think about and change in order to help your students.

*Reflection changes the teacher.* Six preservice teachers also added that reflection is important, but they qualified their endorsement by suggesting that there are other ways to grow as a professional. They also believed that reflection for reflection’s sake is counterproductive.
Intern EE summarized:

Even though I value reflection, it is not the most important learning experience. I think experience has a high merit when it comes down to professional development. Putting what you know into practice is highly educational. In addition, reflection does not equal learning. Reflecting in the wrong direction means no guidance. Reflection leaves room for error.

Many preservice teachers believed that teachers who reflect grow in their knowledge about themselves personally and professionally. Intern J stated, “I believe that being reflective and self evaluative is key in establishing a routine of self awareness and self improvement. Everyone needs to continue learning and growing throughout his or her life … and therefore truly experiencing life.” Intern O connected the personal and professional and stated, “Yes, the best way for a teacher to get better is by learning from her own mistakes and achievements. The better you know yourself, the better you are able to improve active learning.”

Some preservice teachers connected the concept of reflection to the personal quality of being a lifelong learner. These respondents viewed reflection as an integral part of an exemplary teacher’s personality in which the love of learning never stops. Intern B explained, “I don’t understand how teachers could not be lovers of learning themselves. Modeling is one of the easiest ways to teach the value of education.” Intern W wrote, “For a teacher learning never stops; new things are being discovered,” and Intern CC added, “but you have to love learning yourself in order to teach it [the lesson] effectively.”
Intern J expressed a similar idea:

People who are enthusiastic and reflective about what they do are more engaging, and far more interesting. Students pick up on a person’s attitude [lover of learning] and everyone is more convinced by someone who is sincere, and finds the material stimulating, rather than someone just delivering the material.

**Belief changes recorded in surveys related to reflection.** The number of preservice teachers who maintained the same level of belief related to the three questions focused on reflection was higher than those who maintained the same level of belief in the other focus areas. However, the number of preservice teachers who indicated either a reversal change or an incremental change was greater than the number who remained the same for two of the three questions. Although the number of preservice teachers did not outnumber those who remained the same on Q. 13, still 12 preservice teachers indicated that their beliefs had changed. The beliefs expressed in the August survey were often repeated in the November survey. Similar to the other focus areas, the preservice teachers documented incremental changes in their beliefs related to reflection. In the August survey, many preservice teachers believed that reflection was valuable and identified several qualities of the reflective practitioner. Only one preservice teacher linked reflection to the notion of learning from mistakes made in a lesson. In the November survey, many preservice teachers stated that adjusting lessons after reflecting on mistakes was key to reflection, and these adaptations were linked to a focus on specific lessons and student improvement.
Another incremental change occurred in the language of the preservice teachers. In the August survey the preservice teacher referred to the reflective practitioner in the third person; this changed for many to first person references. These preservice teachers began to refer to themselves as reflective practitioners. Their belief in themselves as reflective practitioners was supported with examples from their internship experience.

Finally, the preservice teachers restated their beliefs that reflection has a positive impact on student learning and that the practice of reflection is important. Some of the preservice teachers expanded their beliefs about reflection by adding specific examples such as the increased awareness that the teacher has about individual strengths and weaknesses of the students when she/he reflects. Again, the preservice teachers were able to put their understandings of reflection into the context of teaching after the internship experience.

Summary of the November Survey

After a comparison of the August survey and the November survey, the Likert data indicated that while many of the preservice teachers maintained the same level of belief even after a semester of experiencing the framework of inquiry into practice, for 11 of the 14 questions an equal or greater number of preservice teachers indicated some measure of change. Moreover, although the number of preservice teachers did not outnumber those that stayed the same on three questions, the number of preservice teachers who indicated a level of change for these questions still ranged from 12 to 15.

The preservice teachers often restated the same beliefs that they had articulated in the August survey. However, the restatement included specific references to the classroom experience. Instead of generalities regarding their beliefs, the preservice
teachers commented on specific strategies and techniques they could use to implement active learning. Their definitions of the focus areas included specific examples from the classroom. The preservice teachers included specific references to students as they articulated their beliefs related to the focus areas. The preservice teachers still believed that their role as a reformer in society was important. Instead, they refrained from platitudes and generalities and included the specifics of getting to know the students and communities of the schools. From this new emphasis, the belief that a role model could reform society emerged.

The preservice teachers acknowledged the complexity of issues such as the facilitation of active learning. The preservice teachers began to look beneath the surface of planning and implementing lessons that challenged their students to think. With an increased focus on the students, these preservice teachers reiterated the belief that one assessment was not a useful practice for meeting the needs of students or for planning appropriate instruction. In the November survey, these preservice teachers refined their belief to suggest that a process approach to assessment was more effective. Instead of simply reporting on the ineffectiveness of using one assessment, they identified specific solutions. This emphasis on alternative avenues changed their belief that there was one right answer to learning to teach. In this way, the preservice teachers began to examine both the practices of their mentor teacher and their own practices more critically.

The preservice teachers also changed in the finality of their beliefs. They were more tentative in their explanations. For example, in the August survey, the preservice teachers agreed that the teacher’s role was to set the procedures for the classroom. This belief was articulated again in the November survey. Yet, the preservice teachers had
changed their understanding to the value of a balanced approach that included setting the
rules in place to manage student behaviors and developing relationships with their
students. This complexity was slightly different from the notion that the teacher’s role
meant being in charge and setting up the procedures for the class.

     The Likert data indicated that the preservice teachers also changed in the intensity
     of their beliefs. They appeared to distinguish understandings about active learning by
     redefining the technique as a minds-on approach rather than a hands-on approach. They
     also specified their understanding of culture. They identified subcultures and different
     aspects of home life that also characterized a student’s culture.

     The preservice teachers referred to themselves and the students in their internship
     personally in the November survey. The preservice teachers became more specific as
     they articulated their beliefs, held stronger opinions as a group in some of the focus areas,
     and recognized that teaching is a complex profession. In this way, they were able to put
     their beliefs into the context of teaching experiences.

     Part Two

     Focus Group Interviews and Reflective Levels (Q.2)

     In order to answer the second question guiding this study, the second part of this
     analysis linked the levels of reflection data analysis and the themes that emerged from the
     focus group interviews. The second question guiding this study focused on the preservice
     teachers’ developing use of reflection. The second question stated, “How does the
     framework of inquiry into practice with preservice teachers' effect growth in reflective
     behaviors?”
Method for Analysis

The second question guiding the study emphasized the growth of reflective behaviors in these preservice teachers. Two different data sources were analyzed to describe and explain the preservice teachers’ reflective growth. I analyzed the focus group interview and the reflective level analysis to describe any development of reflective practice. I analyzed the focus group interviews to describe the process that these preservice teachers experienced. Finally, I documented the development of these preservice teachers’ reflections by scoring the dialogue e-mails and written reflections using the reflective levels rubric (Appendix N).

Focus Group Interviews

Five preservice teachers were selected for the focus group interview. Using the August Survey of Beliefs, I sorted the teachers who ranked reflection as most important, those who ranked reflection as least important, and those who ranked reflection third. Following this sorting, I examined the responses to the three questions related to reflection on the survey. I chose two teachers who strongly agreed with these questions, two preservice teachers who strongly disagreed, and one preservice teacher who did not choose “strongly” in the Likert scale choices. The focus group met for two interviews. The first interview lasted one hour and the second interview lasted 45 minutes. The first interview was held after the second round of inquiry into practice, so the preservice teachers had already experienced the framework of the study twice.

The five preservice teachers comprised a diverse group. Intern B was a Caucasian 24-year-old woman who commuted to the University. She was enrolled in three other
courses, married and worked for the family business for about 20 hours a week. Intern B was gregarious, friendly, and quite enthusiastic about teaching.

Intern E was also a Caucasian, 24 year old woman. She was also married and had one child. Intern E was more reserved at the beginning of the interviews and required some invitation to share her thoughts. However, once she started talking, she voiced her opinions firmly. She also enjoyed the internship classroom, but she also was quite critical when her mentor did not display the commitment to teaching that she thought was appropriate.

Intern V was a Hispanic twenty-nine-year old woman. English was her second language, and she often struggled to find the correct word as she talked. She was also married and held a part time job. She developed a warm relationship with the students in her classroom, and she integrated Spanish words into her lessons. She was the most hesitant to talk during the interviews, but with a little coaxing from me she would articulate her beliefs. She voiced her beliefs with conviction.

Intern M was an African American, 26 year old, single woman. Intern M also held a part time job and commuted to the University. She was paired with a very traditional teacher, and voiced strong opinions about the structure of the internship classroom. Intern M had already had me as an instructor in another course, and that relationship appeared to make her more at ease from the beginning. Intern M questioned herself and posed questions to the group during both interviews.

Intern K was also an African American woman. She was single, and 21 years old. Intern K held a part time job and was enrolled in four other courses. Intern K held firm
beliefs about the topics discussed during the interview, and she would not be swayed if questioned by myself or her peers.

We met at the Professional Development School on the University campus in the same classroom that we met for seminar. For both of the interviews, I followed the semi-structured interview protocol (Appendix E). I provided coffee, tea, and breakfast rolls for each meeting as we met at 7:30 a.m. on a day the preservice teachers were scheduled for their internship class experience. The preservice teachers expressed some nervousness about being audio taped at the beginning of the first interview, but after about 15 minutes they appeared to relax. The conversation had fewer pauses, and the preservice teachers often interrupted each other and laughed and joked more.

The second focus group interview was held after the fourth round of inquiry practice. The interview began with jokes about the election and the televised debates. The preservice teachers were anxious to get started and the interview progressed much more quickly with few silent moments. Throughout both interviews, I tried to make sure that each of the preservice teachers voiced an opinion in response to each question. Occasionally, one or two of the preservice teachers did not answer, but when the conversation died down I would ask them again and they would share their thoughts. This happened more frequently with Intern V, but during both interviews I found that each of the preservice teachers at one time or another waited for me to prompt them.

*The first focus group interview.* I transcribed both interviews in two days immediately following the interview sessions. While listening to the tape a second time, I recorded the places where the preservice teachers emphasized a certain point with their voice or indicated sarcasm through inflection. Similar to the analysis of the e-mail
dialogues and written reflections, I coded the focus group interview transcription using Ethnograph 5.0. I categorized the codes that emerged from the data and later combined them into themes. The themes that emerged from the analysis of the first focus group interview included the following: “the helpful process of the dialogue e-mails,” “the limitations of the dialogue e-mails,” and “the process of the inquiry group discussion.” The focus group identified several features of the dialogue e-mails that helped them reflect.

The process of gathering data related to each focus area was similar for three of the participants. First they “asked the mentor teacher” (Intern K), then they spent time “really looking in the classroom and observing” (Intern B), and finally they went to a Web site (Intern U). Intern M and Intern E indicated that they did not go online for information. All of the preservice teachers agreed that the focus questions “made them more aware” (Intern U). Intern B stated that she “was thinking the whole time…. I was trying to check myself.” As the interns prepared for their midterm observation, they stated that the focus questions “kinda (sic) makes you not rush into picking a lesson” (Intern B), and “kinda (sic) made me stay up all night and think” (Intern M). Intern B mentioned that her goal was “to find the most active learning that she could ever find.” This introspection was also evident in the dialogue e-mails and written reflections.

The process of e-mailing to a dialogue partner helped the preservice teachers get started on their reflections. Intern E stated, “Sometimes she’ll ask a question … and I’ll start by answering the question.” Intern B said that having a partner made the process “more authentic and more meaningful… actually using …what we’re learning.” Intern M added, “We don’t really have much time to reflect on what we’re learning…and it helps
you be more focused … something to actually look for.” Intern K agreed: “Personally, I feel it is helpful to see what other classmates are thinking … helps you reevaluate how you feel and makes you question.”

The focus group identified one drawback of the investigation into a focus area. They agreed that not having a choice in the topics they investigated was a negative aspect. The group indicated that the process of having a focus question was valuable, but they wanted an opportunity to “pick something that stood out on your own” (Intern K). There was general agreement that having an opportunity to “focus on something you would do differently” (Intern B), or something they have “seen in the classroom” (Intern M), or “just venting about what was going on in the classroom” (Intern U) was important to reflection. However, the group voiced the need for restrictions to be placed on the addition of choice, such as time. The preservice teachers initially perceived the process as more busy work. Intern E explained, “I had to do this in another class … and it was busy work…. The teacher never read it.” The assignment of the dialogue e-mails was initially perceived as “something else to do! I was overwhelmed” (Intern M). Intern K described the other members of her group and explained, “One of my group feels this is useless…. She feels that she would rather be in the classroom.”

Central to the small group discussion was a handout that I created. The handout contained at least one sentence that was taken from each preservice teacher’s dialogue e-mail. I selected a statement from the dialogue e-mails to facilitate a discussion among the preservice teachers and a reexamination of the beliefs they had already articulated in the dialogue e-mails. The preservice teachers linked the impact of the discussion directly to the process of gathering data related to a focus area and then articulating these findings in
the small group discussion. The focus group explained how the small group discussion during seminar facilitated and increased reflection in a variety of ways. Intern E explained, “I think that sometimes reading your e-mail again … you’re like … wait a second, did I really mean that?” Intern E agreed that knowing that the dialogues were going to be used “makes you think about doing it … um … like it has a purpose.” “When you actually read something you wrote and explain it…you have to critically analyze it” (Intern B). This process also resulted in a more thoughtful composition of the dialogue e-mail, “when you’re writing it…you’re like, oh! She’s going to pick that sentence. You have to really pay attention to what you write now. It gives you that accountability” (Intern B). Intern U agreed, “When you are doing the next one… you can think about what you’re saying so that people can understand what they are reading.”

In this way, the preservice teachers connected the discussion to an increase in self-monitoring behaviors and with an increase in understanding related to the focus area. The focus group members all commented on the process changing or affecting their understanding about the focus areas. Their understandings of active learning expanded: “It is minds-on and hands-on” (Intern U), “It can be students answering higher order questions” (Intern K), “I learned other people’s perspectives on centers” (Intern B), “To be actively engaged it depends on how the teacher is using the lesson to activate their minds” (Intern M), and “How it is so individual” (Intern E). Each preservice teacher credited the process of rethinking the concept in the discussion to new growth in understanding. Interestingly, the more specific answers all related to active learning which correlated to increased reflective behaviors as measured on the reflection level rubric (Appendix S).
The second focus group interview. After researching all four of the focus areas, (teacher’s role, active learning, culture, and assessment), the preservice teachers met with me for the second focus group interview to discuss the process. The semi-structured interview protocol used during the first interview was followed again, but the semi-structured format allowed the respondents to further explain statements made during the initial focus group interview.

Three themes emerged from the interview: “Things learned about each focus area,” “The framework,” and “Reflection.” The focus group first identified the focus area from which they learned the most and explained why. Common to all of their responses were the practical changes that the inquiry had on their teaching practice. They found that an investigation of the focus area facilitated a critical examination of both the mentor teacher and themselves.

The preservice teachers articulated the specific changes that the inquiry had on their thinking. Intern U stated, “Well, now, I’m thinking about an activity and I wonder is this going to work? Are they going to learn from this?” Intern B agreed: “Making sure that active learning is present in every lesson … the kids are actually thinking about what they were doing and that they are actually engaged.” Their planning became more student-focused and at the same time included more self-critique. Intern E pointed out the value of getting a new perspective, “[Assessment] was a good one too, only because a lot of times teachers only focus on tests. It was good to see other ways of assessment, creative ways.” Intern K agreed: “[Assessment] will benefit me the most when I get into the classroom, good tips, [and] different ways to keep a record.”
Several of the preservice teachers identified culture as the most important focus area because they began to examine both the practice of the teacher and themselves more carefully. Intern K and Intern M (both preservice teachers of color) expanded their definition of culture. Their initial concept of culture was bound by racial status, but the discussion appeared to change this definition to include other factors such as the background of the student and personality traits. Intern B stated, “[Investigating] culture got me aware of all the quiet ones, [the] ones that don’t raise their hands, don’t run up to you, stuff like that.” Intern E examined the practice of her mentor teacher in a new light: “Just watching her do it. She calls on the ones who have their hands up: those [students] who know the answers. My teacher told me when you are doing your lesson; make sure you call on so-and-so, so that it looks like it is flowing nice. It drives me crazy!” Intern M expressed a similar concern about advice she received from her mentor after investigating the impact of culture on student learning: “I wanted to do something differently. I want[ed] to get some of the other students to read too. She’s [the mentor teacher’s] like, I don’t know how that’s going to work. You might want to just pick on the ones that can read well.”

Four of the preservice teachers indicated that the framework of inquiry into practice coupled with the dialogue e-mails and discussions changed their approach to teaching. They articulated the change as a gradual process. Although these preservice teachers did not view the framework of the study as formal research, they did acknowledge the impact of research on their investigations related to the focus areas. The preservice teachers explained as follows: “I don’t think I research about it, but I do think about her classroom management everyday” (Intern E), “It [researching] is not very
conscious but you are doing it” (Intern B), and “The thing is, you may not sit down and actually research it, but you notice things (Intern K). The preservice teachers agreed that the process had developed “a habit.” Intern B stated, “I think it would just be our reaction to a classroom setting now…. We would just start looking at these things that we see.” Intern U explained that the process was a habit of noticing and did not always include a negative critique: “Not everything [is] negative though…. I have learned a lot of things positive … that my teacher does; she has great classroom management.”

Only Intern M responded, “Oh, no. Not me personally,” when asked about the framework changing her approach to teaching into a focus on research into practice. However, after the short exchange about the inquiry into practice and the development of research habits with the other four preservice teachers, Intern M changed her initial comment about personal research, and explained how the framework had influenced her very specifically,

I have to take that back about the research…. I went to my mother’s school and I had her give me a contact with a third grade teacher, so I actually did talk to her and find out how she went about her day…. Like, “what was her schedule?” She gave me a breakdown of her schedule; what type of lessons she does with them, and what are her goals and expectations. I guess I did do that. I forgot about that. But I did do it, not thinking it was a part of research because she gave me her input and her … everything, she had been doing for the past…. I think that was my question…. “How do you know what skill to teach next? Is it arbitrary?
Do you just pick one or do you have like a certain format guideline?”… I guess I did do it [research] without really thinking about it.

The focus group also identified reflection as the most important characteristic facilitated by the framework of inquiry into practice. Intern K explained, “Reflection has these fingers that go out into all different aspects,” and Intern B reiterated, “Reflection is really encompassing them all [the focus areas].” The preservice teachers explained that the process of becoming a reflective practitioner was directly connected to the internship experience. The following preservice teachers described their reflections before and during the lessons they taught.

What am I going to teach the next day? How am I going to get the kids involved? I think your [sic] doing it all the time, but especially when you have to be prepared. On those days it’s [reflecting] even more so. (Intern M)

Intern U agreed: “Yea, I think, ‘I did this right.’ I think, ‘This is not working. Let me try something a little different.’” Another preservice teacher connected the internship process and the framework of inquiry into practice to explain her growth as a reflective teacher:

I think we are constantly reflecting. Whether it is informally like in the car,[or]shower, [I’m]constantly thinking about it [teaching]. But, also, just like sitting and really thinking about it, or making notes about what you don’t see or what you want in the classroom. I know with my teachers, there are three of them that work together. I noticed that they don’t really intertwine [with] each other. The teacher next door is teaching spelling,
and I asked one of the kids what his words were. I wanted to look at it [the list of words] with him and he had written it [the word] down, and it wasn’t even a word. I thought that it was a shame that we don’t know what their [the students’] spelling words are because these are the same kids that we are teaching math and science to. And, we could be making word problems with the spelling words helping them out. I gave them [the teachers] the idea of fraction spelling and stuff. I was surprised about that because I thought that she [my mentor teacher] would think, “That doesn’t go with what I’m doing,” but she is usually looking for ideas. So, I was happy about that. That’s the important part of it being a reflective teacher. It is the most important thing, and I think this [framework] has helped us.

(Intern B)

Intern K still wanted to define the action component of reflection before agreeing that being reflective was the most important characteristic for teachers:

I think reflection is very important, but she kind of touched on what I was going to say. That it’s good to reflect as long as you put it into action …

You can’t just say it…. You can reflect all day, but if you don’t put into place the changes there is no use in it [reflection].

This emphasis on action reminded the focus group of the discussions they had participated in during seminar, and they reiterated the importance of using their dialogue e-mails as a springboard for reflective conversation. Intern U stated, “Yeah, because I can think back on it when I reread it. Like I wonder, ‘what did I mean there?’ I’m actually reflecting on my reflections.” Intern B explained her involvement in the discussions,
“Yeah, like the paper with the parts from each of us. When we read it we say, ‘Oh, she’s right. Oh, she’s wrong.’ Intern M added, “I look forward to seeing mine.” Intern B explained how the process increased her attention to the assignment, “You might feel satisfied with your whole dialogue, and then you [the instructor] pick out one little part. You really want your reflection to be meaningful and correct and that really shows you. If you can pick out a part of it and it is still a solid reflection, then it’s good.” In the same way, Intern M agreed: “Yeah … you have to actually think about what you are actually writing [in order] to make sure you get your point across the way you want it to come across.” The focus group emphasized that the process of writing the dialogue e-mails and then using portions of each one as a springboard for the seminar discussions supported their development as reflective practitioners.

Reflective Levels

Each of the dialogue e-mails and written reflections after the seminar discussions were read and analyzed using the reflective level rubric (Appendix N). This process of analyzing the dialogue e-mails and written reflections was to assign a level of reflection to each one. A peer reviewer randomly selected seven e-mail dialogues and written reflections to read and assign a reflective level. The purpose of randomly selecting the same seven preservice teachers was to ensure that they represented the participants in the study and that the reflection levels decided upon were viable. The same seven preservice teachers’ dialogue e-mails and written reflections were analyzed by the peer reviewer for each of the four investigations into a focus area.

After the peer reviewer read the e-mail dialogues and written reflections, we met to discuss each level decision. This was done to ensure that the level assigned was
consistent for both of us. We found that as we discussed the first round, we needed to expand the scale from a three-point scale to a six-point scale because often the preservice teachers included part of the rubric for the next level without falling firmly into the next level of reflection. This expansion helped us articulate our differences and negotiate an agreement for each individual reflection. As the semester progressed, we had fewer discrepancies on the initial level decision, and we often matched exactly. Through discussion, we were able to agree on a final level for each dialogue and written reflection one hundred percent of the time. A representative example of what these reflective levels looked like in the raw data is discussed further in the chapter.

*Changes in reflective levels for each focus area.* The preservice teachers investigated a focus area and then wrote a dialogue e-mail to their partner. The dialogue e-mail was scored according to the reflective level rubric (Appendix N). Following the dialogue e-mail, the preservice teachers met in seminar to discuss their understanding of the focus area inquiry. After the discussion, the preservice teachers reflected in writing, and this was also scored according to the reflective level rubric. If a preservice teacher was absent for the seminar meeting, I could not collect any written reflection data. Thus, for each of the focus areas, the total number of participants changed due to absences. The total number of participants for the teacher’s role and culture was 35. The total number of participants for active learning was 34, and the total number of participants for assessment was 33.

*Mean score of the reflective levels.* I organized the data as the semester progressed on a table (Appendix S), and an examination of the data gave the overall impression that the preservice teachers were developing reflective practice as described in the rubric.
In order to measure the progress, I calculated the mean for each focus area dialogue e-mail and written reflection (see Figure 6). Each focus area is abbreviated and listed as it was explored chronologically through the semester.

Figure 6

Reflection levels mean scores

TRDE (Teacher’s role dialogue e-mail) / TRWR (Teacher’s role written reflection)
ALDE (Active learning dialogue e-mail) / ALWR (Active learning written reflection)
CDE (Culture dialogue e-mail) / CWR (Culture written reflection)
ASDE (Assessment dialogue e-mail) / ASWR (Assessment written reflection)

The reflection level mean score for each focus area was graphed. The score was representative of the typical preservice teacher’s level of reflection for the dialogue e-mails and written reflections for each focus area. A careful analysis of the e-mail dialogues and written reflections revealed that at the beginning of the semester these preservice teachers began with a technical focus in which they identified a problem, and articulated a solution to solve the problem. These reflections were limited in scope and
basically restated the classroom activities with a judgment, good or bad, as a whole. The pre-service teachers did not identify any strategic solution to the problem.

As early as the second round of dialogues, the gradual increase in the mean documented a higher level of reflection. Content analysis of the e-mail dialogues and written reflections indicated that the pre-service teachers were beginning to appraise the whole classroom situation. Their reflections progressed to include specific parts of a lesson and a focus on specific students in order to devise strategies to meet the students' needs, while at the same time discerning the right and appropriate action to be taken in the context of teaching.

By the third round of inquiry into practice, the increase in the mean score provided additional evidence of a higher level of reflection again. Careful analysis of the e-mail dialogues and written reflections detailed that the pre-service teachers' reflections changed to include a conscious critique of self. The pre-service teachers began to include long term implications for teaching in the e-mail dialogues and written reflections. This action-oriented approach resembled a conversation with one's self arising from deeply held values. Interestingly, the last dialogue e-mail related to assessment appeared to plateau at this intense reflective stage, and the written reflection related to assessment dropped back to the focus on individual students and devising strategies for implementation.

Tracking Reflective Progress

Figure 6 depicts the trend that developed over the course of the semester. In order to make the process of determining the reflective levels visible to the reader, I selected one pre-service teacher's dialogue e-mails and written reflections that mirrored the mean
score to report. Intern E’s reflective level scores closely mirrored the typical progression as documented in Figure 6. Intern E was quoted earlier in the chapter, but this separate analysis is a description of how the dialogue e-mails and written reflections were scored using the reflective level rubric.

**First round: teacher’s role.** In the first dialogue e-mail, Intern E spent most of her dialogue defining the problem. She restated classroom activities as a report on what she saw. There were no specific strategies noted, and the conclusions were general statements not connected to the internship experience. Apart from the responsibility of being accountable to outsiders who visit the classroom, the dialogue e-mail rarely addressed the students. The role of the teacher is described as one would describe a piece of clothing. Her dialogue e-mail related to the teacher’s role never acknowledges the possible problems that may be embedded in putting on such a role. The first dialogue e-mail evidenced level (1) reflection or surface problem solving:

I believe that most of the time a teacher plays a formal role in the classroom. A teacher that plays a formal role tends to focus on content, is very teacher-centered, and many times the student is engaged in passive instead of active learning. This formal role does not allow for the building of relationships. The informal classroom is an environment where everybody learns together actively. The teacher might say, “Let us all go to the library and find out the answer to this question” or “What type of experiment shall we do together to prove our hypothesis.” In the formal role, discipline is very important, but the informal role relieves the teacher of the role of a disciplinarian. If a visitor comes into a classroom where
the teacher assumes an informal role, the visitor might think it is chaotic in
the classroom, but soon he will discover that the almost incessant chatter
is leading to a very purposeful activity and the most important result,
which is quality learning. I truly believe that an effective teacher must
behave a good mixture of both. The teacher must play a formal role in
establishing her authority but should establish an informal role in the
overall learning process.

After the first inquiry group discussion, Intern E began to clarify her definition of
the role of an effective teacher. She articulated the belief that there is a value to
maintaining a balance between a formal role and an informal role: “I still believe that in
order to be an effective teacher, you must have a good balance of both. It is crucial that
you establish rules and boundaries early so that your students respect and not walk all
over you.” This comment about the rules and boundaries was still general; however, her
focus on the students shifted the response to a deeper understanding about the complexity
of managing this balance. Although Intern E began to focus on the students, her
comments still did not contain any strategies or genuine critique of the pitfalls that could
occur. “I think I will apply this balance in my classroom by setting the boundaries and
rules during the first weeks of schools. I will start the children off by taking a more
formal role, and once the respect is established, I will fall into a more informal role.” The
written reflection was scored as a (1+) because the reflection was situated in the context
of teaching students.

*Second round: active learning.* In the second dialogue e-mail, Intern E began to
examine the internship classroom carefully. In her reflection, she framed her answer
within the context of teaching, and she gave specific strategies for meeting the needs of
the students. Intern E’s dialogue e-mail evidenced looking beyond the obvious when she
commented on the quality of learning. She also linked achievement to the learning
environment that the teacher provided. This reflection was scored as a level (2) due to the
increased specificity of her comments and the connections made between unseen results
and the practices adopted by a teacher:

What I observed by watching my class is that they were learning about
85% of the time. Each day they switch learning centers that range from
matching games at one center to writing stories at another center. The kids
love these centers and even though it may seem loud at times, my teacher
just kinda [sic] tunes it out because she knows that quality learning is
taking place. They write their own weekly words, and many times they
complete activities with very little teacher instruction at all. I believe that
active learning is the only way to go, especially with younger kids. They
need to feel like they are discovering new and exciting things on their
own. I intend on using this in my classroom because it is the best thing for
the kids. If more teachers fostered this type of learning environment, I
think the overall achievement of the students would go up tremendously.

After the second inquiry group discussion, Intern E began to critique the very
strategies she had proclaimed in the earlier dialogue to be important. In this way, she
began to look beyond the activity to the teacher’s role in structuring the activity. She
included specific strategies, but in her reflection she considered them carefully and added
the caveat that all of the strategies might not be appropriate for classroom lessons:
I believe that active learning is crucial in the classroom. Structure is a key element of active learning and must be maintained throughout the process. I think that learning centers are great examples of active learning only if they are teaching the students something. Matching games, coloring pictures, and playing dominoes are not examples of good learning centers. These should be things that the students play and do on fun Friday, not everyday. The written reflection after the inquiry group discussion was scored (2+) or deep. The second discussion appeared to have challenged her thinking about the amount of teacher talk, and the written reflection had the sound of someone continuing to make the point, only this time with her rationale:

I still do believe that some teacher talk is needed. This teacher talk can still be used actively if the teacher asks questions during the lecture. It is important for teachers to realize the benefits of active learning.... If they implement this, then maybe they would spend less time disciplining.

Third round: culture. The third dialogue e-mail was scored as a (2+) also. Intern E made specific references to her internship experience and related specific strategies to solve the problem she identified. However, in this reflection, she began to critique herself and think about the implications of culture on her instruction. In the dialogue e-mail, Intern E claimed that culture does not impact the instruction, but later contradicted her reflection by highlighting different strategies to combat her tendency to favor some students over others. She ended her dialogue with a statement that indicated the inquiry helped her examine herself at a new level.
Intern E stated,

My classroom is very culturally diverse, and many of them [students] come from very different backgrounds. Most of the students in our class live with only one parent, and many of them are living in very low socioeconomic conditions. After doing this chart, I realized that I do not necessarily have any set patterns except that I tend to call on the children that seem to know the most more often [sic]. I think I do this because they are often the ones with their hands waving in the air. After seeing this chart, I have tried to call on the other students more even if they do not have their hands in the air. I also realized that I tend to talk with and observe the students that act up the most more than I do the other students. (sic) I do not think that my expectations are connected to a child's culture because I believe that all children can learn. I did not notice any cultural trends in my behaviors with the students. I sometimes have to go over the directions with the ESOL students more than once, but I do not feel as if that is necessarily culturally based. Culture in our classroom does not seem to impact the students very much. I think that being 1st graders they notice the differences but they do not call each other on them as much as the older children do. If there is a child in the class that is from another country, then my teacher makes it a point to tell the class about the culture and let the child talk about it a little bit. The kids think that it is cool and many times the child with the different culture becomes the focus of the
day. I am glad that I got a chance to do the chart. It lets me know what I need to work on and what I seem to do well already.

After the third inquiry group discussion, Intern E was scored as a level (3), or intense. The written reflection documented that the opportunity to discuss culture with the group raised her level of introspection. She added to her original understandings of culture through an ongoing conversation with herself. The changes in her thinking included refining her initial notion of culture, and the resulting impact of this refinement was evidenced in her approach to her students:

After our discussion today, I feel like there is a lot more to culture than I originally looked at. Culture is more than just race. It is race, gender, hair color, etc., and these are the many things that often lead to stereotypes. I also now realize that there is also a classroom culture that each teacher sets up. It is made up of the rules and the guidelines that the students are told to follow. I do think that my use of alternating between girls and boys during questions is a good [way] to involve both genders equally. I now have to work on my first instinct to call on the students that I know will know the answer, the ones with [their] hands in the air. I think it would be a good idea for each prospective teacher and current teacher to do this type of chart often.

*Fourth round: assessment.* The last dialogue e-mails focused on assessment, and Intern E was scored as a level (3-). In the final dialogue e-mail, she examined the mentor teacher’s use of assessments, and this critique prompted reflection related to the effectiveness of the mentor’s methods. Intern E indicated that she was beginning to think
about her own practice, but she did not suggest any strategies that could be the solution to the problem she had identified.

My teacher does not really use a variety of assessments. Most of the time her assessments occur through the use of weekly math and spelling tests [sic]. I also find that she uses a lot of worksheets, and many times she moves onto something else before the students have even finished. Sometimes I wonder just exactly how she figures out what they will get on their report cards. I know that in first grade they are not really given letter grades, and so I think that is why her assessments are so informal. I myself have a hard time with assessments. I do not think that tests should be a teacher's only means of assessment, but finding good alternatives is difficult. I played a story element beach ball game for my lesson plan, and my assessment was simply if the students answered their question correctly.

Interns E’s written reflection after the inquiry group discussion was scored as a level (2). She identified specific strategies for future use in the classroom, but neglected to critique her developing ideas about assessment. Intern E’s concept of keeping a folder for each student did not include the possible challenges or pitfalls embedded in implementing this system. Her reflection focused on specific plans for future implementation of assessment while at the same time ignored her earlier reflections on the difficulty of assessing the internship classroom:

After our discussion today, I now feel a little bit better about assessment…. Observation alone can be a great tool to finding out what
your students know or don’t know. In my classroom, I will implement the binder that we talked about. Each child will have a section, and I will put their work into it, both good and bad, so that I have something to fall back on when I need it. I also like the idea of keeping a subject folder for each student that you can make notes in. These notes would be about confusions, places where they may need extra practice. Or even just notes for you to remember to go back and check for understanding. I think that assessment can occur in multiple ways.

*Summary of Reflective Levels and Focus Group Interviews*

The focus group interview data indicated that these preservice teachers found that the framework of inquiry into practice supported their development as reflective practitioners. They stated that the process of collecting data related to a focus area led to practical changes in their lessons. In addition, the framework of discussing and questioning a portion of their dialogue e-mail in the small group discussion increased their attention to the construction of their reflection. As they examined their writing carefully, this amplified awareness also improved their understandings.

In order to communicate clearly in the dialogue e-mails, they added specifics related to the lessons observed, the mentor teacher, and the students in the classroom. Specificity clarified their understanding related to each focus area, which resulted in refining their beliefs. Self-criticism and critique of teaching practices occurred more often as the preservice teachers began to look beneath the surface of lessons. The preservice teachers explained that the framework of inquiry into practice facilitated the development of a habit of research. The reflective level increases mirrored the preservice teachers’
developing understanding of reflective practice as they investigated the focus areas. The gradual increase in reflective levels measured between the dialogue e-mails and the written reflections indicated growth in the preservice teachers as reflective practitioners.

Chapter Summary

In this chapter, I have answered the two questions guiding the study as follows: first, I analyzed the Likert scale data on the survey, the explanatory data included on the two surveys and the dialogue e-mails and written reflections. Secondly, I analyzed the focus group interviews and the reflective level data collected from the e-mail dialogues and written reflections.

I found that these preservice teachers changed their beliefs related to the focus areas. While a substantial number of preservice teachers maintained the same level of belief as they considered the survey questions, an equal or greater number of preservice teachers indicated that they had changed either in a reversal change of their belief or in an incremental change. These changes were articulated in the explanatory data and through the e-mail dialogues and written reflections. For example, the preservice teachers accepted the role of their mentor teacher without question as a model at the beginning of the semester, but this changed as they investigated the focus areas. The preservice teachers grew more critical of their mentor teacher and teaching practices observed in the internship classroom, yet as the semester progressed, this critique shifted to a focus on their own practices.

The preservice teachers became more specific and student-focused in their understandings of the focus areas. They confirmed and strengthened beliefs with examples from their internship experience as they began to apply their understanding of
the focus area to their own teaching practices. Many of the preservice teachers became more tentative in their explanations as they recognized the complexity of implementation. Solutions to questions that they raised were perceived as possibilities to be tried rather than final conclusions. This, in turn, expanded and clarified their original definitions of the focus areas. These preservice teachers recognized that teaching is a complex profession, and as a result they articulated their beliefs within the context of teaching experiences.

The second set of data analyzed indicated that the preservice teachers grew in their reflective practice over the course of the semester. Their reflections changed from being limited in scope and restating the classroom activities to appraisals of the whole classroom situation. Their reflections became student focused and included specific teaching techniques to meet the needs of particular students. As the semester progressed, the preservice teachers’ reflections included critique of the teaching practices observed in their internship classroom and the mentor teacher. Their reflections also became increasingly self-critical and resembled a conversation with one’s self that questioned their own lessons.

Many of the preservice teachers’ reflections mirrored Dewey’s (1933) reflective steps. First, they noticed the focus area, and then they interpreted the experience. This was followed by naming the problem, and pursuing and challenging assumptions. Included in the last phase of challenging and pursuing assumptions, these preservice teachers discovered new questions and began a new inquiry. In the focus interview, these preservice teachers increasingly referred to themselves as reflective practitioners.
In the next chapter, I will discuss four implications that the results of this study have for teacher educators. First, the study results suggest that the framework of inquiry coupled with dialogue e-mails and small group discussion could be a methodological model for developing reflective practitioners. The results also suggest that the framework provides opportunities for preservice teachers to practice self-monitoring strategies and increase flexibility as they implement lessons which in turn may better prepare the teachers to make appropriate instructional decisions based on the needs of their students. The study results also suggest restructuring teacher education programs with an increased attention to reflection assignments and collaborative opportunities in which preservice teachers investigate specific focus areas connecting the course requirements to the internship experience.
CHAPTER V: DISCUSSION

In addition to responding to the needs of the students in their classrooms, reflective practitioners acknowledge how specific actions of their work influence student learning (Bray, 2002; Jackson & Wasson, 2003; Jones & Vesilind, 1996; Sleeter, 1992; Zeichner & Liston, 1996). This perspective is strengthened by a large body of recent research indicating that teaching is not standardized and cannot be scripted (Allington & Johnston, 2001; Ladson-Billings, 1994; Pressley, Allington, Wharton-McDonald, Collins-Block, & Morrow, 2001; Taylor, Pearson, Clark, & Walpole, 1999). Allington (2002) highlights a major shortcoming of scripted approaches when he observed, “When you are told what to teach, how to teach, and when to teach, it is unlikely that you will see bad results as anything other than the responsibility of the system that mandated the instructional plan.” This study contributes to the current body of knowledge by describing the development of reflective practice as preservice teachers use a framework of inquiry into practice. The study results also explain the potential impact of providing opportunities for preservice teachers to rehearse reflective practice on effective classroom instruction. Thus, the potential significance of this study in developing a framework to scaffold the development of reflective practice in preservice teachers is increasingly important.

This chapter discusses the implications of the findings and is composed of four sections. The first section reintroduces the reason for this study and the two guiding questions of the research. The two questions guiding the study were as follows: After the
implementation of a framework of inquiry based on reflective dialogue in a field experience seminar, do preservice teachers' core beliefs change? If so, how? and; How does the framework of inquiry into practice with preservice teachers effect growth in reflective behaviors?

The second section addresses four specific implications for teacher education. First, the framework provided a methodological model for developing reflective practitioners, which supported preservice teachers’ practice of self-monitoring behaviors as they reflect on lessons. Secondly, the framework increased self-monitoring strategies and flexibility in preservice teachers’ approach to instruction which supported the growth of professional teaching behaviors. And finally, the framework demonstrated in explicit terms the importance of professors responding to assigned reflections which may require restructuring teacher education programs at the university. The third section lists the major conclusions of the study, and the fourth section explains the limitations of the study and includes recommendations for future research.

Introduction

Researchers have confirmed that the beliefs held by teachers and preservice teachers determine their interpretation, understanding, and subsequent actions taken in teaching (Ballou & Podursky, 1999; Cazden & Mehan, 1989; Lortie, 1975; Kagan, 1992; Zeichner & Liston, 1996). Initially, this research suggested that these belief systems were unaffected by a preservice teacher education program (Kagan). Later research, however, indicated that these beliefs were more fluid than originally thought (Wideen, Mayer-Smith & Moon, 1998). In addition, for professional growth to occur, prior beliefs must be modified and reconstructed. These studies also found that beliefs are the best indicators
of the decisions made in practice (Kagan; Wideen, Mayer-Smith, & Moon). Despite this evidence of the importance of beliefs in shaping teaching behavior, Kagan’s review found no systematic effort to encourage novices to make “their personal beliefs and images explicit, to study pupils, to compare ongoing experiences and preexisting images, to construct standardized routines, or to reconstruct the image of self as teacher” (p. 150). Some awareness of the relationship between beliefs and teaching behavior was present as much as a decade ago, when Zeichner (1996) called for teacher educators to focus attention on “the kind of reflection teachers are engaged in, what teachers are reflecting about, and how they are going about it” (p. 207). As a result of these earlier calls, attention is now paid to the role of reflection.

The reflective process that modifies the teacher’s personal beliefs is systematic, social, and able to move the learner. Researchers agreed that the narrative version of knowledge construction is transactional. Authority is gained through experience and is integral as each person both shapes his or her own knowledge and as that new understanding is then shaped by the knowledge of others (Dewey, 1933; Schon, 1983; Cruikshank, 1985; Laboskey, 1994; Ziechner & Noffke, 2001). The teacher educator’s challenge in facilitating the reconstruction of preservice teachers’ beliefs prompted Cochran-Smith (1991, 2003) to call for linking field-based school experiences with university experiences. Through mutually constructed learning communities, Cochran-Smith acknowledged that neither the internship nor university experience alone are enough to prepare the preservice teacher.

Cochran-Smith (1999, 2003) challenged teacher educators by conceptualizing the “inquiry as stance” as an “intellectual perspective—a way of questioning, making sense
of, and connecting one’s day-to-day work to the work of others and to larger social, political, and cultural contexts” (p. 24). Similarly, Rogers (2002) proffered an explanation of Dewey’s (1933) discussion on reflection as the bridge of meaning that connects one experience to the next and gives the impetus for growth. Notably, researchers found that direct experience appeared to be crucial for preservice teachers’ growth in reflection. In this light, direct experience may require structures such as research assignments that allow novices to stand back temporarily from their personal beliefs (Bianchini & Colburn, 2000; Fecho et al., 2000; Kagan, 1992; Windschilt, 2002). “It is a novice’s growing knowledge of pupils that must be used to challenge, mitigate, and reconstruct prior beliefs and images” (Kagan, 1992, p.142).

Unfortunately, research that links opportunities for preservice teachers to engage in dialogue connected to their internship experiences is absent in the literature. Thus, while teacher educators acknowledge the importance of reflection and developing a reflective stance in preservice teachers, Risko, Osterman, and Schussler (2002) stated that the research is missing descriptions on exactly how to support the development of preservice teachers as reflective practitioners. This study addresses this missing gap and should be of importance to teacher educators interested in implementing a supportive framework for developing reflective practice.

This study’s framework was designed to investigate the development of reflective practice in preservice teachers during their early internship experience. The framework combined inquiry into specific areas of classroom practice (teacher’s role, active learning, culture, and assessment) followed by dialogue e-mails with peers and small group discussions. The process used to conduct this investigation began with a survey of
preservice teachers’ core beliefs related to each focus area. After a content analysis of the
survey answers, dialogue e-mails and written reflections were used to explain the
preservice teachers’ changes in beliefs (Q. #1). Focus group interviews and reflective
level data on the dialogue e-mails and written reflections were also analyzed to describe
any development of reflective practice in the preservice teachers (Q. #2).

Overall, the purpose of this study was to determine whether these preservice
teachers changed their core beliefs related to the focus areas through participation in the
framework of inquiry into practice, and then describe how these changes occurred (Q.#1).
In addition, this study examined whether an investigation of practice combined with e-
mail dialogue and small group discussion would support the development of a reflective
stance in preservice teachers (Q. #2). This purpose emerged from a theoretical assertion
about the role of inquiry into practice. For this reason, a framework of inquiry into
practice coupled with e-mail dialogues and small group discussion was conceptualized as
mediating the effects of developing a reflective stance.

Framework of Inquiry Overview

This study examined the beliefs of a single group of preservice teachers in order
to describe and explain their experience as they participated in a framework intended to
scaffold a reflective stance. The preservice teachers were enrolled in a Level II internship
that required two full days a week in a school for at least 12 consecutive weeks. The
internship also required their participation in seminar every other week for two hours
where they were introduced to the framework of the study.

First, I introduced the focus area to be investigated, then guided by a group of
questions (Appendix L), the preservice teachers researched the focus area in the
internship classroom. Following their investigations, they e-mailed a peer about their beliefs related to the focus area. I selected a statement from each dialogue e-mail and compiled these statements into a summary document, which the preservice teachers then used as a basis for seminar discussions. Following the small group discussion, the preservice teachers reflected in writing about their beliefs related to the focus area again. This process was repeated four times throughout the semester. The framework was built upon Vygotsky’s (1978) notion that learning is socially constructed and that there is a gradual progression from novice to expert in any learning.

Analysis of the preservice teachers’ beliefs related to each focus area was based on a pre and post survey, dialogue e-mails, written reflections, and two focus group interviews. Additionally, each dialogue e-mail and written reflection was reread to determine the reflective level as defined in a reflective level rubric (Appendix N). This qualitative analysis was conducted to describe and explain the preservice teachers’ belief changes over the semester.

Implications

The framework of this study engaged preservice teachers in the following tasks: investigating a focus area in their internship classroom, dialoguing with a peer about their findings via e-mail, participating in a small group discussion based on the dialogue e-mails, and writing a reflection after the discussion. The study’s purpose was to support and investigate the development of reflective practice in these preservice teachers according to the reflective steps articulated by Dewey (1933).

The first question guiding this study stated, “After the implementation of a framework of inquiry based on reflective dialogue in a field experience seminar, do
preservice teachers' core beliefs change? If so, how?” Embedded in the reflection process, some of the preservice teachers confirmed previously held beliefs, many refined their beliefs, and others situated their beliefs related to a focus within the context of teaching. In addition, a comparison of the August survey to the November survey indicated that while a sizeable number of these preservice teachers maintained their level of belief related to each focus area, there were still an equal or greater number of preservice teachers who changed their belief after the inquiry into practice. Notably, the one focus area that the preservice teachers did not investigate through the framework into practice (reflection) also documented the greatest number of preservice teachers who maintained the same level of belief. However, a sizeable number of preservice teachers documented either reversal changes or incremental changes for every question on the survey. Moreover, qualitative analysis of the preservice teachers’ work in this study suggests that they grew increasingly reflective as the semester progressed. This increase was described as they experienced the framework of inquiry into practice and had opportunities for the practice of reflective behaviors in the e-mail dialogues and small group discussions.

These results have implications for teacher education. First, the framework of the study could be considered an explicit methodological model for developing reflective practice. The model appeared to provide opportunities for preservice teachers to practice self-monitoring behaviors as they reflected on lessons. Further, the use of monitoring strategies may better prepare preservice teachers to address the needs of specific students. The process of inquiry into practice also appeared to increase the flexibility of the preservice teachers’ approach to lessons and individual students. Such flexibility may be a considerable aid in adapting to individual student needs as well as developing a
willingness to adjust lessons in light of classroom experiences. Lastly, the preservice
teachers articulated that the teacher educator’s response to reflection assignments can be
a positive or negative catalyst for the practice of reflection. This attention to the teacher
educator’s practice may indicate that increasing awareness of reflective teaching
principles with university supervisors could be a positive change to current teacher
education programs.

A Methodological Model for Developing Reflective Practice

Risko, Osterman, and Schussler (2002) stated that the research on reflection is
thick on describing researchers’ goals and intentions, yet thin on providing guidance for
students on how to reflect. The results from this study suggest that the framework of
inquiry into practice, coupled with e-mail dialogues and small group discussions,
appeared to support the cyclical process that researchers have identified as the steps
included in reflective practice. Researchers agree that reflective practice has specific
steps: a) noticing a method, behavior, or practice, b) interpreting the experience, c)
naming the problem, and d) pursuing and challenging assumptions (Cruickshank, 1985;
Dewey, 1933; Laboskey, 1994). The framework of investigating an area of focus, then e-
mailing a peer, followed by a small group discussion based on the e-mail comments,
mirrored the cyclical process of reflection. By linking the experiences in the internship
with a focus of inquiry, I provided the preservice teachers with an explicit instructional
structure to guide their development of reflective practice.

In practice, the development of reflective practice appears to be unique to each
person. This study confirms the overlapping nature of reflection indicated in a cyclical
model. Laboskey (1994) and Gore (1987) warned that a linear approach to the reflective
process, as proposed by Cruickshank (1985), would neglect the process and restrict the focus to technocratic rationality. In this situation, professional activity is seen to involve problem solving made rigorous by the application of scientific theory.

In the discussion that follows, I have delineated the steps to describe the preservice teachers’ development of reflective practice. These steps may appear to be linear because the generalizations are a composite of the whole group. In actual execution, however, these steps are applied individually, and the process allows for distinct pathways of reflective development. For each individual the process was unique, and the steps were not followed in a linear fashion in each written response. However, the amalgamated responses demonstrated a progression through the steps of reflective practice for each focus area. In the following explanation of the methodological model and the development of reflective practice, I have overlaid Dewey’s (1933) reflective steps (Noticing, Interpreting the experience, Naming the problem, and Pursuing questions) with the study results as documented in the surveys, dialogue e-mails, and written reflections.

Noticing

The preservice teachers first noticed the focus area and began their e-mail dialogues with definitions. As the themes indicated in both the teacher’s role and active learning in Chapter Four, a majority of preservice teachers began e-mail dialogue with a definition of the focus area after the first two investigations. For example, Intern M began her e-mail dialogue, “I think an informal teacher is one who is not very structured or organized …. Being informal means that the teacher can adjust … and, an informal teacher is flexible and adaptable to the surroundings.” Intern EE opined, “The main goal
of a formal teacher is to educate their students … they can be caring, but they are mostly seen as an educator not a confidant.” [sic]

In both the August survey and the initial e-mail dialogues, the preservice teachers’ tone was instructive as they noticed and described the role of the teacher. The theme that “The teacher must be in charge,” as summarized in Chapter Four from the August survey data, documented this instructive tone 20 times (see Table 15). Interestingly, and as indicated in Chapter Four, the preservice teachers focused on the teachers’ responsibilities without ever referring to themselves as the teacher. Intern HH stated, “The teacher must take on the formal role.” Intern E stated, “The teacher must play a formal role.… The teacher should establish….” Intern K stated, “The role of the teacher should be …” [emphasis added]. In other words, the preservice teachers’ beliefs about teaching were based on years of experience as students, and they confirmed their beliefs as they articulated their findings. The mentor teacher was acknowledged as the expert and few preservice teachers identified any flawed behaviors. For example, Intern G stated,

I believe a formal teacher is one who maintains a strict setting … and has a barrier between [herself/himself and] the students. I can think of the past when my teachers fulfilled a certain role. Teachers were not supposed to have a fun and happy life. They all acted the same way…. The classroom was filled with one voice, the teacher’s [voice]. The classroom that I am in, the teacher is very informal. She allows the students to teach each other. She makes the environment so relaxed that she teaches the students as if they were her friends and they are informing each other of new things. I really admire her teaching style.
Intern N connected her past as a student as the basis for her response: “I respected my teachers more if they were more formal. If they were too informal, [then] I had a hard time believing what they said … because they sounded more like my friends than teachers.” These references to the past changed after the preservice teachers discussed their findings in small group discussions.

For example, as indicated in the Chapter Four theme, “Formal role defined,” the first round of e-mail dialogues based on inquiry into the teacher’s role included many references to the management of the classroom (management, respect, rules, control, etc). (See Table 15.) The teacher’s role was explained in terms of the preservice teachers’ experiences as students, and they emphasized the influence of teachers from past experiences. However, after the discussion, the preservice teachers’ “noticing” began to qualify this emphasis on the classroom control of the teacher as documented in the Chapter Four written reflection theme, “Refining thoughts about the teacher’s role” (p. 174). Many preservice teachers emphasized that the formal role was limited to the beginning of the school year. Specific examples from the internship experience were cited, and the shifting nature of the role between the formal (authoritative) and the informal (relational) was highlighted. Intern W explained,

After the discussion, I think that I should have a balance being a formal teacher and an informal teacher. Informal does not mean your class is unorganized and has no structure. However, there is a time and place for everything. In the classroom, there will be times when being formal is needed to contain order. On the other hand, there will be times when informality is needed. Informal can also mean structured. I do agree that a
formal disposition is needed at the beginning of the school year. After they gain respect and realize that I am there to teach them something, I think the classroom can be more informal.

These preservice teachers began to apply their findings and conclusions from the small group discussion to their own practice, and in the process their beliefs about the focus area became specific. Early data from the Survey of Beliefs and the first round of dialogue e-mails gave the impression that the preservice teachers were going to instruct the experienced teacher, pointing out the things that all teachers should do to be effective. However, as they began to identify themselves as the teacher, the finger pointing tone changed to language rich with optimism about their own classroom. The refinement of their beliefs related to the focus area often included a new emphasis. For example, the emphasis that a teacher’s role shifts between formal and informal was captured in the written reflection theme, “Refining thoughts about the teacher’s role.”

Interpreting the Experience

The investigation began with noticing and was continued by gathering data related to the focus area. The preservice teachers’ noticing, however, quickly progressed to interpretation of their experiences in the dialogue e-mails as soon as they realized that their research was the foundation for the subsequent discussion. In the second round of investigation, the preservice teachers were prompted to focus on active learning. As indicated in the dialogue e-mails in the Chapter Four theme related to active learning, “Defining active learning,” the first step that these preservice teachers took in their responses was to observe the behaviors of students during instruction (see Table 16). Their definitions emerged from categories that included specific examples of student
participation in classroom lessons (participating, observed behaviors, student talk). The preservice teachers began to interpret the students’ behaviors to determine whether the students understood the lesson presented. Similarly, the process of interpreting the experience was again documented in the Chapter Four data from the written reflections. Active learning was interpreted as more than hands-on activities as indicated in the theme, “Clarifying active learning” (p. 183). Intern B began with a definition and then proceeded to explain,

I believe that active learning is an experience where the student is thinking and problem solving in an authentic and meaningful way. You can hear and feel a certain “buzz” of critical thinking, brainstorming, and problem solving among the classroom [students]. When I do see active learning in the classroom, students are taking the concepts that are being taught and relating them to the world around them or their personal experiences. The students ask questions—not because they are confused—because they want to see if a concept applies to something else or confirm their understanding. I found small doses of active learning and large periods of “teacher talk” with students falling victim to rote memorization and textbook work. However, I am doing my best to improve the statistics every time I get the chance to plan the instruction.

In this step, the preservice teachers voiced a new concern related to the students’ control of their own learning, and the teacher’s use of photocopied handouts as an instructional technique. As summarized in Chapter Four’s discussion of the theme “Impacts teaching,” some of the preservice teachers’ concern grew from noticing the missed opportunities for
active learning in their internship classroom. This discovery appeared to be linked to interpreting the behaviors of the students (see Table 16). This concern for the students’ understanding was revisited when the preservice teachers investigated assessment. In the theme, “Doesn’t inform the teacher,” there were twelve references to wrong conclusions as indicated by the category title “Wrong conclusions” (see Table 18). As indicated in the paragraph above, these references to specific students and specific lessons from their internship experience were examples of the preservice teachers’ situating their beliefs in the context of teaching.

In the third round of inquiry, the preservice teachers investigated culture’s impact in the classroom. Here, fewer preservice teachers began their investigation with a definition of culture and instead embedded the definition in the body of the e-mail dialogue (See Chapter Four discussion under theme “Culture Defined”). This predominant approach resulted in fewer categories with an emphasis in their definitions on equal treatment (see Table 17). Analysis of dialogue e-mails relating to culture revealed broad disparities in perspectives: First, the preservice teachers’ identified “sub-cultures” to include quiet students, gender, and socioeconomic status. Second, as preservice teachers began to examine the impact of culture on the students in the classroom, some of the preservice teachers changed previously held beliefs that culture was a negative factor for students to the belief that culture could have a positive influence. They appeared to refine their understanding of the meaning and potential value of culture in the educational setting. Their interpretation of the internship experience and the impact of culture on their students possibly influenced some of the preservice teachers’ beliefs related to culture’s impact on a student’s learning ability to change.
Naming the Problem

As indicated in the themes that emerged from the written reflections related to active learning, during the second round of inquiry, the preservice teachers’ interpretation of active learning refined their original understandings of the teachers’ role. The themes that emerged were as follows: clarifying active learning, clarifying the impact on learning, and clarifying the impact on teaching. Chapter Four indicated that the preservice teachers’ new understanding in this area also included the fact that active learning was not as simple as originally stated. Instead, the preservice teachers began to name specific problems and articulate the complexity of balancing curriculum demands with teaching practices they believed effective.

For example, Intern II stated,

I tried so hard to get the students to talk more. I found myself having to ask provoking questions and saying certain comments just to get the students to talk more and be more involved. Consequently, I was in fact talking even more than I normally would. Even though I believe this to be a challenge, I think that in order to get the students to be actively involved, a teacher has to ask questions throughout the lesson and say comments that will provoke certain comments.

When “Naming the problems,” the preservice teachers related their observations to active learning. For example, they identified the importance of structure in managing active learning lessons, time constraints on teachers, the demands of curriculum pressures, and the unique needs of the students. These points were documented in the written reflections under the theme “Clarifying active learning.”
Furthermore, in the third round of inquiry on culture, the preservice teachers identified the impact of culture on students. The preservice teachers named specific problems in various categories (see Chapter Four related to culture under the theme “How culture impacts”). Categories detailed problems such as, “the level of the student,” “favors gender,” “personal qualities,” “ESOL,” and “those student’s who did not raise their hands.” These categories were evidence that the preservice teachers had personalized the reflective process as they identified culture-related problems. The e-mail dialogues apparently provided a unique venue through which the preservice teachers explored new strategies for change regarding their observations of the students and themselves. (See Chapter 4 inquiry on culture.) At this point, the mere act of naming of the problems appeared to have prompted the preservice teachers to identify possible solutions. The inclusion of new strategies was linked to a critical examination of their own behaviors in the classroom. This inclusion of strategies foreshadowed the development of developing questions and challenging assumptions.

When the preservice teachers investigated the area of assessment during the fourth round of inquiry, they did not articulate a definition for assessment. As they had done in round three, they embedded definitions into their responses as they identified specific assessments and explored ideas for organizing assessments. As the preservice teachers entered the fourth round of inquiry, the earlier steps of noticing and interpreting the experience appeared to become automatic. The preservice teachers identified the problems of reporting to parents and administrators (see Chapter Four dialogue e-mails related to assessment under the theme, “Informs the teacher”). Here, they embedded definitions of the focus area in the categories of “Portfolios/Organization,”
“Observation,” and “Parent connection.” They voiced concerns regarding the range of assessments available to teachers and the need to choose an appropriate assessment for specific students. Their analysis recognized a need for flexibility in meeting the needs of specific students. (See Chapter Four discussion under the theme “A complex issue.”)

They also documented critiques of their mentor teachers’ instructional decisions and the apparent lack of connection between these decisions and assessments given in the internship classroom under the theme “Doesn’t inform the teacher” (see Table 18). These critiques foreshadowed the questions that would form the basis for new investigations situated in the context of the classroom.

**Questions Pursued and Assumptions Challenged**

In the second round of inquiry, some of the preservice teachers began to question the practice of active learning and critique the mentor teacher’s use of the technique. This critique explored positive and negative aspects of active learning which added depth to their understanding of active learning. One of the themes in Chapter Four that emerged from the analysis of the dialogue e-mails related to active learning indicated that “Impacts teaching” included questions associated with the mentor teacher’s teaching practices (see Table 16). The preservice teachers began to identify instructional techniques that they could attempt to execute. Intern O described her lesson adaptation that was prompted from her observations: “A lot of students were board [sic] with calendar, so I tried to think of ways to keep them on their toes. One example was when I had them close their eyes to help me spell September.”

The category, “But how?” evidenced the emergence of pursuing questions and challenging assumptions (see Table 16). In particular, many preservice teachers
developed increased levels of questions related to the practice of active learning after the small group discussions. Under the theme that emerged from the written reflections, “Clarifying the impact on teaching” the preservice teachers indicated they had developed new directions for research in the internship classroom related to active learning. The questions raised in the small group discussions under the theme “Clarifying the impact on teaching,” appeared to influence the refinement of beliefs related to the focus area. Specifically, written reflections included refining thoughts on assessments as well as situating these new understandings in the context of the internship classroom.

Likewise, in the e-mail dialogues related to culture, the preservice teachers raised questions, but their critiques turned inward. As indicated in Chapter Four, the theme “Noticing the realities,” included categories such as, “Now I realize,” “I have discovered,” “New strategies,” “I will try,” and “Teacher responsibility” (see Table 17). The preservice teachers had noticed culture as an issue, interpreted culture as experienced in the internship classroom, named the problems associated with culture, and finally, identified new questions to pursue. Some of the preservice teachers’ written reflections after the small group discussions became more conversational, often resembling a debate one would have with another, and focused on airing different perspectives. This approach appeared to be a starting point for challenging long held assumptions. The theme “Re-examining the realities” indicated that some preservice teachers identified personal biases as they questioned themselves, which was then followed by the articulation of possible solutions. Intern HH explained,

I found that I have made prejudicial assumptions regarding students who have recently entered my classroom. … Luckily, I realized what I was
doing. The problem is that many teachers do not. In fact many are in denial that these prejudices and biases even exist. We would all like to think that we live in a perfect world, but the reality is, we don’t. It is far from perfect, but if we take personal responsibility and make an effort to change our thought process and our actions, then we could be much more effective teachers and members of society. [Intern’s emphasis]

Unique to the focus on culture, the preservice teachers’ solutions were articulated as possible directions for inquiry. Intern HH implied that the solution to teacher biases required that teachers change their thought processes with the accompanied actions. The “solution” of teachers’ changing biases was viewed as process rather than a destination.

In the final round of inquiry, the preservice teachers’ self-critique related to assessment-raised questions about their own use of assessment in the classroom. The preservice teachers articulated (18 times) the need to “Take a closer look” at assessment (See Chapter Four dialogue e-mails related to assessment under the theme, “A complex issue”). Their dialogue e-mails indicated that these preservice teachers had arrived at new conclusions about assessment. These preservice teachers set new goals of how to incorporate assessments into their lessons, and, moreover, how to use assessments in order to make sound instructional decisions. Their e-mail dialogues appeared to serve as a starting point for another inquiry.

Summary of Reflective Steps

In light of the reflective level increases (see Figure 6) in Chapter Four, I believe that these preservice teachers experienced a structure that supported their development of reflective practice. For the first three focus areas, this increase occurred between the e-
mail dialogues and the written reflections; and even after the reflective level decreased minutely between the e-mail dialogue and written reflections in the fourth focus area, the reflective level mean still remained high (2+). The data suggest that some of the preservice teachers practiced the steps of reflection as identified by Dewey (1933). (See Chapter Four summary of reflective level changes.) In addition, the comparison of the survey data from August to November documented that as many or more preservice teachers that maintained their belief level changed their beliefs either as a reversal change or an incremental change in the final survey.

The first question guiding the study asked if the preservice teachers’ core beliefs related to the focus areas changed after experiencing the framework of inquiry into practice. As the preservice teachers experienced and voiced their reflective process, they referenced their core beliefs related to the four focus areas. The preservice teachers’ beliefs were reversed, confirmed and strengthened, refined, and put in the context of real teaching experiences as they practiced the process of reflection. The preservice teachers confirmed and strengthened their core beliefs related to the focus areas with specific student examples from their internship experience. The combination of the focus area investigation and the internship experience provided opportunities for these preservice teachers to become more student focused. As the preservice teachers became more student-focused, they grew increasingly critical of the mentor teachers’ teaching practices. However, in their written reflections after the small group discussions, their critiques turned inward and they refined and sometimes reversed their core beliefs as they articulated the complexity of teaching related to the focus area. In addition, the connection between investigating a focus area and the internship experience provided
opportunities for these preservice teachers to situate their beliefs in the context of teaching.

The framework appeared to influence and support the development of reflective practice as the preservice teachers progressed through the semester. As such, this framework could be viewed as a methodological model for developing reflective practitioners. The explicit, sequential process could have the potential to guide preservice teachers in their understanding and practical knowledge of reflection. This framework begins to answer the call for a description of supporting reflective practice in preservice teachers. Teacher educators may find that this framework provides them with a process and structure that supports the gradual process of learning to reflect in preservice teachers.

*A Self-Extending System of Monitoring is Influenced by Reflective Practice*

*A Self-Extending System*

Clay (1991) describes a self-extending system that creates a “forward thrust” (p. 4), enabling young readers to learn to read better by reading. In this system, beginning readers notice a discrepancy between their articulation of the text and the actual text, and strategic questions are options that the readers use to problem solve unknown words. The student learns to monitor their reading by depending upon strategic questions, such as “Did that make sense?” or “Did that sound right?” or “Did that look right?” As the beginning reader uses one of the strategic questions, the reader confirms in his/her mind that the problem word has been solved. If the text still doesn’t make sense, the beginning reader tries another strategic question. Execution becomes increasingly fast as the
beginning reader’s strategic behaviors become automatic and flexible as the reader becomes more proficient (Clay, 1991).

The self-extending system is not the same as the developmental stages of reader; rather, the self-extending system refers to the actual process of solving text in reading. Clay (1993) explained that the self-extending system of the beginning reader included behaviors such as, monitoring the reading, searching for cues in words (word sequences, meaning, and letter sequences), discovering new things for themselves, crosschecking one source of cues with another, repeating or confirming reading, self-correcting to make sure the text makes sense and finally, solving new words (p. 45) [emphasis added]. Clay (1993) stated that strategic control enables a child to “monitor his own reading” (p. 317) and is a concept that is central to the self-extending system. Young readers must learn to notice disparities between what they read and what the text actually says. Clay characterized reading as a problem-solving process “to extend the potential of the reader to engage in more difficult activities” (p. 319).

Similarly, Chandler-Olcott (2002) applied the self-extending system as a metaphor for classroom-based researchers searching for ways to improve teaching. Chandler-Olcott proposed that “teachers must learn to monitor their practice” (p. 29), and use comparable strategies “to solve the problems they identify in the classroom” (p. 31). Thus, as the beginning teacher teaches a lesson, she must learn to monitor her students and assess whether her instruction is meaningful. The process of monitoring a lesson’s progress entails noticing when meaning breaks down for students, searching for different approaches to make the lesson meaningful, discovering student confusions and strengths,
repeating or confirming that the students have actually understood the concept, and self-correcting to ensure each student’s needs have been met [emphasis added].

Several longitudinal studies (Chandler-Olcott; Ellsworth, 2002; Sanchez & Nichols, 2003) found that learning inquiry required “noticing a bump in the road of a lesson” (Chandler-Olcott, p. 30) and discussed the need for self-designed research questions and the guided practice of inquiry within a community of learners. In the present case of developing reflective abilities in preservice teachers, a stand-out difference from a self-extending system is that the research questions were not self-designed. Nonetheless, the preservice teachers did practice the process of noticing, interpreting the experience, naming the problem, and pursuing questions and challenging assumptions as indicated in the previous section of Chapter Five. These strategic steps of reflection supported the preservice teachers’ practice of monitoring their students.

The preservice teachers also began to monitor their own teaching practices (see documentation in Chapter Four e-mail dialogues related to culture under the theme “Noticing the realities”). The categories “Now I realize,” “New strategies,” and “I will try” included specific strategies that the preservice teachers stated they would change in future lessons after monitoring the effect of their instruction on the students in their internship classroom during a lesson (see Table 17). Some preservice teachers monitored their own behaviors related to culture’s impact on students, as documented in the written reflections theme “New definitions of culture.” When they monitored their reactions, their written reflections proposed new approaches and their determination of appropriate behaviors for future interactions with students.
Moreover, the preservice teachers’ focus grew increasingly more specific and connected to the students in their internship classrooms as the semester progressed. As indicated in Chapter Four dialogue e-mails related to assessments under the theme “Informs the teacher,” the preservice teachers expressed and wrestled with the complexity of choosing the correct assessment for specific students. Forty-six references to monitoring students in the category “Who is understanding the lesson” documented the preservice teachers’ noticing students who understood the lesson and those students who evidenced confusion. The emphasis on the focus area of assessment appeared to provide opportunities for these preservice teachers to practice strategic behaviors, such as noticing a discrepancy, monitoring their teaching practices, and adjusting to meet the needs of students. As Intern DD explained,

I question the children throughout the lesson to ensure understanding.

When I come to a student who does not understand, I will give a quick mini-lesson to the child if time [is] available; or I go back and help them when the other students get started on their class work.

Summary of a self-extending system. The results from the study suggest that the framework provided opportunities for these preservice teachers to practice self-monitoring behaviors. The process of noticing a discrepancy between the actual lessons presented to students and their understanding of the lesson seemed to be understood as a “bump in the road of a lesson” for the preservice teachers (Chandler-Olcott, 2002). The preservice teachers indicated that once they realized the discrepancy they were able to see that another approach was necessary (see Chapter Four e-mail dialogues related to
assessment). In this way, the preservice teachers practiced self-monitoring: a concept central to a self-extending system.

The framework of inquiry into practice may also provide opportunities to further develop these behaviors. Teacher educators interested in supporting preservice teachers who examine their own teaching practices and then adjust these practices to meet the needs of students might consider implementing a framework of guided inquiry similar to this study. Teacher educators may find the framework a viable option as they encourage preservice teachers to begin the process of monitoring their teaching practices.

_Flexibility is Influenced by Reflective Practice_

Closely related to developing a self-extending system of monitoring one’s own teaching practice is learning to place student needs at the forefront when developing lessons. The importance of implementing instruction to specifically meet the needs of individual students requires flexibility in the teacher’s plans. Unfortunately, Lortie (1975) explained that teachers sometimes welcome the draw to technical action because freedom carries a burden. The “opportunity to assess one’s own teaching is also the obligation to do so …” (p.142), and when classroom teachers self-assess their practice, the experience magnifies recurrent doubts held by most teachers about the value of their work. Teachers who doubt their own effectiveness or who rely exclusively on their past experiences as students often resort to the programmatic approach (Gitlin et al., 1999). An unfortunate outcome of a programmatic approach is that responsibility for implementing appropriate teaching strategies is removed from teacher expertise and replaced with robotic implementation of a lesson or curriculum.
Flexibility and the Framework

The framework for the study invited these preservice teachers into what Bisplinghoff (1998) called an “organic” approach to inquiry. This type of an approach attempts to integrate inquiry seamlessly into the teaching learning cycle. This study attempts to incorporate the teaching learning cycle approach by using an “inquiry into practice” methodology that required the preservice teachers to investigate the focus areas and then report back in the form of the dialogue e-mails. This was then followed by subsequent discussions which served as a structure for the teaching learning cycle. As indicated in the written reflections related to the “Teacher’s role,” under the theme “Refining thoughts about the teacher’s role,” Intern O described this teaching learning cycle as she explained how her initial concept of the teacher’s role changed after her actual experience in the classroom:

After trying to be informal I realized two things. The classroom lit up, brains were working, smiles were apparent. But then, five minutes later, I noticed that chaos was happening. Children were talking too much and the lesson got to be ineffective…. I used to think that kids would respect the teacher…. But [after the discussion] the important thing to remember is the more informal the lesson [plan] is, the more formal the structure needs to be.

The preservice teachers demonstrated flexibility in their approaches to lessons more often in the written reflections. For example, in the written reflections related to active learning in Chapter Four under the theme “Clarifying the impact on active learning,” some of the preservice teachers asked questions related to active learning
methods that they had earlier deemed to be an effective method. In the written reflection related to active learning, Intern Y asked, “I still wonder how you can be sure that students are actively learning…. I guess you can ask them questions … or [by] doing an activity.”

This process of spotlighting a particular focus area appeared to prompt questions related to the focus area. The preservice teachers often proposed in the written reflections several alternatives for a particular problem with specific students in mind. For example, Intern I stated in her written reflection related to active learning, “We read together and I asked all the questions, but next time I think they could read it independently and talk about it in groups…. The problem is [that] not all of them will read. What then? … Paired reading?”

As the semester progressed, the preservice teachers recognized the uniqueness of each internship experience. As researchers, the preservice teachers explained to one another the reasons for their conclusions related to the focus area in their small group discussions. Cochran-Smith (1991) stated that “collaborative resonance” is essentially transformative, helping participants develop new understandings of their work in the educational system as less restricted by conventional structures and assumptions. Essential to the classroom culture of collaboration is the construction of knowledge about teaching.

The preservice teachers’ expectation that effective teaching includes an attitude of self-assessment and questioning appeared to increase as the semester progressed. As indicated in Chapter Four “Summary of e-mail dialogues and written reflections,” many preservice teachers’ questioning focused first on the mentor teacher and her practices; but
then the questioning turned inward which refined and redirected their questions toward themselves. In the dialogue e-mails related to assessment in Chapter Four under the theme “A complex issue,” the category “Need for flexibility” was mentioned 18 times. The preservice teachers indicated that flexibility was crucial for teachers as they recognized the complexities of planning and implementing a lesson.

*Summary of flexibility.* It is critical that teacher educators support novice teachers in the understanding that to reach high standards with students, teachers must be responsive to their students. Preservice teachers’ dispositions may not necessarily translate directly into successful teaching, but guiding inquiry as a conduit for understanding students can be a powerful way to steer preservice teacher toward considering a flexible approach to lessons. This flexibility could be the disposition that many teachers appear to lack when they fall into the practice of doing what has always been done (Gitlin et al., 1999; Lortie, 1975). Linking the unique needs of students to flexible lesson planning might be the connection that preservice teachers need to make appropriate instructional decisions as professionals.

The results from this study suggest that the teacher educator interested in providing opportunities to develop professional teachers who respond to the specific needs of students with flexibility could consider this framework as an instructional model toward that end. In addition, the evidence of increased flexibility in these preservice teachers’ view of lessons may indicate that the practice of reflection over a semester has the potential to influence the development of flexibility in teaching. Specifically, the framework of inquiry into practice appeared to support the notion that an instructional plan may require an alternative approach to meet the needs of students. In this way,
preservice teachers who have experienced the framework of inquiry into practice may be better prepared to make appropriate choices when confronted with the multitude of instructional decisions generated in a typical school day.

*Teacher Education Restructured*

Direct experience appears to be crucial for preservice teachers’ growth in reflection. In fact, direct experience may require structures such as “research” assignments that allow novices to stand back temporarily from their personal beliefs (Bianchini & Colburn, 2000; Fecho et al., 2000; Kagan, 1992; Windschilt, 2002). The framework of inquiry into practice coupled with dialogue e-mails and small group discussions provided the social context for learning that Vygotsky (1978) referred to as a “higher psychological function” in which the meaning of teaching was constantly negotiated and renegotiated within the context of the group. However, it is not enough to simply have preservice teachers reflecting in a haphazard way. Schon (1987) called for preservice teacher education programs to “include field experiences that present uncertain, unique, and conflicting situations where prospective teachers can think and act like teachers” (p. 27). Key aspects of a preservice teacher’s experience require that teacher educators move beyond the uncritical celebration of teacher reflection and empowerment and examine exactly what kind of reflection facilitates growth in reflective professionals (Zeichner, 1996).

*Experience and Accountability*

Data reported in Chapter Four in the first focus group interview provided insight into development of reflection through processes involving the investigation of a focus area, e-mailing a peer about the results, and having small group discussions. Central to
the small group discussions were the hand-outs created from each of the dialogue e-mails. As documented in Chapter Four in the first focus group interview, two of the preservice teachers emphasized the impact of knowing that these dialogue e-mails were going to be used for the discussion. Intern E explained, “I had to do this in another class … and it was busy work, the teacher [professor] never read it…. People could write things in there [their reflection journal] that would be completely off topic and he would just check it off.” Intern B agreed, “It makes it more meaningful, by actually using it … that we come back and really learn from it.”

The preservice teachers also pointed out how they changed their approach to the e-mail dialogues once they realized they would be used as a springboard for discussion. Part of the study included two focus group interviews midway through the semester and at the end of the semester. These data from the first focus group interview shed an interesting perspective to the framework of inquiry into practice. As indicated in Chapter Four under the first focus group interview, the focus group agreed that they thought more carefully about the dialogue with their partner. The preservice teachers indicated that they reread the e-mail dialogue and asked, “Wait, did I really mean that?” (Intern E); “You think about what you are saying so that people can understand what they are reading” (Intern U); and “You have to really pay attention to what you write now. It gives you that accountability” (Intern B). The presence of an interactive audience demanded that they communicate clearly. Establishing a community that negotiated and renegotiated findings was an essential component to the framework of inquiry into practice.

The results from these exchanges indicate that for these preservice teachers, the act of being told to reflect after an experience was not enough for them to truly engage in
the process of negotiating the meaning of their reflection. This exchange suggests a need for teacher educators to reexamine the present practice of assigning reflections. The university practice of requiring reflection assignments is commendable, and research supports the value of developing reflective practice in teachers (Schon, 1987); but in the interest of accepting reflections as neither right or wrong, the possibility exists that professors have neglected to provide meaningful commentary to the reflective responses of their students. Without accountability built into the reflections assignment beyond a completion check, the preservice teacher’s careful negotiation of meaning could be absent. Restructuring reflective assignments in such a way that preservice teachers receive genuine feedback and is accountable for the meaning of their reflection could be key to providing a place where preservice teachers can negotiate and renegotiate their teaching practices.

Another implication for teacher education is the demonstrated value of an explicit framework to provide opportunities for reflective practice. As indicated in the changes in reflective level mean scores for each focus area investigation reported in Figure 12, the preservice teachers’ mean score continued to rise as the semester progressed. The implication for teacher educators is to consider restructuring the internship experience in such a way that preservice teachers are provided opportunities to pursue questions and challenge assumptions as indicated in the Chapter Four section, describing the reflective progress of Intern E in “Changes in reflective levels for each focus area.” Providing such opportunities means making time available within the experience for preservice teachers to engage in the study of teaching with a specific focus and an approach that meets the needs of particular students. Universities may consider shifting to a collaborative model
in which meaning is derived from inquiry into practice. In order to develop the focus areas for investigation, coordination between departments in the college of education must be in place. This would mean that teacher education be restructured to emphasize reflection. Preservice teachers who enter a program investigating certain focus areas through inquiry into practice that related to key pillars of the required coursework could possibly exit the program better prepared to apply their university knowledge to the realities of the school experience.

**Summary of teacher education restructured.** The results from this study indicate that teacher educators interested in developing reflective practitioners might consider restructuring teacher education at the university. First, teacher educators may want to consider restructuring reflective assignments in such a way that preservice teachers receive genuine feedback and is accountable for the meaning of their reflection. The importance of building in accountability for the meaningfulness of assigned reflections has implications for the professors who use a reflection assignment. These assignments may be more beneficially restructured so that specific feedback to the preservice teachers would be included. This could be key to providing a place where preservice teachers can negotiate and renegotiate their teaching practices.

Teacher educators interested in an “organic” approach to inquiry, an approach that is integrated seamlessly into the teaching learning cycle, may want to consider restructuring teacher education to provide opportunities for preservice teachers to engage in the study of teaching with a specific focus. Along this vein, the university may need to consider restructuring teacher education coursework to include more collaborative research projects. This development of focus areas would also require coordination
between departments at the university. The emphasis on linking an inquiry and key focus areas from each of the required courses would restructure the teacher education curriculum to emphasize reflection.

Implications Summary

This study has several implications for teacher education. The first question guiding this study stated, “After the implementation of a framework of inquiry based on reflective dialogue in a field experience seminar, do preservice teachers' core beliefs change? If so, how?” Embedded in the reflection process, the preservice teachers confirmed previously held beliefs, many refined their beliefs, and they also tailored expression of their beliefs as they related to a focus within the context of teaching. The study results indicate that there were shifts in the core beliefs for some of the preservice teachers and that the process was more of a refining of beliefs rather than dramatic changes. The majority of refinements occurred in the written reflection data which could imply that the preservice teachers’ beliefs were affected by the entire process rather than just one component. In addition, the preservice teachers grew increasingly more reflective as the semester progressed, and the framework of inquiry into practice might prove to be a methodological model for developing reflective practice in preservice teachers.

The second question guiding the study stated, “How does the framework of inquiry into practice with preservice teachers effect growth in reflective behaviors?” The framework of inquiry into practice supported the preservice teachers’ growth in self-monitoring strategies for teaching. Moreover, the preservice teachers articulated flexibility in reference to lessons and individual students. It appears that they are thereby
better prepared to adjust instruction as necessary to meet changing circumstances or student needs. Finally, the preservice teachers highlighted the impact of the professor’s response and use of the dialogue e-mail assignment which may indicate a need to restructure teacher education at the university.

The increased reflective practice in these preservice teachers after a semester-long experience within the framework of inquiry into practice combined with e-mail dialogue and small group discussions suggests that this framework supported the development of reflection. These preservice teachers moved from a surface level reflection that focused primarily on classroom activities in their first e-mail dialogues to a practical deliberation of their internship experience. They identified specific strategies and teaching techniques with an increased focus on their students. Many of the preservice teachers critiqued their own practice, and by the end of the semester they recognized, to a greater extent, the complexity of issues related to teaching. The solutions suggested in their writings were tentative and indicate that they intended to investigate their practice further in order to become effective in meeting the needs of their students.

The process of developing new approaches to meet the needs of their students suggests that these preservice teachers had developed a self-extending system of teaching strategies that included the ability to monitor their practice. The practice of reflection guided the preservice teachers as they developed questions for further research. The steps of reflection appeared to become automatic as the preservice teachers expanded on their conclusions and included the needs of specific students in the classroom. The process of communicating observations in the e-mail dialogues and then explaining themselves to the small group served as a prompt for learning to monitor themselves rather than relying
on external authorities, such as textbook publishers or curriculum developers, to direct their work.

In addition to monitoring their own teaching behaviors, the preservice teachers increasingly critiqued practices used by the mentor teacher. There is no evidence that the framework accelerated this common practice of critiquing the mentor teacher as the study progressed; however, this critique was tempered with the small group discussion, and the preservice teachers indicated in their written reflections that the small group discussion influenced and turned the critique to themselves. Many of the themes in the written reflections show a refining of their ideas and increased application to their own lessons. In the larger group discussion, the preservice teachers listed multiple ideas to solve teaching challenges that had been identified in the small group discussion. This development of collaborative problem solving suggests that this framework fostered an understanding that effective teaching practices include self-monitoring and flexibility.

The participation in a collaborative learning community encouraged these preservice teachers to examine the focus areas in light of the individual students in their internship classroom. Shifting the focus from procedural lesson execution to the students and their needs highlighted the complexity of meeting the wide range of student needs. This understanding of students became the grounds for the preservice teachers to question one approach for all students. The change in focus suggests that the framework may better prepare preservice teachers to appropriately adjust their lessons with a focus on helping students.

Finally, these preservice teachers demonstrated that the development of reflective practice was supported by the framework of inquiry into practice. Implementing this
methodological model for developing reflective practice may mean that teacher educators need to restructure reflective assignments in such a way that the preservice teacher receives genuine feedback and is accountable for the meaning of their reflections. The framework for inquiry into practice may require restructuring teacher education to provide opportunities for preservice teachers to engage in the study of teaching with a specific focus. This may require university review of existing inter-departmental coordination in order to discover new mechanisms for restructuring teacher education coursework to include more collaborative research projects. Shifting to a collaborative model in which meaning is derived from inquiry into practice may be the best way to bridge the gap that both preservice teachers and experienced teachers believe exists between the university and school realities.

Conclusions

• After experiencing the framework of inquiry into practice of this study, these preservice teachers evidenced growth in their reflective practices according to mean reflective level scores.

• These preservice teachers became more student-focused after experiencing the framework of inquiry into practice.

• These preservice teachers recognized the complexity of the four focus areas (The teacher’s role, Active learning, Culture’s impact, and Assessment).

• These preservice teachers grew in their ability to question practices in the classroom and propose new techniques to meet the needs of students.

• The framework of inquiry into practice supported preservice teachers’ negotiation of their core beliefs related to the focus areas.
Limitations

Five features of this study limit these findings. The first four are characteristics of the design and were forecasted at the study’s commencement. First, the findings of this study were limited to only one section of elementary education preservice teachers. Secondly, the study was limited to one semester. Thirdly, the section of thirty-six preservice teachers contained only two male participants, thereby limiting the diversity of perspectives and the opportunity to generalize the results across genders.

A fourth limitation identified at the outset of the study was the role of the researcher as a participant observer. Since I was the researcher and the supervisor of these preservice teachers, my beliefs related to reflection could have influenced the preservice teachers instead of the framework of inquiry into practice. However, the large number of preservice teachers enrolled in the section restricted my interaction and involvement with them. In order to schedule the preservice teachers for two observations and post conferences, I scheduled back to back observations beginning on week four until the end of the semester. In addition, during the seminar discussions there were nine groups engaged in conversation simultaneously. The number of small groups restricted my interaction with the groups and I assumed a listening posture which also limited any opportunity to share my expertise. Thus, instead of the researcher emphasizing specific topics and thereby limiting the objectivity of the discussion during seminar, the seminar discussion was driven by the e-mail dialogues and the participants themselves.

Moreover, the experience of the researcher is limited to the supervision of preservice teachers at only one institution and for only three semesters. Thus, the implications related to teacher education programs may be limited. In other words, the
suggestions for restructuring teacher education may be limited to the experiential level of the researcher.

A fifth, unintended limitation of the study relates to the possibility of “miseducative experiences” (Dewey, 1933, p. 25). Dewey stated that educative experiences broaden the field of experience and knowledge, but educative experiences are not enough. What is critical is the ability to perceive and then weave meaning among the threads of experience. Reflection is the process of reconstruction and reorganization of experience that weaves meaning into the experience (Dewey, 1933; Kagan, 1992; Loughran, 2002; Schon, 1983), and the framework of inquiry into practice invited the preservice teachers in this study to practice reflection. However, the idea of reflective practice must be tempered with Dewey’s (1933) reminder,

All genuine education comes about through experience does not mean that all experiences are genuinely or equally educative. Experience and education cannot be directly equated to each other. For some experiences are miseducative. Any experience is miseducative that has the effect of arresting or distorting the growth of further experience. (p.25)

Miseducative experiences arrest or distort growth. For example, in my role as participant observer, I noticed some dialogue e-mails that included statements about the focus area that I felt need further exploration. Specifically, in the Chapter Four section that focused on culture’s impact on students under the theme “Culture defined,” Intern Y defined culture as a child’s “socioeconomic status.” This definition among others indicated that some of the preservice teachers had a misunderstanding or miseducative experience as they investigated the focus area. The small group discussion that followed
these dialogue e-mails built on their previous understandings, and the more verbose participants could have dominated the conversation. There were nine small group discussions held during seminar simultaneously; thus the sheer numbers restricted my opportunities to monitor the interactions in the small groups and to encourage the less assertive preservice teachers to voice their thoughts. In this way, the miseducative experiences could have been the actual information shared in a discussion or the group dynamics affecting the small group discussion process. Miseducative experiences that could have arrested or distorted the preservice teachers’ growth as reflective practitioners were not measured or considered as the study progressed.

Recommendations for Future Study

Recommendations for future research fall into two major areas: improvement of the current design and new research designs. This researcher recommends the continued pursuit of qualitative designs in this research area. Although labor intensive, qualitative studies have the most potential in explaining the essence of an experience in the participants’ own words. The present study’s limitation of one section of preservice teachers over a single semester suggests a direction of future research in size of the group and length of the study. As the body of qualitative studies increases, this study may be foundational for future researchers to determine how reflective practice can be rehearsed in the lives of preservice teachers. In addition, teacher educators may be able to better prepare preservice teachers in facing the challenges of an increasingly diverse student population and in developing self-monitoring skills necessary to master the multitude of instructional decisions.
The results of the study indicate that reflective level changes increased for each of
the first three focus areas between the dialogue e-mail responses and the written
reflections after discussion. The reflective levels also increased for each of the focus
areas except the last investigation based on assessment. At the same time, the reflective
level between the dialogue e-mails and written reflections for the last investigation
remained at a high level. Whether these levels of reflection are stable in the practices of
these preservice teachers remains in question. Questions remain about the lasting effects
of participation in this study, and future researchers may improve the current design of
the study by lengthening the study period. A study that follows the preservice teachers
into the first few years of teaching might supply more information about whether the
reflective practices continue at the same level or if there is a point of diminishing returns
related to reflective practice. Similarly, future researchers may want to consider
replicating the study, to confirm the conclusions with another group of preservice
teachers.

The framework for this study included a number of different variables, such as the
length of the semester, the relationship built between the preservice teachers and their
mentor teacher, and a variety of focus areas. Since these variables have the potential to
confound the results, future researchers may want to consider replicating the study using
a case study design. By studying the reactions of specific individuals in depth,
researchers may be able to describe more fully the impact of the framework components
on preservice teachers as developing reflective practitioners.

Other designs and lines of inquiry are also recommended for future study in this
fruitful research area. The ultimate goal of teacher education is to prepare preservice
teachers who have the skills and knowledge to meet the needs of increasingly diverse populations. Reflective practice could be key to the self-monitoring behaviors and flexibility that teachers need in order to make appropriate instructional decisions. Continued research in avenues to support the development of reflective practice must be at the top of the teacher educator’s agenda.
References


*Curriculum Inquiry, 6*, 205-228.


APPENDICES
Overview – This course is the second in a sequence of field experiences that is designed to allow you, the student, to apply the information about teaching that you have learned in your classes at USF. You now have some notion of “what” ought to occur, and you also have some notions of “how” these occurrences should happen. Now you have the opportunity to do the following:

a. Practice teaching techniques and strategies based on a solid research and pedagogical base.

b. Continue to refine your management techniques in the following areas:
1. Discipline
2. Verbal and Non-verbal Behaviors
3. Time Management
4. Overall Classroom Management

c. Begin to diagnose your own problem areas and, with your supervising professor’s assistance, actually seek solutions to the identified problems.

d. Refine your personal philosophy of instruction. A defensible and well-thought-out statement, which is reflected in your behavior and practices as a teacher, is important if you are to become a true professional.

1. Participate in two peer observations using a prepared observation instrument. Provide a one-page lesson plan for the observer using the attached template.

Requirements – The following statements reflect both the written and performance behaviors that are to be the basis for evaluation and the assigning of a grade for Level II. These statements are organized into four (4) non-exclusive classifications and, for the most part, are stated in broad general terms.
Professional Behavior:

This classification includes, but is not limited to, the following:

- **Attendance** – You must inform both your supervising teacher and supervisor **ahead** of time if you are going to be absent.
- **Punctuality** – Please be prompt @ 7:30 a.m.
- **Does more than the minimum**, i.e., attend PTA meetings, in-service, extra time spent with students.
- **Participate in teacher work days**
- **Demonstrate enthusiasm and a positive attitude toward teaching as a profession**
- **React favorably to supervision**

This has a number of behaviors that are value statements. We, as faculty, recognize this, just as you, as students, have come to the realization that the teaching act is not always an exact science and can be open to interpretation.

You will be required to participate in a dialogue journal activity with a partner throughout the semester. Bi-weekly you will write an e-mail to your partner reflecting on your observations based on a guiding question provided by the supervisor. The reflection is **NOT** to be a record of observations (i.e., at 8:20 we waited outside the classroom, we had music and a fire drill) It is essential for each partner to complete the reflection no later than the dates listed. You may reflect earlier, but any e-mail entries dated later than the dates below will result in consideration for dismissal from the internship. **The e-mail must include thoughtful reflection based on classroom observations and must be at least 15 lines in length, and all e-mails must be copied to:**

Schedule for the dialog journal:

Person “A” writes a reflection via e-mail 9/15/04.
Person “B” responds to the reflection via e-mail by 9/16/04.
Bring a hard copy of the e-mail to seminar on 9/20/04.

Person “B” writes a reflection via e-mail 9/29/04.
Person “A” responds to the reflection via e-mail by 9/30/04.
Bring a hard copy of the e-mail communication to seminar on 10/4/04.

Person “A” writes a reflection via e-mail 10/13/04.
Person “B” responds to the reflection via e-mail by 10/14/04.
Bring a hard copy of the e-mail communication to seminar on 10/18/04.

Person “B” writes a reflection via e-mail 10/27/04.
Person “A” responds to the reflection via e-mail by 10/28/04.
Bring a hard copy of the e-mail communication to seminar on 11/1/04.
Person “A” writes a reflection via e-mail 11/17/04.
Person “B” responds to the reflection via e-mail by 11/18/04.
Bring a hard copy of the e-mail communication to seminar on 11/22/04.

(The hard copy that you bring to seminar must have a response back to the partner.)

**Evaluation of Instruction:**

Your instructional behaviors this semester will be evaluated based on the twelve (12) domains of the Accomplished Practices. The summary evaluation, which will be completed by your teacher, as well as your supervisor, reviews the salient points in each domain. A copy is enclosed. If these factors are carefully considered as you plan for your instruction, the chances of your having a successful and worthwhile lesson are greatly enhanced.

 Demonstration of instructional competence and behavior management skills during two observations (at least one must be whole class). Provide typed lesson plans that include the following:

1. Behavioral objective [must be something you can observe students do]
2. Materials required [everything you need to use for the lesson]
4. Assessment [what you will do to evaluate if students meet the objective]

Lesson plans need to be typed (double space) and submitted to the supervisor 24 hrs before the lesson is taught. If you are scheduled for an observation and you have not submitted the lesson plan, the supervisor will cancel the observation which may put successful completion of the internship into jeopardy.

**Observation lesson expectations:**

**Planning**

- Demonstrates ability to implement plans by supervising teacher
- Plans lessons that incorporate effective instructional strategies
- Demonstrates ability to plan lessons over extended period of time (more than one day)

**Management of Student Conduct**

- Plans for and manages transitions between lessons
- Consistently monitors classroom behavior
- Provides positive reinforcement of student behavior
- Maintains academic focus while monitoring students’ conduct

**Instructional Organization**

- Is organized and prompt
- Maintains instructional momentum
✓ Provides positive reinforcement and feedback for student academic performance
✓ Effectively uses a variety of strategies and activities
✓ Effectively uses a variety of visuals, concrete materials, and technology

Lesson Presentation
✓ Presents subject clearly and accurately
✓ Uses lesson introductions to gain attention and motivate students
✓ Uses lesson introductions to make connections to prior learning
✓ Demonstrates questioning skills
✓ Monitors students’ learning during lessons
✓ Determines when students have reached desired learning outcomes

Communication
✓ Is proficient in Standard English
✓ Expresses ideas clearly, logically, and appropriately for level of students
✓ Gives directions that are clear and appropriate for students and task

Professional Behavior
✓ Meets requirements for attendance and punctuality
✓ Demonstrates professional behavior toward children, teachers, and peers
✓ Seeks and accepts suggestions and feedback from supervisors

Missing a scheduled observation without giving the professor prior notice will result in an unsatisfactory grade.

During your classroom instruction you will be evaluated at least two times. You will receive written feedback from your professor. The first evaluation must be scheduled and completed between September 27 and October 11. (Sign up on September 20.) The final evaluation must be scheduled and completed between November 3 and November 22. (Sign-up on October 18.)

Philosophy of Instruction:

At the end of the semester (11/29/04), each student will submit a position paper (2-4 pages typed) which is his/her philosophy of instruction. This paper will be written in such a manner that each student belief is supported by citations from the available professional literature. The citations will be primarily from class texts and class notes.

You might refer to your ideas about homework, classroom management, parents, how children learn, interpersonal communication skills, etc. Consider keeping this paper to help you in job interviews.
One easy way to deal with this issue may be through the use of “I believe ...” statements. For instance:

- I believe that each lesson should, when possible, use concrete materials as a primary instructional strategy.
- Research has found that beginning a lesson with abstractions is not an efficient manner of teaching (Combs, 1980; Bloom, 1982).
- Using a model such as the FACT model in planning and carrying out the instruction suggested in most teachers’ manuals will enhance learning (Uprichard, Ober, 1971; Bedics, Greabell, Uprichard, 1974; Greabell, 1978).
- Children need to have concrete experiences before they can learn the associated abstractions (Piaget, 1964, 1972).
- Your philosophy of instruction is neither “right” nor “wrong” – it exists. The criteria for evaluating this position paper will include the following: consistency of statements; level of supporting statements; English usage; choice of content; balance of content.

We will discuss your philosophy statement in greater detail during seminar.

Criteria for Grade in Level II Interning

The student will:

a. Attend all required seminars scheduled for Level II.

b. Be at your assigned school two days a week, Monday and Wednesday. Attend all scheduled seminar meetings. Any missed days must be made up within one week of the absence.

c. Demonstrate professional attitude in dress, manner, speech, and promptness. I will, to be honest, have little patience for students who are chronically late. Your teacher is required to be in the building by 7:25, so you need to be signed in by 7:30. Please wear a photo I.D. at all times when at school. You can buy one from the Marshall center for $5.

d. Timeline – For the first two or three weeks I anticipate you will be just soaking it all up. I’m sure you will be wide-eyed! As you learn the children’s names and their routines, feel free to begin to pick up some tasks (attendance, one-on-one tutoring, etc). By late September you should be ready to start doing some small group work. You will predominantly use your teacher’s plans to teach lessons she/he has created with you in mind. By mid-October, however, you should be responsible for planning a few of your own small-group lesson plans, and then delivering those plans. By the beginning of November I would like for you to be teaching from one of your own original plans at least one class period every Monday and Wednesday. When your teacher assigns the planning materials to you, or if you plan together, make sure you understand the objectives of the lesson.
and that, in turn, your objectives are very clear. If time allows, I strongly recommend you share your lesson plans with your teacher prior to the lesson.

During the second half of the semester, your teacher will discuss with you whether you can teach some large group activities. Together, you can certainly co-plan and co-teach, or the teacher can support you as you lead a large group lesson. Hopefully, having interns will allow the teachers to conduct centers or small group projects that would have been hard to arrange otherwise. Ideally, as your last weeks approach, I would like for you to know how it feels to plan for, and be “on the go” for several consecutive lessons. As a good experience prior to starting student teaching, I hope you can work towards demonstrating the ability to handle a full morning, or afternoon, using skills indicative of a professional teacher.

**Evaluation**

There is an evaluation form for your teacher to complete at the midpoint and again at the end of the semester. Please use the following schedule:

- 9/1/04 First day of Internship
- 10/18/04 **Midterm evaluation (Progress Report) due**
- 11/29/04 **Final evaluation (Review of Level II) due**
- 12/1/04 Last day of internship

Please sign and professionally discuss your midterm and final evaluations which your teacher will have filled out with her/him before you personally deliver the evaluations to me. Be advised I have asked your teachers to reserve 4’s for “superior” performance. Most satisfactory ratings, particularly on the midterm will be 3’s, and 2’s should not be seen as negative but as an indication that this behavior is improving but not consistent yet. Why only give 4’s in exemplary circumstances? Because this is a difficult profession, and I believe you have to demonstrate the ability to keep growing as a teacher if you want to develop into a master teacher one day. As I tell the teachers I work with, the day we think we have reached perfection as teachers (including me!) is the day we should retire. ☺

e. Develop and submit a short paper on your philosophy of education.

f. Complete a dialog journal with a peer and turn a hard copy in at each seminar.

g. Produce a portfolio based on the Accomplished Practices. This will be discussed further during seminar.
Grading Procedure

An S/U grade will be assigned at the end of semester from evidence reflected and documented by Supervising Teacher Evaluations, formal and informal observations conducted by the Supervising Professor, and completion of the seminar assignments. **Should a student be in danger of receiving a “U” grade, a warning letter citing specific areas of weakness will be given to the student around the midpoint of the semester, and a copy will be sent to the Department Chair to be placed in the student’s file.** Should a student not demonstrate a marked improvement in these cited areas of weakness, further action (including possibly repeating the internship or the case of a “D” grade) will be necessary.

**ADA Statement:** Students with disabilities are responsible for registering with the Office of Student Disabilities Services (974-4309) in order to receive special accommodations and services. Please notify the instructor within the first week of classes if a reasonable accommodation for a disability is needed for this course. A letter from the USF Disability Services Office must accompany this request.

**USF Policy on Religious Observances:** All students have a right to expect that the University will reasonably accommodate their religious observances, practices and beliefs. Students are expected to notify the instructor in writing by the second class if they intend to be absent for a class or announced examination, in accordance with this policy.

**Academic Dishonesty:** Plagiarism is defined as “literary theft” and consists of the unattributed quotation of the exact words of a published text, or the unattributed borrowing of original ideas by paraphrase from a published text. On written papers for which the student employs information gathered from books, articles, or oral sources, each direct quotation, as well as ideas and facts that are not generally known to the public at large must be attributed to its author by means of the appropriate citation procedure. Citations may be made in footnotes or within the body of the text. Plagiarism also consists of passing off as one’s own, segments or the total of another person’s work. Punishment for academic dishonesty will depend on the seriousness of the offense and may include receipt of an “F” with a numerical value of zero on the item submitted, and the “F” shall be used to determine the final course grade. It is the option of the instructor to assign the student a grade of F or FF (the latter indicating dishonesty) in the course.

**Detection of Plagiarism:** The University of South Florida has an account with an automated plagiarism detection service which allows instructors to submit student assignments to be checked for plagiarism. I reserve the right to 1) request that assignments be submitted to me as electronic files and 2) electronically submit assignments to Turnitin.com. Assignments are compared automatically with a huge database of journal articles, web articles, and previously submitted papers. The instructor receives a report showing exactly how a student’s paper was plagiarized. For more information, go to [www.turnitin.com](http://www.turnitin.com) and [http://www.ugs.usf.edu/catalogs/0304/adadap.htm#plagiarism](http://www.ugs.usf.edu/catalogs/0304/adadap.htm#plagiarism).
EDE 4942 (Fall 2004)

Seminar Outline

Each seminar will begin promptly on Mondays at 3:00 p.m. The first 15 minutes will be for announcements and group-support time. Starting with our meeting on September 20, please bring a copy of your dialog e-mails. It helps to hear about strategies that are working for other interns, so this will be your time to share some tricks with each other. We will then spend approximately 90 minutes on the “Topic de Jour” before closing by 4:50. There is a great deal of information to cover in this seminar! I will do my level best to follow this outline, but understand that we might all have to show flexibility with this schedule. Note that there will be no seminars on September 6, 13, 27; October 11, 25; November 8, 15.

**Very Important:** If you miss any seminar meetings you will be required to write a 3-5 page paper on the topic we discuss in the seminar meeting you have missed. The paper must also have 3 references and be completed according to APA guidelines.

8/23       Syllabus/survey of beliefs
8/30       Sharing placements/inquiry groups
9/20       Pre-professional Accomplished Practices
            Inquiry groups
10/4       Philosophy statements
            Accomplished Practices
            Inquiry groups
10/18      Accomplished Practices
            Inquiry groups
11/1       Portfolio & philosophy statement progress report
            Inquiry groups
11/22      Classroom management
            Inquiry groups
11/29      Philosophy of Education due
            Survey of beliefs
Appendix B

Study Time Line

<table>
<thead>
<tr>
<th>Week</th>
<th>Date</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>8/23/04</td>
<td>Introduction via Venn-diagrams, syllabus</td>
</tr>
<tr>
<td>2</td>
<td>8/30/04</td>
<td>Administer survey, Assign inquiry #1, IRB consent</td>
</tr>
<tr>
<td>5</td>
<td>9/20/04</td>
<td>#1 Inquiry group discussion &amp; reflection, assign inquiry #2</td>
</tr>
<tr>
<td>7</td>
<td>10/4/04</td>
<td>#2 Inquiry group discussion &amp; reflection, assign inquiry #3</td>
</tr>
<tr>
<td>8</td>
<td>10/13/04</td>
<td>Focus group interview #1</td>
</tr>
<tr>
<td>9</td>
<td>10/18/04</td>
<td>#3 Inquiry group discussion &amp; reflection, assign Inquiry #4</td>
</tr>
<tr>
<td>11</td>
<td>11/1/04</td>
<td>#4 inquiry group discussion and reflection</td>
</tr>
<tr>
<td>12</td>
<td>11/10/04</td>
<td>Focus group interview #2</td>
</tr>
<tr>
<td>14</td>
<td>11/22/04</td>
<td>Administer survey and member check data categories</td>
</tr>
</tbody>
</table>
Appendix C
Study Design Flowchart

Survey preservice teachers on focus areas

1. Assign inquiry #1

2. Dialogue via e-mail

3. Inquiry group discussion

4. Written reflection

Repeat steps 1-4 with inquiry #2

Focus group interview #1

Repeat steps 1-4 with inquiry #3 & #4

Focus interview #2

Final Survey

Tally likert scale data

Identify meaningful units/ categories/

Select focus group

Identify meaningful units/ categories /

Peer- review of reflection levels

Reread e-mail dialogues for reflection levels

Identify meaningful units / categories /

Peer- review of reflection levels

Reread written reflection for reflection levels

Transcribe & identify meaningful units/ themes

Reread written reflection for reflection

Transcribe & identify meaningful units/themes

Tally likert scale data, identify meaningful units / categories and themes, member check
Appendix D

Name_____________________________

Date____________________________

Survey of Beliefs

Read the following statements. Decide whether you strongly agree, agree, disagree, or strongly disagree. Explain your decision below each statement.

1. I believe that all students can learn if the teacher is committed to reflecting on practice. SA A DA SDA

2. I believe the teacher needs to plan active participation in each lesson to be most effective in motivating student learning. SA A DA SDA

3. I believe a child’s cultural background has little effect on their education. SA A DA SDA

4. I believe it is the teacher’s role to establish classroom procedures. SA A DA SD

5. I believe that a teacher adopting a reflective stance to their teaching far out weighs any other professional development opportunity. SA A DA SDA
6. I believe the most effective teacher engages students in *active learning*.
   SA  A  DA  SDA

7. I believe that *on-going assessment* is essential for the teacher to make sound instructional decisions. SA  A  DA  SDA

8. I believe that an effective teacher maintains a *formal (somewhat distant) role* in the classroom. SA  A  DA  SDA

9. I believe a teacher must be an *active agent* in reforming school and society.
   SA  A  DA  SDA

10. I believe that assessment *directly impacts* the level of learning in the classroom.
    SA  A  DA  SDA
11. I believe that all students are treated equally in schools today.  
SA  A  DA  SDA

12. I believe that the learning ability of some children is limited because of home environment.  
SA  A  DA  SDA

13. I believe that all exemplary teachers are “lovers of learning” themselves, and are constantly reflecting on their practice.  
SA  A  DA  SDA

14. I believe that hands-on learning is basically the same thing as active learning.  
SA  A  DA  SDA

15. Rank the following teacher characteristics (1-5) Most important to least important. Explain your choice for the most important (1), and the least important (5).

_____ organized
_____ enthusiastic
_____ reflective
_____ knowledgeable
_____ caring
Appendix E

Semi-structured Interview Protocol

1. Looking back on the last few weeks, describe the question you enjoyed researching the most. Why?

2. Describe how you gather data related to the focus questions.

3. How did you feel about the dialogue e-mail assignment?

4. Has the exploration of a question in the last few weeks either through the e-mail dialogue or inquiry group discussion impacted your classroom practice? Please explain.

5. Have you found that the e-mail dialogues have contributed to changing any ideas about classroom practices? If so, how?

6. Describe the inquiry group discussion that you participate in during seminar.

7. In what ways does the discussion impact your thinking?

8. Is there anything more you want to tell me about the process of inquiry into practice, dialogue e-mails, and inquiry group discussion?
Appendix F

Lesson Plan: How to do an Inquiry

1. Introduce “Save the last word for me.” (Each group of 4-5 students receives one quote from the list below. One volunteer reads the quote to the group. The rest of the group members listen and then discuss the meaning. The reader of the quote can only ask questions of the other members without telling his/her thoughts. After each member has had an opportunity to share, the volunteer who read summarizes and adds his or her own interpretation to the group’s ideas. Each group shares out their combined interpretation in a whole group sharing.

   ✓ The assumptions we make and the theories we hold have a powerful effect on what and how we teach (Hillocks, 1995).

   ✓ This process that originates in doubt and moves in a rational way to resolution constitutes inquiry (Dewey, 1938).

   ✓ When teachers reason about choices, planning in light of those reasons, implement those plans, examine their impact on students, and revise and reformulate reasons and plans in light of all that experience, that conjunction constitutes theory driven teaching. Such teachers are engaged in reflective practice and inquiry (Hillocks, 1995).

   ✓ Taking an inquiry as stance means teachers and student teachers working within inquiry communities to generate local knowledge, envision and theorize their practice, and interpret and interrogate the theory and research of others (Cochran-Smith, 2004).
✓ It is not a casual incidental collection of facts; rather the work is anchored in literature and has a designated period of time (Drennon & Focar-Szocki, 1996).

✓ A community of inquiry invites educators to experience the richness of their work. Communities take time, trust, commitment, struggle, mutual recognition, and shared purpose. This includes a commitment to honor diversity of thought (Cochran-Smith, 2004; Lave & Wenger, 2003).

✓ Much reflection in action hinges on the element of surprise. When intuitive, spontaneous performance yields nothing more than the results expected for it, then we tend not to think about it. But when intuitive performance leads to surprises, pleasing and promising or unwanted, we may respond by reflecting-in-action” (Schon, 1983).

As each group shares out, the instructor records the interpretations under each quote on the overhead (Appendix G) and leads a discussion on inquiry into practice. Following the discussion the instructor distributes the guidelines (Appendix H) for doing and inquiry reviews each point, which is followed by modeling a dialogue e-mail (Appendix I).
1. **Reflect** … what do I notice? (Limited and focused)

2. **Analyze** … and interpret. Slow down the thought process and ask to what extent have the teaching and goals been appropriate and effective for the students?

3. **Investigate** … observe behaviors, conduct interviews, read. (Collect purposeful data on the question throughout the internship day.)

4. **Dialogue** with your partner. Name the “surprise,” and challenge long held assumptions.
Appendix H

Dialogue Demonstration

Several days ago, I worked with a little boy in reading. The teacher wanted me to work with him because he needs extra help. He seemed so intelligent during the class discussion; I was surprised that he was the one picked for extra help. I really thought there were several others that “looked” like they would need help. I’m not here to argue with the teacher, so I picked up a book from a little basket on his desk. He could hardly read it. The book was about helicopters and every time he saw the word helicopter he stumbled and searched for the word. He looked at the picture and still couldn’t get it. I started listening to him really carefully when he got to the word helicopter. He kept saying “a-a-a” (the long a sound). He must not know his letters I surmised. Later I asked the teacher what she thought and she gave me some magnetic letters and showed me how to work with him so that he would start learning the letter names. I tried it and he knew every letter by name. I looked back at the text I got a semester ago in one of my classes and it had a letter / sound chart, and that got me thinking…so we started making an alphabet book today and when we got to the “H” he did it again!! He said, “a-a-a.” I told him “no … the sound is like ‘huh’ like at the beginning of house.” He pointed to the letter and said H sounds like a-a-a … ch. That was when I realized that he is mixing up his letter names and sounds! Holy Cow! That little confusion has been the crux of his reading problem. What a victory! I feel like such a great teacher. Really watching him and listening gave me insight that noone, including his teacher, had before. I wonder how I can build that kind of observation into my day as a teacher. What do you think, dialogue buddy?
Appendix I

Save the Last Word for Me: Quotes

a. The assumptions we make and the theories we hold have a powerful effect on what and how we teach (Hillocks, 1995).

b. This process that originates in doubt and moves in a rational way to resolution constitutes inquiry (Dewey, 1933).

c. When teachers reason about choices, planning in light of those reasons, implement those plans, examine their impact on students, and revise and reformulate reasons and plans in light of all that experience, that conjunction constitutes theory driven teaching. Such teachers are engaged in reflective practice and inquiry (Hillocks, 1995).

d. Taking an inquiry as stance means teachers and student teachers working within inquiry communities to generate local knowledge, envision and theorize their practice, and interpret and interrogate the theory and research of others (Cochran-Smith, 2004).

e. It is not a casual incidental collection of facts; rather the work is anchored in literature and has a designated period of time (Drennon & Focar-Szocki, 1996).

f. A community of inquiry invites educators to experience the richness of their work. Communities take time, trust, commitment, struggle, mutual recognition, and shared purpose. This includes a commitment to honor diversity of thought. (Cochran-Smith, 2004; Lave & Wenger, 2003).

g. Much reflection in action hinges on the element of surprise. When intuitive, spontaneous, performance yields nothing more than the results expected for it, then we tend not to think about it. But when intuitive performance leads to surprises, pleasing and promising or unwanted, we may respond by reflecting-in-action” (Schon, 1983).
Appendix J

How to do an E-mail Dialogue

1. Reference the inquiry topic in the subject line of the e-mail.

2. Sign your e-mail with your name.

3. The minimum length of a dialogue e-mail is 15 lines.

4. Think about the questions posed, and research them for several days.

5. Ask your mentor teacher, professors, students, and think about what you already know.

6. A dialogue e-mail is a conversation with your partner; feel free to ask your partner questions too.

7. It is more than an opinion or a rendition of the daily schedule; however, your opinion is important and should be included.

8. Try to synthesize the information you have gathered, and then think about what you really believe.

9. Your thoughts about each series of questions will be unique based on your experiences and the classroom in which you are placed. Don’t be surprised if or when your partner has a different thought. That is what makes mail interesting to read!
Appendix K
Writing a Post-Discussion Reflection

• “Yohakoo” introduction. Read or tell the following vignette to the seminar.
Several years ago I had the privilege of listening to Elaine Koiningsburg (background on author), and she asked what these things have in common: “a teacup, a comb, and chromosome 9.” What makes them useful is the empty places. Then she explained that the empty places in the comb gets the tangles out of hair, the emptiness of the teacup is what you need to have a cup of tea, and Chromosome 9 was discovered after a researcher who had spent thousands of hours looking through his microscope finally decided to take a walk. He walked around a small pond on the institute’s property and sat down on a bench. As he sat back, cleared his mind, and relaxed in the sunshine, it dawned on him what he had been missing in his research. He lingered a few minutes, then returned to the lab, and he discovered Chromosome 9. Clearing his mind made an empty place for him to reflect and find the answer he had been looking for in the lab.

• Elaine Koiningsburg was told about “yohakoo” by her Japanese editor who commented that her writing was unique and powerful because she provided the empty spaces for thinking as she wrote. Post-discussion reflection is intended to provide you with the quiet place to make sense of the time spent in the inquiry group discussion.

• Look over your initial dialogue e-mail, and spend a few minutes bringing the discussion to bear on your thoughts.

• Note in the margins ideas that have been clarified or questions that remain.
• Once you put your pen to paper, do not pick it up … continue writing until the time is up.

• Respect the “yohakoo” time, and do not talk to your neighbor.

• Think. Now what do you think about the inquiry question? (Your ideas may have been reinforced, you may have a new twist, or you may have changed completely.)

• Finally, write about how this applies to your teaching practice. How can you implement what you learned in the classroom? Try to be very specific, and describe what it would look like or sound like to implement your ideas. Specificity requires thinking carefully.

• Two questions will be posted each seminar during the post-reflection time:
  1. After the discussion, what do you think now about the area of inquiry?
  2. Specifically, how can you apply it to your classroom now or in the future?
Appendix L

Focus Questions for Inquiry into Practice

**Dialogue 1:** Investigate the statement “An effective teacher maintains a formal role in the classroom.”

- Observe your mentor teacher and other teachers in the school.
- What role do they play … is it formal or informal?
- What does a formal / informal role look like? What does a formal/informal role sound like?
- What do you believe your role should be?

**Dialogue 2:** Research the statement, “The most effective teacher engages students in active learning.”

- Goodlad (1984) found that 70% of the school day is talk, and 75% of that talk is teacher talk.
- Why do educators say active learning is effective?
- Monitor your classroom for a day, and write down when the students are learning.
- What are the behaviors or evidence that tells you the students are learning?
- Monitor your interactions with the students, and notice the percentage of teacher talk.
- What is active learning, and is it important?

**Dialogue 3:** Is the learning ability for some students hindered by their culture?

- Try to define the culture of the students in your classroom (the culture of home, society, school).
- Monitor the following actions on the chart for the teacher you work with for one hour, and then ask your mentor teacher to choose two different times during the next few days to monitor you for an hour.
- Make a chart of all the students’ names on the left side of the paper. Record a tally mark for each time the teacher evidences a behavior.

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- Look over the results before dialoguing with your partner, and look for patterns.
- Have you learned anything about yourself?
• Are your expectations connected to a child’s culture?
• Does culture impact the students in your classroom?

Dialogue 4: **What does on-going assessment look like?**

• How did you incorporate assessment into your lessons?
• Research the assessments used in your classroom; do they really give the teacher an accurate picture of the student?
• Think through the assessments you will use in the classroom; how will you organize the data collected? Be specific.
Appendix M

(Example of statements during pilot study)

**Assessment: What it is … What it is not. You decide.**

Scanning the room

Evaluating students beyond paper and pencil

Takes place daily

Observable observation

Children constantly being challenged and stimulated to learn

Reading groups

Collection of students’ work

Making connections to other subject areas

Evaluation

Constantly checking where students are

Question and answer style

Checking homework

Watching student faces

Collecting work samples from day one to the end of the grading period

The beginning of lesson planning

Formal (placement tests)

Giving all students an opportunity to answer the question

Grading students’ work

An accurate picture of the student
Appendix N
Levels of Reflection Rubric
(Adapted from: Carlson & Parry, 2003; Tsangaridou & Sullivan, 1994; Van Manen, 1977)

Problem solving (Surface): technical, identifies a problem and envisions a solution which removes the problem, limited reflection, restatement of classroom activities, judgement good or bad on lesson as a whole … no parts, no strategies identified. (level 1)

Practical deliberation (Deep): appraises the whole situation, considers what is right and appropriate, action in the situation is a moral question, “What course of action will prove to be the most prudent and contribute to the good,” concentrates on the context of the teaching, examined aspects of the lesson (parts), seeing the individuals, looking beyond the obvious, and devising strategies to accommodate individuals. (level 2)

Speculative thought (Intense): self-conscious critique of self, thinking about the thought process, seeing long term implications of teaching and developing strategies, action-oriented in the context of the situation, the mind’s conversation with itself, ideas come from a socially constructed world of meaning, has meanings in the social world not value-free, construction of new ideas the way we participate in communication, decision-making, and social action. (level 3)
Appendix O

Pilot Study Survey Data: Fall 2003

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## Appendix Q

Main Study Survey Data 2004

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Appendix U

Sampling of charts created by small groups after discussion on “Teacher’s role.”

(Chart 1)
We like the combo pack:
- We believe there needs to be a balance between formal and informal roles.
- Sometimes teaching by lecturing is effective, and sometimes teaching using cooperative learning is better.
- We need to meet the needs of all students.
- Formal: teacher centered, traditional, lectures, less emotion
- Informal: student centered, cooperative learning, constructivist, more open to the ideas of students.

(Chart 2)
A Balanced Classroom
- At the beginning of the school year: a more formal role to establish rules and expectations—with some informal interaction.
- As the year progresses, the teacher allows more informal instruction by posing open-ended questions based on constructivist theory.
- Some situations call for a formal role, such as lectures, directions, and test administration.
- Certain situations call for different roles.

(Chart 5)
What we will be:
Informal…………………..A balanced approach………………..Formal

Certain situations call for a particular approach–this balance represents our idea of a well-rounded effective teacher:
- Formality when classroom management is concerned
- Informality with instruction and interaction with students

(Chart 7)
Regardless of teaching style formal or informal, always organized and consistent!

- We all agree that there should be a combination of formal and informal.
- Formal: discipline, rules, safety.
- Informal: While teaching, offer personal stories, establish a trusting relationship with students.
- Always try to place your students at ease to create a healthy learning environment.
About the Author

Susan Lloyd received a Bachelor’s degree in Elementary Education from Frostburg State University in 1976 and an M.S. from the University of South Florida in 1995. She taught elementary grades, and after earning her M. S., she was employed as a Reading Specialist. She trained teachers through continuing education courses focused on literacy and served as the Language Arts lead teacher. She was certified as a Reading Recovery tutor and earned National Board Certification in 2001.

While in the Ph.D. program at the University of South Florida, Mrs. Lloyd taught several literacy courses and supervised level I and Level II preservice teachers. She also consulted for Florida Literacy and Reading Excellence (FLaRE). Mrs. Lloyd presented at the Florida Reading Conference, College Reading Association Conference, and the National Reading Conference. She has two publications in the *Florida Reading Quarterly* and one publication in the *Journal of Adolescent and Adult Literacy*. 