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THE INFLUENCE OF PRACTITIONER RESEARCH ON TEACHER CANDIDATES’ BELIEFS

A Dissertation in
Curriculum and Instruction

by
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ABSTRACT

This phenomenological study investigates the ways in which practitioner inquiry influences preservice teachers’ beliefs about teaching and learning. The study followed five teacher candidates (interns) completing an internship in a K-4 Professional Development School (PDS). This study focused on the interns’ engagement in practitioner inquiry and how their inquiry experiences influenced their belief development. Data was collected during the spring of 2016 and consisted of two rounds of semi-structured interviews, researcher notes, the interns’ teaching platforms, and inquiry reports. A thematic analysis was conducted (Braun & Clarke, 2006) to identify and describe how practitioner inquiry influenced interns’ beliefs about teaching and learning. Results indicate that practitioner inquiry is a means for preservice teacher belief development in the following ways: 1) Inquiry is a means for self-investment in preservice teacher learning to support the authenticity of beliefs. 2) Inquiry is a means for deepening and expanding preservice teachers’ understandings of what is happening in their classrooms to support the complexity of beliefs. 3) Inquiry is a means for learning about students in order to implement student-centered practices that support the enactment of beliefs. 4) Inquiry is a means for developing professionalism to support the empowerment of beliefs. 5) Inquiry is a means for influencing preservice teachers’ teaching stance to support the transferability of beliefs. The results of this study extend understandings about the use of practitioner inquiry in teacher education to support teacher candidate belief development.
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CHAPTER 1
INTRODUCTION AND BACKGROUND

This study explored the ways in which practitioner inquiry may influence preservice teachers’ beliefs about teaching and learning. Knowledge gained from this study brings new insights into how teacher education experiences may affirm and/or change teacher candidates’ beliefs, and how practitioner inquiry might be utilized by teacher educators in teacher preparation programs. The research employed a qualitative phenomenological methodology to illustrate the phenomenon examined. Participants in this study included five preservice teachers engaging in practitioner inquiry in a Professional Development School (PDS) internship, which provided the context of this research.

This chapter begins with an overview of the research on preservice teacher belief development, paying specific attention to how beliefs are conceptualized and the role of practitioner inquiry in teacher education. Also, included in this chapter is a review of the concept of practitioner research and the inquiry cycle. Following this, the study’s purpose and accompanying research questions are shared. This chapter presents an argument for conducting a study on the extent to which teacher candidates’ beliefs about teaching and learning might be influenced by experiences involving classroom research or inquiry. The aim of this chapter is to situate this study at the intersection of teacher beliefs and practitioner research. The chapter presents the rationale, research design, and significance of the study.

Problem Statement

Despite the influence that beliefs have on behavior, it is difficult to directly observe beliefs in action (Pajares, 1992). They must be inferred from people’s actions. Researchers must be cautious as understanding beliefs requires making inferences about what individuals say and
do. Five and Buehl (2012) argue that teachers may express beliefs that they do not personally believe, or they may not feel comfortable enacting a specific belief in certain contexts. Furthermore, Nespor (1987) claims that some beliefs implicitly guide teachers’ behaviors and filter interpretations of experiences without their awareness.

Repeated across much of the research on preservice teacher belief development is the importance of using reflection to examine teachers’ beliefs (Pilitsis & Duncan, 2012; Sillman & Dana, 2001; Yerrick & Hoving, 2003). According to Wade (1994), helping preservice teachers become more aware of their beliefs through discussions and other activities in teacher education programs are crucial if teacher educators want to help preservice teachers reexamine their initial beliefs. However, the limited amount of research on the ways in which preservice teachers’ beliefs change calls for further research on beliefs (Pilitsis & Duncan, 2012).

Confronting preservice teachers with dissonance can promote a change or affirmation of beliefs (Festinger, 1957; Raths, 2001). Engaging prospective teachers in activities that collide past experiences with new experiences may encourage the re-examination of one’s beliefs about teaching. A change in beliefs may occur when one develops a new understanding of a topic based on their interpretation of an event or information. However, an experience may also lead to the affirmation of an espoused belief once it is enacted in the classroom. Teacher candidates’ beliefs may not drastically change, rather they may develop stronger and more elaborate beliefs about their practice.

Little research on teacher beliefs clearly addresses the ways in which preservice teachers’ beliefs change over time (Löfstrom & Poom-Valickis, 2013). Further research is needed to examine the relationship between instructional activities in teacher education programs and influence on preservice teachers’ beliefs about teaching (Pilitsis & Duncan, 2012). In particular,
there is a need for additional research on the use of practitioner inquiry in teacher education programs as a way to support preservice teacher belief development. This research defines inquiry as the “systematic, intentional inquiry about teaching, learning, and schooling carried out by teachers in their own school and classroom settings” (Cochran-Smith & Lytle, 1993, p. 27).

Inquiring into one’s practice may invite preservice teachers to consider what they are doing and why they choose to teach, learn, and lead in certain ways (Cochran-Smith & Lytle, 1993). By questioning one’s practice, students, and context, preservice teachers may reconsider previously held beliefs about teaching and adopt alternative beliefs that are more consistent with their new experiences and understandings about schooling. Not enough attention has been given to the influence of practitioner inquiry on teacher candidates’ beliefs about teaching (Cochran-Smith et al., 2009; Hyland & Noffke, 2005; Levin & Rock, 2003; Price & Valli, 2005). In particular, the lack of connection between specific teacher education program activities and preservice teachers’ beliefs highlights the need to further examine the relationship between inquiry in teacher education programs and its influence on preservice teachers’ beliefs.

**Conceptualizing Teacher Beliefs**

All teachers hold beliefs about their practice, students, curriculum, and role as educators (Pajares, 1992). According to Kagan (1992), teachers’ beliefs are “tacit, often unconsciously held assumptions about students, classrooms, and the academic material to be taught (p. 65).” The time preservice teachers spend in classrooms as students shape these beliefs about teaching (Lortie, 1975; Zeichner & Tabachnick, 1981). However, their beliefs often remain dormant until entering the classroom. What teachers believe is significant because their beliefs affect how they understand and make decisions about their practice (Pilitsis & Duncan, 2012; Sillman & Dana, 2001).
Fives and Buehl (2012) argue that teachers have both implicit and explicit beliefs. Teachers may be able to explicitly state their beliefs through verbal or written communication. Yet, there are some concerns with teachers sharing these explicit beliefs. During an interview, teachers may state the desired answer which is contrast to what they actually believe or they may not have the appropriate language to articulate their beliefs. When reflecting on one’s practice, teachers may also be unaware of implicit beliefs that guide their practice. Furthermore, researchers must consider the difference between a teacher’s espoused and enacted beliefs (Fives & Buehl, 2012). Enacted beliefs can be examined through teachers’ actions, whereas teachers’ espoused beliefs are identified through their descriptions. Differences between one’s espoused and enacted beliefs highlight discrepancies between what one says and what one does.

**Practitioner Research**

Dewey (1933) recognized teachers as learners and producers of knowledge. Based on the belief that teachers are continually thinking about their classrooms, inquiring into one’s practice provides opportunities for teachers to make sense of their work. Stemming from Dewey’s (1933) work, Cochran-Smith and Lytle (1993) define inquiry as, “systematic, intentional inquiry about teaching, learning, and schooling carried out by teachers in their own school and classroom settings” (p. 27). As teachers engage in the inquiry process, they ask questions which can lead to more questions about their practice. From these questions, teachers can implement different strategies and interventions to continue learning more about their classrooms. Problematizing one’s practice provides intentional space for teachers to reflect and take action based on their reflections (Cochran-Smith & Lytle, 1993). In particular, conducting an inquiry encourages teachers to raise more questions about their practice (Dana & Yendol-Hoppey, 2014).

Research on practitioner inquiry in teacher education programs suggest that reflection
and continued questioning based on inquiry “wonderings” may lead to higher levels of reflection, changes in practice, and re-examining beliefs about teaching (Hyland & Noffke, 2005; Levin & Rock, 2003; Rock & Levin, 2002). However, further research is needed to understand how classroom inquiry influences teacher candidates’ beliefs about teaching and learning. Parker, Bush, and Yendol-Hoppey (2016) found that teacher candidates moved from blind acceptance of others’ ideas for practice to the purposeful enactment of their own thinking informed by collaboration with their mentors during a final practitioner inquiry. Similarly, Darling-Hammond and McLaughlin (1995) recommend experiences such as practitioner inquiry to help preservice teachers “reflect critically on their practice to construct new knowledge and beliefs about content, pedagogy, and learners” (as cited in Rock & Levin, 2002, p. 9). In support, Keating, Rosario, Diaz-Greenberg, Baldwin, and Thousand (1998) discovered that teachers involved in practitioner inquiry become more reflective and critical of their own instructional practices. In these studies, inquiry served as a means to help teacher candidates re-examine their espoused beliefs through their own practice.

**Research Purpose**

There are gaps in the literature on how teachers’ beliefs are influenced by classroom inquiry. The research on practitioner inquiry has conceptualized and described inquiry at the preservice teacher level, but there is little empirical research describing the influence on preservice teachers’ beliefs about teaching and learning (Cochran-Smith, Barnett, Friedman, Pine, 2009). Cochran-Smith et al. (2009) insist that we need to develop a stronger understanding of how practitioner inquiry influences teacher candidates. Furthermore, Parker et al. (2016) state “there is a pressing need to more closely examine inquiry in teacher education, particularly the ways in which teacher candidates engage in inquiry and the resulting degree of quality that
emerge from this work” (p. 224). Studying how inquiry influences teacher candidates’ beliefs responds to Cochran-Smith et al.’s (2009) and Parker et al.’s (2016) calls for future research.

Specifically, there is a need for further research on how preservice teachers’ beliefs change over time (Pajares, 1992; Pilitsis & Duncan, 2012; Stuart & Thurlow, 2000). Löfstrom and Poom-Valickis (2013) suggest that future research look at how beliefs about teaching develop among preservice teachers throughout their teacher education programs. This study answers that call by examining how interns’ beliefs about teaching developed over a year-long Professional Development School (PDS) internship. Studying how interns’ beliefs changed over the final year of their teacher preparation program adds to the body of literature on preservice teachers’ beliefs.

Research Questions

The purpose of this research was to study how engaging in practitioner inquiry may influence preservice teachers’ beliefs about teaching and learning. This study asked: 1) What is the influence of conducting classroom inquiry on teacher candidates’ beliefs about teaching and learning? 2) What aspects of inquiry, if any, are most influential in changing beliefs?

Research Design

In order to gain insight into these questions, the research was theoretically oriented by phenomenology. Phenomenology is focused on human experiences (Baptiste, 2016). Researchers conducting phenomenological studies are interested in analyzing a phenomenon in order to understand the structures that make up one’s experience (Moustakes, 1994; Van Manen, 1990). Therefore, the purpose of phenomenology is to grasp the meaning of an experience by engaging in direct contact with individuals who have lived the experience or are currently living the experience. Drawing on phenomenology, this study was designed to examine how the
phenomenon of conducting practitioner inquiry affects teacher candidates’ beliefs about teaching and learning.

**Study Significance**

This study contributes to the professional conversation in the literature about teacher candidates’ beliefs and how inquiry may act as a means for supporting preservice teacher belief development. Additionally, it contributes to conversations about the experiences provided through teacher education programs.

This study adds to current literature about practitioner inquiry by studying how engaging in practitioner inquiry may influence teacher candidates’ beliefs on teaching and learning. A continued description of how preservice teachers engage in classroom inquiry will provide new understandings for how teacher education programs can use inquiry to improve how pre-service teachers think and reflect on their practice (Cochran-Smith et al., 2009). This study investigated the influence that inquiry has on preservice teachers’ beliefs to create a stronger understanding of how preservice teachers engage in classroom research and inquiry’s relation to teacher candidates’ beliefs.

Furthermore, this study adds to the current conversation about the need for more powerful learning opportunities for preservice teachers and may better position teacher education programs to prepare preservice teachers with a sense of agency to ask questions about their classroom experiences. The study also contributed to the literature on the use of classroom inquiry in teacher education by attempting to explain the influence of inquiry on preservice teachers’ beliefs about teaching and learning, which is needed for the continued improvement of teacher education programs.
The context of the proposed study adds to the significance of the study. While the research was not directly studying the PDS experience, it is an important contextual element of the study. Educational researchers argue that there have not been many credible and systematic assessments of PDS impacts (Clift & Brady, 2005; Fullan, 1995; Teitel, 2000). Teitel (2000) suggests that “credible, systematic documentation of the impacts of professional development schools (PDSs) is critical to the growth and sustenance of the partnerships themselves and the PDS movement” (p.1). The study addresses this need for more research on PDS impact by providing new insight into the use of practitioner inquiry in teacher education.

Furthermore, the study is educationally significant in that it used the voices of preservice teachers to describe the influence participation in classroom inquiry has on their beliefs about teaching. Stuart and Thurlow (2000) argue preservice teachers’ beliefs about teaching should be made an explicit focus of teacher education programs. Examining the influence of inquiry on teacher candidates’ beliefs might help bridge the gap between research and practice. This study also generated meaningful recommendations for teacher educators to support the development of pre-service teachers’ beliefs through the use of inquiry.

**Overview of Dissertation**

This chapter provided a brief overview of the study. It began with a summary of the literature on preservice teacher belief development and practitioner inquiry in teacher education in order to demonstrate the study’s purpose. Following this summary, the purpose statement, research questions, and discussion of the research approach contributed to the chapter by indicating the importance of the study within its context. Finally, this chapter examined the significance of the study within current professional conversations between researchers and teacher educators.
The remaining chapters of this dissertation review relevant literature pertaining to the proposed study, discuss the study’s methodology, provide a description of the context, present findings, and offer implications of the work. In Chapter 2, a review of the literature on preservice teacher beliefs is presented. Chapter 3 provides a detailed background of the theoretical orientation of this study, qualitative phenomenology, and discusses the research methodology. Chapter 4 presents the assertions that emerged from my data analysis. Finally, in Chapter 5, a summary of the study is presented as well as recommendations for future research on the development of preservice teacher beliefs and implications for the use practitioner inquiry in teacher education experiences.
CHAPTER 2

LITERATURE REVIEW

The purpose of this qualitative study was to explore the influence of engaging in practitioner inquiry on teacher candidates’ beliefs about teaching and learning. Specifically, I sought to understand the influence of practitioner inquiry on five teacher candidates’ belief development in a Professional Development School (PDS) context. This study asked the following questions: 1) What is the influence of conducting classroom inquiry on teacher candidates’ beliefs about teaching and learning? 2) What aspects of inquiry, if any, are most influential in changing beliefs?

Using phenomenology to theoretically orient the study, I aimed to examine how the phenomenon of conducting practitioner inquiry influences teacher candidates’ beliefs about teaching and learning. The study’s participants included five teacher candidates engaged in individual classroom inquiries during the final semester of their internship year. Although practitioner inquiry was a critical element of the teacher candidates’ internship year, this study focused on the pre-service teachers’ inquiry conducted during the spring semester.

As previously stated in Chapter 1, there is a limited amount of research on the ways in which preservice teachers’ beliefs change (Pilitsis & Duncan, 2012). Löfstrom and Poom-Valickis (2013) suggest that the current research on teacher beliefs does not clearly address the ways in which preservice teachers’ beliefs change over time. Therefore, this study contributes to the literature by examining how five teacher candidates’ beliefs about teaching and learning developed throughout their classroom inquiry experiences.

Studying the extent to which inquiry influences beliefs about teaching and learning contributes to the literature on belief development. Currently, there is limited research on the
extent to which classroom inquiry influence teacher candidates’ beliefs about teaching and learning (Hyland & Noffke, 2005; Levin & Rock, 2003; Rock & Levin, 2002). In response to this gap, Cochran-Smith et al. (2009) insist that the field needs to develop a stronger understanding of how practitioner inquiry influences teacher candidates. The study contributes to conversations about classroom inquiry experiences provided through teacher education programs.

To carry out this study, it was necessary to complete a critical review of current literature on the development of preservice teacher beliefs and the use of practitioner inquiry in teacher education. This review was ongoing throughout the data collection, analysis, and synthesis phases of the study. This chapter is organized into two main sections. First, I define beliefs to examine the development of preservice teachers’ initial beliefs and how teacher candidates’ beliefs change during their teacher education programs. Second, I examine the role of practitioner inquiry in teacher education and consider literature related to the use of practitioner inquiry to inform preservice teachers’ belief development. Throughout the review, I attempt to point out important gaps and relevant issues in the literature on preservice teacher beliefs and practitioner inquiry. The chapter concludes with the study’s potential contribution and future research implications.

Beliefs

Beliefs are dispositions that people develop at a young age (Quine & Ullian, 1978). Richardson (2003) defines beliefs as “a subset of a group of constructs that name, define, and describe the structure and content of mental states that are thought to drive a person’s actions” (p. 102). In other words, beliefs are described as primers for action by influencing how individuals react to situations, what choices they make, and what strategies they adopt in those
situations (Mahlios, Massengill-Shaw, & Barry, 2010). At times, people choose to solely rely on beliefs rather than facts because this way of thinking is more comfortable than questioning existing beliefs.

It is important to acknowledge that individuals have different kinds of beliefs that may be independent of each other as well as beliefs that are related and affect one another. Beliefs can be categorized into three types: (1) private beliefs, (2) declared beliefs, and (3) public beliefs (Hamilton, 1993).

1) **Private Beliefs**: These beliefs are personal and can easily reject others’ beliefs with the argument that one’s beliefs are the right way of thinking.

2) **Declared Beliefs**: These beliefs are socially accepted as appropriate ways to think and behave.

3) **Public Beliefs**: Similar to declared beliefs, these beliefs are shared by members of a cultural group. Eventually, public beliefs become declared.

Beliefs are formed as individuals adopt socially constructed ways of thinking from their respected cultures. When appropriate events occur, individuals display their beliefs as dispositions. However, one’s knowledge about a certain subject can differ from one’s beliefs about the specific matter. Collectively one’s beliefs form their belief system. Preservice teachers’ beliefs about teaching, children, and schooling form their pedagogical belief system. As central to this study, how preservice teachers form their belief systems about the way they perceive and engage in practitioner inquiry is crucial as their beliefs structures can be influenced by multiple variables.
Beliefs and Teaching

Teachers use their beliefs to make decisions about planning instruction and interacting with their students. Teachers’ beliefs are defined as “tacit, often unconsciously held assumptions about students, classrooms, and the academic material being taught” (Kagan, 1992, p. 65). Richardson (2003) describes three factors that support the formation of teachers’ beliefs.

1) *Personal experiences*: Family and cultural influences, life history, and socioeconomic status can affect a person’s beliefs. A teacher’s instruction is affected by images that he or she develops in relation to his or her personal experiences.

2) *Experience with schooling and instruction*: Teachers form their image of teaching by recalling their early memories of their own teachers and experiences as a student. Studies on teachers’ beliefs and images of teaching/learning reveal that teachers form their images of teaching by recalling their own memories as PK-12 students.

3) *Experiences with formal knowledge*: One’s interactions with various resources including the media, family, and schooling affect teachers’ conceptions of how children should learn subject matter content.

As mentioned in Chapter 1, researchers must consider one’s espoused and enacted beliefs (Fives & Buehl, 2012). Enacted beliefs can be examined through teachers’ actions, whereas teachers’ espoused beliefs are often identified through written and verbal descriptions. Discrepancies between what one says and what one does can be explained by the concept of espoused and enacted beliefs. Furthermore, Fives and Buehl (2012) identify three functions that beliefs serve related to teachers’ practice: filters for interpretation, frames for defining problems, and guides for action. Beliefs filter the way teachers interpret situations, conceptualize problems, and guide action. Similarly, Nespor (1987) argues that beliefs influence how one organizes
information, solves problems, and behaves. The conceptual framework below provides a visual representation of how beliefs act as filters, frames, and guides (see Figure 2-1).

![Diagram showing filters, frames, and guides]

Figure 2-1: The function of teacher beliefs (adapted from Fives & Buehl, 2012, p. 478).

Fang (1996) argues that teachers’ theoretical knowledge and beliefs are intertwined in their thought processes and influence one’s knowledge of students. It is difficult to determine which thoughts are based on theoretical knowledge and which are based on one’s belief system. Despite this overlap between knowledge and beliefs, Quine and Ullian (1978) suggest that one’s beliefs about a certain subject can differ from one’s theoretical knowledge of the same subject. Therefore, teachers’ knowledge and beliefs should be considered as two different entities in one’s thought system. Nespor (1987) differentiates teachers’ beliefs about the teaching profession from their knowledge of teaching. He offers a set of properties to help distinguish beliefs from knowledge in teachers’ belief systems:

1) **Existential beliefs**: Teachers carry assumptions about their students, teaching, and their school community. Their practices are based on those beliefs.

2) **Alternativity**: Connected to a teachers’ utopic beliefs about teaching and the classroom environment, a teacher might dream of a classroom full of laughter, fun, and learning. This dream may be far from the teacher’s reality. Due to their own past
experiences of schooling, a teacher’s utopic beliefs can be opposite of their classroom realities.

3) Affective and evaluative aspect: How teachers feel about a certain subject matter or specific teaching practice affects their planning of curriculum and instruction. Additionally, it affects how teachers manage their classrooms. For example, two teachers can have the same educational background and subject-matter knowledge. However, their individual beliefs about how children learn a particular subject can make a difference in their teaching practices.

4) Episodic structure: Knowledge is based on concrete principles whereas belief systems are mainly formed by personal experiences. An episodic memory of a certain teacher or instructional activity can be very influential on a teacher’s beliefs about how a teacher should act. Teachers may recall these episodes to justify their teaching practices.

5) Non-consensuality: Knowledge can be evaluated and easily change since it is ruled by certain principles. Yet, beliefs are structured by one’s feelings, personal experiences, and memories. These structures make changing beliefs more challenging because there are no criteria to evaluate them.

From these properties, teachers’ beliefs are very subjective and strongly related to one’s personal experiences. Due to teachers’ attachment, it is also extremely difficult to question these beliefs. The longer the teacher’s teaching experience, the less flexible his or her beliefs about teaching and learning become. The reason teachers prefer to use their beliefs over knowledge to make decisions is that beliefs function in two important ways. Nespor (1987) describes these functions as “(1) task definition and cognitive strategy selection and (2) facilitation of retrieval
and reconstruction in memory processes – while serving the overall function of allowing teachers to deal with ill-structured domains” (p. 321). The first function helps teachers determine which tasks will help them achieve their teaching goals. Experiences with applying certain teaching strategies play a stronger role than common knowledge about best practices in determining whether or not they will implement a specific strategy. The second function serves as a mechanism to help teachers recall personal experiences when faced with problems that they do not know how to approach.

In conclusion, teachers’ belief systems that are developed by personal experiences inform their practice. Yet due to the subjective nature of teaching beliefs, they are not always reliable when applying to specific teaching situations. It is also very difficult to differentiate between knowledge and beliefs because knowledge can evolve into beliefs. When undergraduate college students enter teacher education programs, their belief systems are met with the program’s theoretical knowledge, which plays a critical role in the development (confirming, intervening and possibly altering) of teacher candidates’ initial, espoused beliefs about teaching.

**Beliefs and Preservice Teacher Education**

Teacher candidates enter their teacher preparation with initial beliefs about teaching and learning. Some studies suggest that this is a critical time where preservice teachers address their previously formed beliefs through coursework and classroom experiences (Calderhead & Shorrocks, 1997; Fang, 1996; Joram & Gabrielle, 1998). These studies emphasize the quality of opportunities where preservice teachers reflect on their experiences are significant in alternating previously held beliefs. In response, Perry and Gerard (2002) urge the field to “consider the social construction of teaching and learning that accompanies known research and include our students’ realities into teacher preparation programs” (p. 348).
Despite the need for quality opportunities, it is challenging to alter preservice teachers’ initial beliefs without identifying the preconceptions that they bring to a program. Joram and Gabrielle (1998) identify common beliefs initially held by preservice teachers when they enter their teacher preparation programs and are often carried throughout their program unless they are challenged:

1. Preservice teachers may think that theoretical knowledge provided in their methods coursework has little value for application in the classroom. They believe that field experience is the most effective way to learn how to teach. This attitude can prevent teacher candidates from applying theoretical knowledge into their practice and understanding the rationale behind instructional practices and other student learning situations.

2. Preservice teachers enter their programs with well-established images of teaching and learning that they developed from their years as a PK-12 student. This set of experiences is influential on one’s profession understanding of teaching, learning, and students. These previous experiences are already a part of preservice teachers’ initial beliefs and are not easily changed.

3. Preservice teachers can also overestimate and underestimate their students’ abilities to learn when developing lesson plans. This perception is problematic in that the preservice teachers may not be able to recognize the challenging situations their students may encounter during a lesson. These beliefs may be rooted in their own memories of themselves as students and perceiving that their students will react in a similar way. Preservice service teachers may fall into this trap by failing to recognize the potential that each individual student brings to the classroom.
4. Classroom management is often a high priority for preservice teachers. However, experienced educators know that knowledge of fundamental concepts is also important to the profession. With a heavy focus on classroom management, preservice teachers may lack the necessary knowledge of the curriculum and instruction.

Joram and Gabrielle (1998) developed a course to change elementary preservice teachers’ initial beliefs about teaching. Classroom discussions, open-ended questionnaires, and vignettes of instructional situations were used to help teacher candidates reexamined their prior beliefs about teaching. Results from these interventions showed that half of the participants felt a change in their beliefs about teaching, learning, and students. The preservice teachers felt that they were starting to move from a teacher-directed to a student-centered teaching approach. They also saw learning as constructing one’s own learning rather than their initial beliefs on absorbing information. Finally, the participant’s viewpoint of students shifted from being a passive receiver to being an active learner in the classroom. When addressing the other half of participants whose beliefs remained unchanged several reasons were apparent. First, the researchers found that prior beliefs are difficult to change in a single course and that their teacher education program lacked the organizational knowledge of the belief systems that preservice teachers bring to the program. In support of Joram and Gabrielle’s research, Calderhead and Shorrock (1997) encourage teacher education to focus on developing a stronger understanding preservice teachers’ perceptions and attitudes towards teaching, learning, and students. They describe preservice teachers’ initial understanding of teaching as a transfer of knowledge as a problematic viewpoint that needs to be addressed to assist preservice teachers in developing deeper understandings of the various contexts of school communities and learners.
Beliefs about Teacher’s Role and Teaching

One way preservice teachers form their beliefs about teaching through an apprenticeship of observation (Lortie, 1975). Teacher candidates enter their teacher education programs with initial images of teaching shaped and strengthened by their own experience as students in the PK-12 system (Pajares, 1992; Stuart & Thurlow, 2000). These initial beliefs about teaching and the role of the teacher influence how preservice teachers learn to teach in their teacher education programs (Bullough & Stokes, 1994; Doyle, 1997; Greene & Magliaro, 2003; Lin & Spodek, 1994; Raths, 2001). Lin and Spodek (1994) discovered that preservice teachers’ images of teaching presented connections between their past experiences, present teacher education programs, and future practice (Lin & Spodek, 1994).

Pajares (1992) argues that beliefs in one’s belief system are connected and images of teaching are critical reflections of one’s beliefs. In support of Pajares’ (1992) argument, Fischer and Kiefer (2001) classify teachers’ images of teaching into three categories:

1. *Constructed Images*: These images are developed through actual classroom experiences. Teachers used reflections from students to construct their teaching image.

2. *Ideal Images*: Opposite of constructed images, ideal images are based on teachers’ early school experiences and society’s image of teachers. Typically, ideal images are developed through what the teacher thinks an ideal teacher should be like. These images are usually altered once the teacher experiences the realities of teaching.

3. *Given Images*: These images are shaped by cultural and social views about teaching. Teachers often accept these given images because they are accepted by society and
the school system. Given images can limit teachers’ creativity and professional growth.

All three – constructed, ideal, and given images overlap in one’s practice. When these images are considered useful, a teacher includes them in her practice. Clandinin (1985) studied the relationship between classroom practices and teachers’ images of teaching. He found that when teachers verbalized their images they were able to generalize from their teaching experiences and offer theoretical accounts to support their practice. Participants also made connections to their own schooling experiences when describing images that aligned with their teaching. Clandinin’s findings emphasize how images of teaching can offer insights into what teachers know and believe about teaching.

Similar to images of teaching, metaphors have also been used to represent teachers’ beliefs. Strickland and Iran-Nejad (1994) identified metaphors as a helpful tool for preservice teachers to articulate what they believed about teaching. Specifically, they argued that “the choice of metaphors enables the teachers themselves to look at their own assumptions and reorganize their learning through reflection on their choices” (p.12).

In support of Strickland & Iran-Nejad’s (1994) findings, Efron and Joseph (2001) analyzed metaphors created by public school teachers (both experienced and novice) to describe their images, beliefs, and philosophies of teaching. Efron and Joseph (2001) evaluated these teaching metaphors based on two categories: pedagogical roles and moral roles. The participating teachers’ metaphors ranged from teacher-controlled to student-centered pedagogy. Metaphors using language such as “ring leader” and “manager of a factory” reflected an elevated sense of teacher control over the class, while more constructivist, student-centered pedagogy was seen in metaphors that used words like “motivator” and “facilitator.” To categorize in terms of
morality, metaphors connected to the role of parenting. For example, one teacher used the expression “ring leader” which connects to the belief of disciplining children for the betterment of society. Metaphors that mentioned students’ emotional needs and being a good role model connected with a more nurturing and mother-like position. Despite these insights into the teachers’ beliefs about teaching, Elfron and Joseph concluded that metaphors cannot be sufficient for understanding the nature of teachers’ teaching philosophies. In regards to teacher education programs, they can be used to help teacher candidates construct their own beliefs and practices rather than completely accepting ideal images of teaching.

Research on beliefs about teaching is heavily focused on teacher education, where preservice teachers are confirming and alternating initial beliefs about teaching. Kagan (1992) suggested that preservice-teachers’ beliefs about the role of teachers can filter new knowledge presented in teacher education programs. Therefore, it is a necessary precondition to know preservice-teachers’ entering perceptions of effective teaching in order to develop experiences where teacher candidates can confront their beliefs (Minor, Onwuegbuzie, Witcher, & James, 2002).

Bullough and Stokes (1994) found that preservice teachers’ initial images and metaphors of teaching illustrated a romantic view of teaching. These images emphasized emotional factors such as nurturing children and placed less emphasis on instruction. The researchers found that the preservice teachers’ images often did not fit the realities of schooling including the diverse student background and needs. When preservice teachers gained classroom experience, they were confused and disappointed by the challenges pushes against their existing beliefs about teaching. Initially optimistic metaphors such as “guide” and “bridge builder” changed during
field experiences when they encountering situations that conflicted with their existing belief systems.

Bullough and Stokes (1994) argued that placing more importance on the caring of students than instruction was a primary reason for dissatisfaction during the preservice teachers’ beginning field experiences. Brookhart and Freeman (1992) also noted that preservice teachers entered their beginning field experiences with a high value in nurturing and placed less value on students’ academic goals. One reason for this elevated love-of-children mentality may be due to preservice teachers’ experiences with children before entering their teacher education programs such as babysitting, camp counseling, and teaching in Sunday school.

Along with developing images and metaphors about a teachers’ role, the characteristics preservice teachers use to describe a “good” teacher play a critical role in the development of their teaching beliefs and pedagogy. Greene and Magliaro (2003) found that teacher candidates use personal characteristics to describe their ideal image of a teacher. Similarly, Minor et al. (2002) noted that preservice teachers rated student-centered pedagogy highly in their image of effective teaching.

In both studies (Greene & Magliaro, 2003; Minor et al., 2002), the participants’ beliefs about teachers were highly influenced by the participants’ own teachers. Memories from their own schooling experiences created deep emotional connections to the kind of teacher the preservice teachers wanted to become. Interpersonal characteristics were rated as more important than academic qualifications and educational backgrounds. Preservice teachers’ value in relationship building and connections with their students is extremely important to teacher educators. Holt-Reynolds (2000) argue that teacher candidates are typically disinterested in the
theoretical underpinnings of instructional practices. Rather they are interested in the practical application of teaching strategies.

There are a variety of factors that influence preservice teachers’ beliefs about teaching. Previous schooling experiences and societal norms of good teaching are strong influences on preservice teachers’ beliefs about teaching. “Teachers approach teaching with various ideas and images of what teachers’ work is like based on their own individual past experiences, including previous work experience, experiences as a parent or childhood experiences of school” (Calderhead & Shorrock, 1997, p. 15). Britzman (2003) indicated that teacher candidates bring their own educational biography and common images of a teacher’s role to their teacher education program.

Hollingsworth (1989) argued that innovative and supportive mentor teachers are critical agents in preservice teacher belief transformation. In his study, a constructivist teacher-education course was taught with a group of preservice teachers. Four out of seven participants made adjustments to their preexisting beliefs specifically on classroom management and student learning. When faced with challenging classroom situations, they were able to restructure their practice and attitudes toward students. The remaining three participants in the course did not revise their preconceived beliefs about teaching and learning. In their field experiences, they adopted an authoritarian teaching style, which was similar to their mentor teachers and they did not suggest any revisions to their lesson plans or classroom management style based on their constructivist coursework. The researchers noted that little or no changes to one’s beliefs related to the mentor teachers’ teaching styles and what the preservice teachers already believed about teaching. Preservice-teachers’ existing beliefs existing beliefs are left unchallenged when they
“learn certain techniques at a superficial level without understanding the underlying instructional rationales that would guide their use” (Anderson & Holt-Reynolds, 1995, p. 9).

Teacher educators can help teacher candidates to re-examine their prior beliefs through discussion and other reflective activities in teacher education programs (Wade, 1994). However, we lack studies about the ways in which preservice teachers’ beliefs change (Pilitsis & Duncan, 2012). Therefore, we lack details about how teacher education can support preservice teachers’ developing beliefs and specifically what activities support this belief development. Further research is needed to examine the relationship between instructional activities in teacher education programs and influence on preservice teachers’ beliefs about teaching and learning.

**Practitioner Inquiry in Teacher Education**

Cochran-Smith and Lytle (1993; 2001) argue that inquiring into one’s practice may invite teacher candidates to consider what they are doing and why they choose to teach, learn, and lead in certain ways. Problematizing one’s field experiences may help teacher candidates re-evaluate prior beliefs about teaching. However, we lack studies that have studied the connection between inquiry in teacher education and its influence on preservice teachers’ beliefs about teaching and learning.

The use of inquiry in teacher education programs is challenging (Carroll & Yarger-Kane, 2000; Cochran-Smith, Barnett, Friedman, & Pine, 2009; Dawson, 2007; Donnell & Harper, 2005; Price, 2005; Schulz & Mandzuk, 2005). Advocates for practitioner inquiry emphasize the power of adopting an inquiry orientation toward one’s practice (Cochran-Smith & Lytle, 2001). However, a review of empirical research focused on how classroom inquiry is introduced to preservice teachers, illustrates how preservice teachers experience inquiry and incorporate inquiry into their practice (i.e. Carroll & Yarger-Kane, 2000; Donnell & Harper, 2005; Levin &
This review of literature examines the process, experiences, and outcomes of inquiry in teacher education programs to illuminate the benefits and challenges of pre-service teachers engaging in practitioner research.

**The Inquiry Process**

Introducing preservice teachers to the inquiry cycle is a difficult task (Donnell & Harper, 2005; Schulz & Mandzuk, 2005). Ross (1987) recommends providing support to teacher candidates as they begin developing wonderings and selecting appropriate questions. Cochran-Smith et al. (2009) argue that stronger inquiries are based on authentic tensions and beliefs of preservice teachers. Through the analysis of preservice teachers’ inquiry papers, Cochran-Smith et al. found that stronger inquiries began with a question about classroom tensions focused on one’s experiences and beliefs. The stronger inquiry papers also integrated findings from empirical research and theories. Weaker papers asked questions on the impact of a particular instructional technique or strategy.

When preservice teachers start inquiring into their practice, Ross (1987) argues that methods for data collection and analysis need to be modeled for teacher candidates. Additionally, Carroll and Yarger-Kane (2000) suggest devoting more seminar session time to work with teacher candidates on their inquiries. To provide more in-depth methods for assessing student learning and studying one’s inquiry wondering, Ross (1987) encouraged time for discussion and consultations with university instructors. However, Cochran-Smith et al. (2009) found that requiring teacher candidates to use specific strategies to make classroom decisions did not guarantee deep reflection or changes in candidates’ beliefs and practices. The preservice teachers that were the most successful with inquiry had real ownership over their wonderings developed a strong rationale based on their university coursework and current research. Carroll and Yarger-
Kane (2000) also recommend sharing former teacher candidates’ inquiries as models to offer additional support.

Along with sharing former inquiries, current teacher candidates should share their classroom inquiries with others (Carroll & Yager-Kane, 2000; Ross, 1987). Ross (1987) found that the opportunity to share inquiries with others gave preservice teachers a sense of purpose for doing their research. Ross argues that the conversations sparked through the sharing of classroom inquiries can lead to future wonderings and possible inquiry topics. Similarly, Cohen and Alroi (1981) reported that preservice teachers saw presenting their inquiries as a glimpse of their development gained through their inquiry experiences.

Challenges with Inquiry


Schulz and Mandzuk (2005) discovered that the ambiguity of the inquiry process created a sense of uneasiness for preservice teachers. In Schulz and Mandzuk’s study, preservice teachers struggled to embrace the openness of inquiry. Donnell and Harper (2005) also noted that not all preservice teachers fully embraced the inquiry process. Donnell and Harper found a continuum of understandings describing inquiry ranging from rejecting the concept to fully embracing inquiry. Teacher candidates who thought inquiry was redundant felt that they were already reflecting on their practice and engaging in inquiry before taking a research course. They felt that inquiry was already a natural part of their practice. Others felt the process was rushed by
their instructors. They explained that they were asked to problematize their practice before knowing how to teach.

Cochran-Smith, et al. (2009) and Donnell and Harper (2005) noticed that defining inquiry was also a challenging task for teacher candidates. Preservice teachers in both studies presented unrelated ideas about research and inquiry. Preservice teachers either saw inquiry as looking at their practice as a fluid and ongoing process or as a linear process that was unconnected to their instructional decisions (Cochran-Smith, et al., 2009). Donnell and Harper argued that seeing teaching and inquiry as two separate entities highlighted preservice teachers’ struggle with defining inquiry.

Carroll and Yarger-Kane (2000) argue that the disconnect between inquiry and research can lead to misunderstandings about the purpose of inquiry. Teacher candidates reported that inquiry was taking away from lesson planning and they viewed inquiry as another burden to their tall workload. Along with adding to preservice teachers’ responsibilities, Levin and Rock (2003) noted that preservice teachers were frustrated with the time constraints of their program. Limited time in the classroom restricted the amount of time that preservice teachers had to discuss their inquiries and collaborate with their corresponding teachers. Donnell and Harper (2005) also found that preservice teachers struggled to recognize how inquiry could help address practical concerns. When debriefing about classroom experiences, they did not tend to examine their daily practice.

Donnell and Harper (2005) argue that teacher educators should consider how teacher candidates respond to inquiry related coursework. Donnell and Harper discovered that preservice teachers saw their inquiry course as preparation for writing a research paper rather than learning through classroom practice. Similarly, Cochran-Smith et al., (2009) presented a challenge with
including an inquiry rubric. Instead of inquiring into one’ practice, preservice teachers inquired into the rubric and grading measurements. Preservice teachers were focused on completing the required elements based on the rubric components rather than viewing inquiry as an integral part of teaching (Cochran-Smith, et al., 2009). The rubric was originally created to offer support. Unfortunately, the scoring rubric disconnected teaching from learning. Cochran-Smith et al. found that preservice teachers developed a procedural understanding of inquiry rather than focusing on the ongoing inquiry cycle.

Donnell and Harper (2005) found that challenging the status quo of one’s context was another concern for preservice teachers conducting inquiry. While preservice teachers were often encouraged to engage in inquiry to critique existing practices and challenge inequities in their own teaching contexts, they feared to encounter resistance when deciding to use inquiry in their own classrooms. Schulz and Mandzuk (2005) also reported that teacher candidates feared school resistance to inquiry. They identified ways in which inquiry presented a challenge to the current culture and practices of the school. Specifically, they worried about the disconnect between the culture of the schools and the advocacy for inquiry in their teacher education program.

Along with site challenges, Donnell and Harper (2005) reported that preservice teachers spoke of competing agendas in their teacher education programs. They often felt pressure to meet multiple requirements in their program, which highlighted the competing tensions between their university coursework and field experiences. The teacher candidates’ frustrations exemplified that inquiry was not a cohesive part of the program. The researchers urge university faculty to engage in more meaningful conversations with supervisors and corresponding teachers on a regular basis.
Schulz and Mandzuk (2005) emphasized the concerns teacher candidates raised about sustainability as they learned more about the daily realities of being a teacher. They wondered if inquiry was a realistic component of a novice educator’s experience with the demands of being a new teacher. Starting with smaller inquiry wonderings and questions was a common solution to this concern. Schulz and Mandzuk (2005) reported that beginning teachers felt that inquiry defined themselves as a professional and felt that inquiring into and being thoughtful about one’s practice was their professional responsibility.

**Benefits from Inquiry**

Despite the challenges with the process of inquiry and continuing to inquire into one’s practice, Schulz and Mandzuk (2005) reported that teacher candidates identified benefits from their inquiry experiences. The three main benefits of engaging in inquiry at the preservice teacher level include increased awareness of students’ needs, connected coursework and field experiences, and improved understandings about the role of teachers (Dawson, 2007; Hyland & Noffke, 2005; Levin & Rock, 2003; Schulz & Mandzuk, 2005).

**Inquiry as a Lens.** Kagan (1992) argued that preservice teachers do not shift their focus to the needs of students until late in their teacher education programs. At first, preservice teachers are primarily concerned with classroom management issues and their own teaching adequacy (Fuller, 1969). Rock and Levin (2002) found that it takes time for preservice teachers to make this shift from a teacher-centered to a student-centered approach and classroom inquiry can help preservice teachers call attention to their students’ needs. This shift in preservice teachers’ focus presents inquiry is seen as a lens to consider student learning (Dawson, 2007; Levin & Rock, 2003).
Levin and Rock (2003) noticed that concerns of the preservice teachers in their study were focused on students’ needs. The researchers noted that preservice teachers’ collaborative inquiries with mentor teachers pushed the teacher candidates to look beyond the novice concerns of teaching. Similarly, Haberman (1992) reported that classroom inquiry required teachers to interact more with students and therefore increased their awareness of student’ needs. Haberman’s research was conducted with in-service teachers, but the study’s implications support the act of engaging preservice teachers in the process of inquiry to help preservice teachers’ attend more closely to their students’ learning.

Wolkenhauer and Hooser (In Press) also supported the theme of inquiry as a way to address the needs and perspectives of students by describing inquiry as a tool for customizing practice to meet students’ learning needs. With a student-centered approach to teaching, conducting inquiry can improve classroom practice by helping preservice teachers attain a better understanding of the curriculum, school community, and student needs (Dawson, 2007; Hyland & Noffke, 2005; Levin & Rock, 2003; Schulz & Mandzuk, 2005).

**Inquiry as a Bridge.** Secondly, Dawson (2007) describes inquiry as a bridge between coursework and field experiences. Specifically, classroom research provides a context for preservice teachers to practice asking questions and reflective thinking (Ross, 1987). Classroom inquiry requires preservice teachers to synthesize what they have learned from asking questions, collecting data, and analyzing information based on their classroom experiences. Dawson (2007) found that preservice teachers’ inquiry findings paralleled concepts addressed in their teacher education program’s coursework. Knowledge gained in university coursework was linked to the preservice teachers’ knowledge gained from classroom experiences. Providing preservice teachers with authentic experiences helped them make connections with theoretical concepts.
Furthermore, Dawson argues that weaving inquiry into coursework and field experiences can support the recognition of inquiry as a mindset of teacher education programs.

**Inquiry as a Light Bulb.** The third outcome refers to inquiry as a light bulb (Dawson, 2007; Donnell & Harper, 2005; Rock & Levin, 2002). Dawson (2007) reported that through inquiry, preservice teachers began to develop conceptual changes. This change in thinking offered a new outlook on practice where preservice teachers became more comfortable with not having all of the answers. Similarly, Donnell and Harper (2005) noted that inquiry helped preservice teachers address the problems presented in their classrooms.

Rock and Levin (2002) suggest that inquiry encourages preservice teachers to take their beliefs about teaching and learning and put them into practice. They found that planning and conducting classroom inquiries helped preservice teachers to develop clearer images of what they saw themselves doing in their future classrooms. Teacher candidates were able to enact their new understandings through their classroom inquiries. The reflective nature of practitioner inquiry helped the preservice teachers gain a stronger awareness of themselves as educators and espoused beliefs.

Inquiry is also a way for teachers to contribute to the larger educational community (Schulz & Mandzuk, 2005). Cochran-Smith and Lytle (1993) reminded us that “the voices of teachers themselves, the questions that teachers ask, and the interpretive frames that teachers use to understand and to improve their own classroom practice” are often missing from research conducting by academic organizations (p. 7). Wolkenhauer and Hooser (In Press) argue that classroom inquiry offers a platform to raise teachers’ voices by establishing their professional identities and promoting leadership in local and global contexts.
Goals for Practitioner Inquiry in Teacher Education

The literature on practitioner research in teacher education provides a more nuanced understanding of the learning opportunities and challenges preservice teachers face when conducting classroom inquiry. Despite the difficulties with conducting inquiry, the learning outcomes of practitioner research describe several benefits for engaging teacher candidates in their own classroom inquiries (Cochran-Smith et al., 2009; Dawson, 2007; Donnell & Harper, 2005; Levin & Rock, 2002; Rock & Levin, 2002). Dawson (2007) describe inquiry as a lens, bridge, and light bulb for preservice teachers’ practice and professional development (Dawson, 2007).

The goal of practitioner research is for preservice teachers to view teaching as reflective inquiry (Dawson, 2007; Ross 1987). When preservice teachers view teaching as searching for answers, inquiry is understood as a linear process at a procedural level. Cochran-Smith et al. (2009) argue that viewing inquiry as a scientific process is problematic. Yet, Carroll and Yarger-Kane (2000) suggest that if preservice teachers’ shift their understanding of teaching to question raising and exploration, inquiry can become an integral part of a teacher’s practice. Levin and Rock (2003) add to this argument by supporting the need for preservice teachers to develop an understanding of teaching as integrally related to research. By planting the seeds, teacher educators can equip preservice teachers with strategies to problematize their own practice and develop a commitment toward generating knowledge about teaching (Donnell & Harper, 2005).

Implications for Inquiry in Teacher Education

The process, challenges, and benefits of preservice teachers engaging in classroom research present many implications for teacher educators. Research supports the use of practitioner inquiry with preservice teachers (Schulz & Mandzuk, 2005; Wolkenhauer & Hooser,
In Press). Ideally, Rock and Levin (2002) recommend introducing inquiry at the beginning of one’s teacher preparation program to invite preservice teachers to question their experiences, practices, and beliefs throughout their teacher education program.

Carroll and Yarger-Kane (2000) advocate for incorporating more inquiries into early field experiences to help preservice teachers make the connection between inquiry and teaching. However, Ronfeldt and Reiniger (2002) identified concerns with adding more field experiences. They found that more experiences did not guarantee a better experience for preservice teachers. Schulz and Mandzuk (2005) suggest that early experiences should challenge teacher candidates to ask questions about their practice and see inquiry as a way to address practical concerns about the classroom.

Donnell and Harper (2005) found that acknowledging and addressing preservice teachers’ practical concerns supported their ability to see the use of inquiry as a problem-addressing approach. The researchers suggest that additional inquiry experiences will also change the current practice of implementing a procedural activity completed toward the end of one’s program experience. Cochran-Smith et al. (2009) warn teacher educators that assigning an inquiry to student teachers at the end of their program is not as beneficial for supporting new teachers as they learn to problematize their practice. This practice of introducing inquiry late into a teacher education program supports the notion of inquiry as a project and time-bound assignment. Researchers recommend integrating inquiry across a variety of experiences to encourage preservice teachers to see teaching as inquiry (Dawson, 2007; Rock & Levin, 2002; Ross 1987).

Donnell and Harper (2005) encourage a stronger bridge to be formed between university coursework and field experiences as more field experiences are provided (Donnell & Harper,
Dawson (2007) note that a culture shift must occur in which inquiry is encouraged throughout one’s teacher education program. Levin and Rock (2003) also suggest providing additional time for preservice teachers to engage in inquiry (Levin & Rock, 2003). Adequate time and support are necessary for preservice teachers as they develop their wonderings and inquiry into their practice.

Furthermore, Levin and Rock (2002) suggest that teacher educators designing coursework need to consider their students’ current development levels. Preservice teachers are at an early stage of their professional growth. Making adjustments based on preservice teacher needs and their feedback emphasizes the importance of flexibility in inquiry-orientated teacher education programs (Cochran-Smith et al., 2009).

Research on practitioner inquiry in teacher education programs argues for more field experiences, a clearer understanding for preservice teachers, stronger connections to coursework, and more scaffolded support to meet the needs of preservice teachers (Cochran-Smith et al., 2009; Dawson, 2007; Donnell & Harper, 2005; Levin & Rock, 2002). Future research should explore the relationship between inquiry and preservice teachers’ beliefs about teaching. Specifically, we do not know how practitioner inquiry influences teacher candidates’ beliefs about teaching and learning.

**The Potential Contribution of This Study**

This study examines the influence of practitioner inquiry on teacher candidates’ beliefs. Though there is a clear definition of beliefs (Richardson, 2003), understanding where initial beliefs come from (Lortie, 1975; Pajares, 1992), we know little about how practitioner inquiry influences teacher candidate belief development. In particular, we lack research-based understanding of how teacher candidates’ beliefs about teaching and learning are influenced by
their practitioner inquiry experiences. In the growing field of teacher education research, studies about how inquiry influences teacher candidates are starting to emerge (Hyland & Noffke, 2005; Levin & Rock, 2003; Parker et al., 2016; Rock & Levin, 2002). However, at the present, this literature falls short of describing how teacher candidates drawn upon their inquiry experiences when shaping their beliefs about teaching and learning.

In examining teacher candidates during their PDS internship, I focused on how practitioner inquiry experiences influenced the development of their beliefs. This focus on practitioner inquiry in relation to belief development is important because it is a critical component of many preservice teacher education programs and potentially creates opportunities for both academic and practitioners working in teacher education. By investigating practitioner inquiry related to preservice teacher belief development, this study offers new insights into the use of practitioner inquiry in teacher education as a means to support belief development (Chapter 4). Results have potential implications for future research about and practice in teacher education (Chapter 6).
CHAPTER 3

METHODOLOGY

The purpose of this phenomenological qualitative research study was to explore the influence of practitioner inquiry on teacher candidates’ beliefs about teaching and learning. The results of the study contribute to the literature on the use of practitioner inquiry with preservice teachers and teacher candidate beliefs. In seeking to understand teacher candidates’ experiences with practitioner inquiry, the study addressed two research questions: 1) What is the influence of conducting classroom inquiry on teacher candidates’ beliefs about teaching? 2) What aspects of inquiry, if any, were most influential in changing beliefs?

This chapter describes the study’s research methodology and includes discussions around the following areas: (a) rationale for the research approach, (b) description of the study context, (c) description of the research participants and selection process, (d) overview of the research design, (e) methods of data collection, (f) analysis and synthesis of data, (g) ethical considerations, (h) issues of trustworthiness, and (i) limitations of the study. The chapter culminates with a concluding summary of the methodology.

Rationale for Qualitative Research Design

The intent of qualitative research is to examine social situations or interactions in order to develop a holistic understanding of one’s experiences (Bogdan & Biklen, 2007; Maxwell, 2013). Qualitative methodology emphasizes discovery and description with a focus on understanding the meaning of a phenomenon. Rather than testing a hypothesis, the objective of quantitative research, the present study was interested in the relationship between engaging in practitioner inquiry and teacher candidates’ beliefs about teaching. Using strictly qualitative methods allowed me to elicit rich data, which was necessary to address the proposed research purposes.
Rationale for Phenomenology Methodology

Within the framework of a qualitative approach, the study was most suited for a phenomenological design. As a form of research methodology, phenomenology is focused on human experiences (Baptiste, 2016). Researchers conducting phenomenological studies are interested in analyzing a phenomenon in order to understand the structures that make up one’s experience (Moustakes, 1994; Van Manen, 1990). Therefore, the purpose of phenomenology is to grasp the meaning of an experience by engaging in a direct contact with individuals that have lived the experience or are currently living the experience. The present research fit well with this research methodology because it sought to better understand how the phenomenon of conducting practitioner inquiry influences teacher candidates’ beliefs about teaching and learning.

Every effort was made to use the research participants own words to describe their experiences. Additional data were collected to provide insight into their descriptions and to align my interpretations of what their words meant. By using the participants’ voices, the essence of one’s experience was more clearly articulated in the study’s findings and contributed to the implications of those findings.

Study Context

This study investigated the experiences of elementary teacher candidates in their final semester of their PreK-4 teacher education program. This group of teacher candidates was a part of a Professional Development School (PDS) partnership. Committing to this program entailed that interns followed the local school district’s academic year, which was longer than the university academic calendar. Interns in this PDS began their internship two weeks before the school year started in the middle of August and stayed in their assigned classrooms until the last day of school in June. The year-long experience provided interns an opportunity to experience a
full year of co-teaching under the guidance of master teachers, expert supervisors, and methods instructors and to observe, first-hand, practices in classroom management, curriculum design, instructional methods, and student learning across an entire school year.

In this PDS, the community uses terms that differ from many traditional teacher education programs. Pre-service teachers in the PDS are known as “interns.” This term is significant because it emphasizes the year-long commitment the interns make to their students, school sites, local community, the program, and their own professional development. Graduates of the intensive year-long internship have gone on to be highly-recruited teacher candidates and successful teachers around the country.

PDS supervisors are known as “Professional Development Associates” (PDAs). PDAs are hybrid educators (Zeichner, 2010) that come to supervision from a variety of roles. The term hybrid educator was used in this context to describe supervisors that carry a variety of different roles. PDAs consist of released classroom teachers, university faculty, graduate students, and retired teachers. Rather than the traditional university supervisor, supervising PDAs visit each intern at least twice a week and spend about two hours working with each intern. Cooperating teachers are called “mentors.” Mentors provide interns with daily support and they are an essential part of the school-university partnership. Together the intern, PDA, and mentor form a collaborative “triad.” They meet at least twice a semester to establish positive relationships, promote professional growth among all members, and support the intern’s development into a reflective practitioner.

It is important to note that I was a supervising PDA during this study’s data collection phase. In the fall semester, I supervised three interns and collaborated with other PDAs as a member of the social studies methods team. In the spring, I continued to supervise the same three
interns, while leading inquiry focused weekly seminars with a team of PDAs. My role in the PDS has implications for this study, specifically in my participant selection, which is discussed further below.

For the 2016-2017 academic year, each methods course met once a week for two to three hours. Once a week, interns were pulled out of their classrooms to attend a day of methods classes including three of the four methods courses. On an additional day, interns attended their fourth methods course after school. The interns were split into two cohorts in order to decrease the instructor to student ratio and to fit into the classroom. Typically, one cohort was attending methods classes, while the other cohort remained in the classroom. All of the methods courses were taught in elementary school classrooms around the district. This physical space was one representation of the partnership between the university and local school district.

Engaging in inquiry was a theme that ran through the PDS curriculum from the first day of the internship. The inquiry cycle was first introduced in methods courses during the fall semester of the year-long PDS experience. Methods instructors used the inquiry cycle during the planning and implementing their own instruction. In all fall methods courses, including science, math, social studies, and classroom learning environments (CLE), the curriculum planners were also the course instructors. The curriculum planners’ own inquiry stance and value of inquiry were clearly seen in the course readings, activities, discussions, and especially in the assignments they created.

Each methods’ course assigned specific inquiries into different elements of teaching and learning during the fall semester. In CLE for example, the instructors planted the seeds of inquiry by explicitly introducing the inquiry cycle (Cochran-Smith & Lytle, 1993). The cycle was introduced with a clear definition of inquiry, the process of the cycle, and examples of a teacher
inquiry. To easily reference inquiry, posters of the inquiry cycle were kept on display in the methods classroom for the entire semester. The CLE assignments engaged interns in two rounds of the inquiry cycle (see Figure 3-1).

![Inquiry Cycle Diagram](image)

**Figure 3-1: Inquiry cycle (Adapted from Dana, Thomas, & Boynton, 2011, p. 5)**

First interns focused on an aspect of classroom management. This topic was selected for the interns by the CLE teaching team. Interns were asked to select an aspect of classroom management to study. Interns developed inquiries focused on transitions, student independence, and promoting classroom community. Interns spent time observing and taking collecting data across three different grade levels. Here interns were introduced to systematic observation as a means of data collection. Anecdotal notes were one form of data collection often used by interns. Interns were encouraged to look at their observational notes to develop claims. This cycle helped interns broaden their wonderings about the classroom, while still thinking of ways to support individual students.

In the second cycle, interns used their new understandings about classroom management to develop a second inquiry focused on the specific learning needs of an individual student. The cycle was known as the Individual Learner Inquiry (ILI). This second inquiry was up to each individual intern to select a student that they found worthy of investigation based on tensions in
their own practice. Interns spent weeks collecting data and implementing strategies with a particular student. Interns then shared their experiences and learning statements in a small group setting similar to an Individualized Education Program, IEP team meeting.

These two cycles of inquiry invited interns to start thinking about how educators are life-long learners and continuously problematizing their own practice to improve their own instruction and enhance student learning. The two cycles also allowed interns to develop real ownership over their inquiry wonderings and helped them realize how inquiry could address practical concerns (Cochran-Smith et al., 2009; Donnell & Harper, 2005).

Science, math, and social studies method course instructors also approached their courses from an inquiry stance. In science methods, interns used a KLEWS chart to teach inquiry with their students. A KLEWS chart is a science specific KWL chart that helps you move students through all the steps involved in scientific reasoning. K stands for what students know, L stands for what students learned from evidence, E stands for evidence they learned through observation, w stands for what students wonder about, and s stands for scientific understanding. In math, the instructors promoted attention to exploring children’s thinking and student-generated ideas and strategies as a priority. Interns were encouraged to inquire into their students’ mathematical understandings. In social studies, small groups of interns conducted an inquiry on their school communities to learn more about forces inside and outside of the school that impact student learning. Research on each school’s demographics, district’s beliefs, and community partnerships helped interns to understand more about their school’s culture and to appreciate the contextual elements of their students’ lives. As seen through the program’s methods courses, inquiry was a signature pedagogy used throughout the PDS experience.
In December, PDS interns started a larger inquiry that continued throughout the spring semester. One of the primary texts used by the PDS program to guide interns through their inquiries was Dana and Yendol-Hoppey’s (2014) *The Reflective Educator’s Guide to Classroom Research*. In the text, the authors describe eight passions: a child, curriculum, content knowledge, teaching strategies/techniques, beliefs about practice, personal/professional identity, social justice, and context. These eight passions represent the merge between the complexity of teaching and felt difficulties by classroom teachers (see Figure 3-2).

![Diagram](image)

**Figure 3-2:** Developing a wondering (*Adapted from Dana & Yendol-Hoppey, 2014, p. 30*).

In Dana and Yendol-Hoppey’s (2014) text, each of the eight passions is presented with illustrated examples of practitioner inquiries. At the end of each section, there are a set of exercises to help teachers further explore the passions and which areas may be suitable for the development of their wonderings. Prior to attending a fall culmination professional development session, each intern was required to read about all eight passions and complete at least one of the passions’ exercises. At the professional development session, interns generated lists of potential inquiry wonderings. However, it was not a requirement to directly connect their inquiry topics
with a specific passion about teaching. In fact, interns were encouraged to consider problems of practice and how their interests overlapped among multiple passions. Interns did not use these passions as categories, but rather as triggers to explore dilemmas, frustrations, and interests that were surfacing in their teaching practice. The PDA team made it clear that an inquiry question could overlap with several categories. Instead of finding a specific topic that matched one of the eight passions, the passions helped interns conduct a careful and critical analysis of their teaching and explore a variety of wonderings to potentially pursue.

In support of the PDAs’ approach, Price and Valli (2005) suggest that passion is an important element of practitioner inquiry. Yet, they caution against solely focusing on teacher candidates’ passions. “Passion must be tempered and informed by reason” (p. 69). Teacher educators can support teacher candidates by helping them to disrupt their own assumptions about teaching and learning. If these initial assumptions are not challenged, they may limit preservice teachers from developing new understandings and seeing different viewpoints.

The interns’ inquiries continued to be the focus of weekly spring seminar meetings and reflective journal updates. Once a week, all of the PDS interns met with the supervising PDAs for a weekly seminar focused on one of four main topics: planning and implementing instruction, understanding others, building an inquiry stance, and growing as a professional. Nine seminars were focused on the inquiry cycle, which responds to Carroll and Yarger-Kane’s (2000) suggestion for devoting more seminar time to work with teacher candidates on their inquiries. During the spring 2017 semester, an inquiry seminar team consisting of a reassigned teacher, another graduate student, and myself prepared and lead the inquiry focused seminars. After each seminar, interns were assigned a weekly inquiry update. PDS interns created a virtual journal through Google documents to share with their classroom PDA, mentor, and the lead inquiry
instruction. A weekly update submitted in this journal encouraged the intern to write reflectively about their inquiry experience and to identify areas in which they needed support. Through the seminar meetings and inquiry updates, PDAs provided feedback for interns as they developed a wondering, collected data, implemented strategies, analyzed their data and prepared to share their inquiries with the local community.

During the spring semester, PDAs guided interns throughout the five phases of the inquiry cycle: finding my focus, collecting my data, making sense of my data, presenting my inquiry, and developing an inquiry stance (Dana & Yendol-Hoppey, 2014). Supervising PDAs met with individual interns to provide consultation and allow time for discussion (Ross, 1987). In the first phrase, PDA instruction was focused on helping interns to generate wonderings and refine their wonderings into inquiry questions. By the end of January, all interns had topic and started collecting baseline data. The collection of baseline data introduced phase two, data collection. During the data collection phase, interns were introduced to a variety of data collection strategies such as interviews, surveys, systematic observations, field notes, and artifacts. As interns started to collect data in their classrooms, PDA introduced data analysis methods to help interns look at their data from multiple perspectives and interpret their findings. Developing claims across data sources moved interns into the sharing phase.

In April, all interns were required prepare a presentation of their spring inquiries to share at a Spring Inquiry Conference. Classroom teachers in the district and other university students were also invited to share their inquiries. This culminating experience invited interns to engage in scholarly conversations with other educators in the district including classroom teachers, administrators, and fellow teacher candidates.
The Research Sample

A selective criterion sampling procedure was used to select research participants for this study as recommended by Sandelowski (1995) when sampling decisions are made before starting a study. In order to the target phenomenon under study, the study’s participants were undergraduate seniors enrolled in the K-4 Valley Professional Development School. These teacher candidates were known as interns. Interns in the PDS were required to complete a spring inquiry as part of their internship coursework. To screen the 51 interns in the PDS, I asked Professional Development Associates (PDAs) to recommend interns for the present study. The supervising PDAs were in a position to recommend interns because of their close working relationship with them. Supervising PDAs spent at least two hours per week in the classroom with each intern.

At a weekly PDA meeting, I introduced my study to the PDA team. I followed up this introduction with an email asking PDAs to recommend interns that they believed met the following requirements:

- Able to articulate his or her experiences within the PDS and what these experiences mean to him or her
- Able to describe his or her emotions and understandings
- Willing to share struggles and potential challenges from his or her inquiry

I explained to the PDA team that I was not necessarily interested in talking to the most successful interns. Instead, I was interested in finding participants that would be candid and forthcoming about their frustrations and successes with their inquiries. By asking PDAs to recommend interns that would share about their inquiry experiences rather than ask for
recommendations based on the strength of each intern’s instructional practices or inquiry. 

wondering, I developed a participant pool that included interns with a variety of experiences.

My screening criteria of the fifty-one interns included the likely richness of each intern’s comments during the interviews and the willingness of each intern to participate in my study. I did not review preliminary evidence other than information about the interns’ willingness to discuss their experiences provided by classroom PDAs when asking for recommendations.

Purposeful sampling was used to discipline my research design. Eighteen interns were recommended by their supervising PDAs as possible research participants. In addition to nominations, PDAs also shared some concerns with a few of the nominations. For example, a PDA shared that one of the individuals she nominated was able to articulate her experiences, but she was often unreliable with meeting times. The PDA was concerned that she would not show up to scheduled interview times.

I placed all of the willing participants in an Excel spreadsheet with their PDA, potential concerns based on PDA feedback, school placement, and grade level. Seven of these interns were immediately removed from the participant pool; Three were removed due to interning at the school I supervised in, another two were removed for attending the same international spring break teaching experience in Columbia, Bogota that I supervised with my advisor, one was removed because I was her Social Studies methods grader, and the last one was removed due to a PDA’s concern that she did not respond to emails in a timely manner and she might have missed scheduled interview times.

I decided to remove those seven interns because I thought our prior shared experiences might negatively influence their ability to share openly and freely about their experiences in their PDS internship. In particular, I was concerned about inviting interns at my supervising school
site to participate in the study. I often observed them co-teach with the interns I directly supervised and offered additional support at weekly intern meetings. Intern meetings were one-hour meetings held at each school site with all supervising PDAs and interns working in the school. Interns that I did not directly supervise, but were interning at my school site, saw me as another supervisor and mentor. I felt that our interactions would make it challenging for them to speak freely about how their supervisors including myself were influencing their beliefs about teaching.

I confirmed with each participant multiple times that participation in the study would not influence their inquiry grade and standing in the PDS program. However, I was worried that my former position as their social studies’ methods grader and school PDA would make it challenging for those seven interns to move past this during our interview conversations.

Working with the two interns that traveled to Colombia with me over spring break was also problematic. Conversations during our traveling gave these interns insider knowledge about my research questions and current progress with my dissertation proposal. As friendly and talkative as they were, I could not make a solid argument for keeping them in the sample pool.

The last two participants removed from the participant sample pool were not at my school site or had any interactions outside of the PDS internship. However, I was the social studies methods grader for one. I felt that my role as an evaluator in that fall methods course would create an awkward tension when asking the intern to share openly about her coursework. The final intern was one that I was not familiar with. She was not at my school site and not in my methods class. Her PDA initially recommended her through an email, but then told me in person that she was worried about her recommendation. Her PDA shared that this intern often did not respond to emails and would forget to tell her PDA about changes in her classroom schedule.
Her voiced concerns made me worried that this intern might be late or not show up for scheduled interview meetings. Due to the study’s time constraints, I could not take this risk and she was removed from the participant sample pool.

After reflecting on potential concerns with the recommended intern list, I identified eleven remaining interns suitable for my data collection. These eleven interns were not interning at the school site where I supervised, none had traveled out of the country with me, and I was not their methods coursework grader. I felt these three factors were extremely important to consider when thinking about the trustworthiness of the data. Using interns that did not meet these restrictions could have jeopardized my research. From the Excel table, I emailed five interns from the remaining eleven. Each intern that was initially contacted was working with a different PDA. My purpose was to attempt to create a research participant sample that included interns working with a variety of PDAs.

After the first round of emails, two of the five interns agreed to participate in the study. One intern was supervising in a third-grade classroom and the other in a second-grade classroom. For my second round of invitation emails, I invited three different interns to participate in the study. Again, I made sure to invite interns that were working with different PDAs. For the second round, I asked interns from different grade levels to broaden the range of participant experiences. Two more interns agreed to participate in this study. In round three and four, I invited one more intern in each round. I waited 48 hours until emailing more potential participants in round five. A fifth intern agreed to participate in my study during the fifth round of emails. My research participant sample was completed after the fifth round when all eleven possible participants were invited to participate in the study and five willing participants were identified.
When I invited interns to participate in my study, I emailed each intern individually and asked if they were willing to participate. In the email, I told the interns that their information would be kept confidential to the extent possible. I also attached a Consent for Research form. This form provided the potential study participants with information about their participation in my study including the duration of the study, their commitment, and the documents that I needed access to. There were no additional work assignments outside of the PDS program’s requirements for interns that participated in this research study. The only additional time required was for two interviews scheduled for the end of March and the middle of May. In the email to the nominated interns, I asked interns willing to participate in this study to print and return the completed form to me at our next weekly spring semester seminar. I reassure interns that they were not required to participate and there was no penalty for declining.

Purposeful sampling allowed me to identify five willing interns to participate in my research study: Maddie, Ben, Jane, Liz, and Carrie. In the Table 3-1, each intern’s grade level and research question is provided.

<table>
<thead>
<tr>
<th>Intern</th>
<th>Grade Level</th>
<th>Inquiry Wondering</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Maddie</td>
<td>3rd Grade</td>
<td>How does incorporating Genius Hour into my third-grade classroom benefit my students’ curiosity and knowledge in science and social studies by engaging in their own inquiry process?</td>
</tr>
<tr>
<td>2. Ben</td>
<td>2nd Grade</td>
<td>What does teaching leadership looks like in a second-grade classroom?</td>
</tr>
<tr>
<td>3. Jane</td>
<td>2nd Grade</td>
<td>How can I help my second-grade students develop empathy and tolerance for one another when working collaboratively in the classroom?</td>
</tr>
<tr>
<td>4. Liz</td>
<td>3rd Grade</td>
<td>How does providing my third graders with a variety of ways to demonstrate their learning impact their motivation to complete quality work?</td>
</tr>
<tr>
<td>5. Carrie</td>
<td>4th Grade</td>
<td>How can classroom environment and routines support the development of positive conflict resolution within fourth graders?</td>
</tr>
</tbody>
</table>

Table 3-1: Intern chart.
Intern #1: Maddie

Maddie is a twenty-one-year-old female interning in a third-grade classroom at Bear Creek Elementary School. She grew up in the same town in Pennsylvania where she completed her internship. However, she went to a different elementary school in the same district. Her hobbies include dancing and reading. She has a quiet personality and considers herself to be soft-spoken. Maddie decided that she wanted to major in elementary education because she always dreamed of being a teacher. When she was four years old, she remembers sitting in the back of her family’s car and telling her mom that she wanted to become a teacher. Throughout her journey as a student, many inspirational teachers and life mentors helped keep her teaching dream alive.

After completing her internship, Maddie planned to move to Virginia and teach first grade. She knew that her new school had a high English as a Second Language (ESL) population and planned to incorporate her Spanish skills with her instructional practices. Maddie was grateful to already know her school placement and she was already starting to develop ideas for her first year of teaching. Specifically, she was interested in incorporating student-centered practices through the use of technology.

Intern #2: Ben

Ben is a twenty-two-year-old male interning in a second-grade classroom at Bear Creek Elementary School. He was from the western part of Pennsylvania. He considered himself very cooperative and easy going. He enjoyed making people laugh. He was an avid ice hockey player and currently coaches the local high school team. He was also involved in the school community as an intramural coach at his internship elementary school site. His fifth-grade teacher inspired him to become a teacher because of his infectious energy and enthusiasm. Ben felt that he had a
similar personality to his fifth-grade teacher and he appreciated how his teacher made the learning so meaningful.

Ben was searching for teaching positions within the district of his internship. He felt supported and encouraged in this district’s environment. He was worried that others districts might not provide him with the encouragement he believed was necessary to continue inquiry and opportunities to take on leadership roles. He interviewed with his internship district this spring and hoped to secure a position in the district over the summer.

**Intern #3: Jane**

Jane is a twenty-two-year-old female interning in a second-grade classroom at Rose Lane Elementary School. She was from a small town in central Pennsylvania. She enjoyed taking pictures, painting, and spending time outside with her family. Growing up, Jane was a competitive ballet dancer and planned on dancing professionally in New York City after her high school graduation. Plans changed and Jane found herself teaching beginner level dance classes while starting her general education courses at the university.

She always knew she loved kids, but this opportunity opened a new set of doors for Jane. From the moment she began teaching dance, she fell in love with the idea of being a teacher. She knew that she wanted to spend the rest of her professional career helping to instill children’s natural curiosity and supporting students’ love for learning. During the spring semester, Jane was interviewing for teaching positions in Pennsylvania and Virginia.

**Intern #4: Carrie**

Carrie is a twenty-two-year-old female interning in a fourth-grade classroom at Hill Tigger Elementary School. She was from central Pennsylvania. Her hobbies included reading, traveling, and cheerleading. Originally, Carrie was a human and child development major.
However, Carrie ultimately chose to be an elementary education major because of the impact teachers have on their students. She believed that teachers can make long lasting impacts and better students’ futures. Carrie felt that it was inspiring to be working with such thoughtful, caring individuals every day. Carrie used phrases such as “I have the best kids,” “They are wonderful people,” and “They taught me more than I could ever teach them” to describe her students.

Despite her affection towards her students, Carrie did not feel the same way about her mentor and supervisor. She openly shared her frustrations with her triad. She did not agree with suggestions from her mentor about developing more confidence in her teaching and she felt uncomfortable with some of her supervisor’s recommendations for her coursework. She expressed being under tremendous pressure and counting down the days until the end of her internship. She was looking forward to having her own classroom next year and making instructional decisions without having to negotiate within another teacher’s space.

**Intern #5: Liz**

Liz is a twenty-two-year-old female interning in a third-grade classroom at Cedar Village Elementary School. She was from eastern Pennsylvania. Her personal passions included dance and art. She chose to become a teacher because she wanted to make a positive impact on the lives of children and show them that learning is fun. Liz was a quiet intern during methods courses, but talkative during her interviews. She was excited to share multiple examples of how she included her passion for the arts in her instructional practices this year. Next year, she looked forward to bringing all that she has learned through her internship and teacher education program into her own classroom. During the spring semester, she was searching for a teaching position in Pennsylvania.
These were my five participants in the study. I felt that they would be good informants because I was not their direct supervisor, none had traveled out of the country with me, and I was not their methods coursework grader. Each was also recommended by their PDA based on their ability to clearly articulate their inquiry experiences as well as being candid and forthcoming about their frustrations and successes with their inquiries.

**Data Collection Methods**

The study employed a number of different data collection methods including interviews, document analysis, and analytic researcher memos. Specifically, I was interested in investigating the extent to which interns’ interviews, teaching platforms, and inquiry reports revealed their beliefs about teaching and learning. The teaching platforms and inquiry reports are further defined below. I used four different data sources as shown in the table below with a brief description of my data analysis method used for each data source (see Table 3-2). Below the table, I explain each component of my data collection in more detail. Multiple methods and triangulation were critical in attempting to obtain an in-depth understanding of the interns’ experiences with engaging in practitioner inquiry and its influence on their beliefs about teaching and learning.

<table>
<thead>
<tr>
<th>Data Source</th>
<th>Analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Interviews</td>
<td>Thematic Analysis (Braun &amp; Clarke, 2006)</td>
</tr>
<tr>
<td>a. #1 – End of March</td>
<td></td>
</tr>
<tr>
<td>b. #2 – Middle of May</td>
<td></td>
</tr>
<tr>
<td>2. Teaching Platforms</td>
<td>Thematic Analysis (Braun &amp; Clarke, 2006)</td>
</tr>
<tr>
<td>a. Version 2</td>
<td></td>
</tr>
<tr>
<td>b. Version 4</td>
<td></td>
</tr>
<tr>
<td>3. Inquiry Reports</td>
<td>Thematic Analysis (Braun &amp; Clarke, 2006)</td>
</tr>
<tr>
<td>4. Analytic Researcher Memos</td>
<td>Thematic Analysis (Braun &amp; Clarke, 2006)</td>
</tr>
</tbody>
</table>

Table 3-2: Data collection sources.
Interviews

Semi-structured interviews were used in this study because they offered a reliable way to gain insight into the teacher candidates’ experiences (Cochran-Smith, et al., 2009; Hyland & Noffke, 2005; Levin & Rock, 2003; Thomson, Turner, & Nietfeld, 2012). Stuart and Thurlow (2000) argue that preservice teachers need to bring beliefs to conscious level for reevaluation during field experiences. In order to gain insight into the interns’ beliefs about teaching, two rounds of interviews were conducted. The interviews provided interns opportunities to share information about their inquiry experiences and reflect on how these experiences influence their understandings about teaching. With the design of the semi-structured interview protocols, interns articulated how these experiences influenced their beliefs about teaching and learning.

“Conversation as research” is presented as a stance for researchers to obtain interviewee’s descriptions of a lived experience while considering their own interpretations (Kvale, 1996, p. 5). Interviewing goes a step further than daily conversation. With a specific purpose and structure, Kvale argues that interviewing can be used as a powerful research method. For this study, the interview questions were structured to learn more about the interns’ experiences with inquiry and inquiry’s influence on their beliefs. The specific interview questions are designed as open-ended questions as to not guide participants to respond in a certain way (Kvale, 1996; Gubrium & Holstein, 2002, Seidman, 2013). The openness of the semi-structured interview protocols encouraged knowledge creation through the interaction between the interviewer and the interviewee.

Kvale (1996) suggests two contrasting metaphors related to the role of the interviewer: a miner and a traveler. As a miner, the interview is searching for nuggets of information unharmed or altered by the interview conversation. Whereas, a traveler engages in conversation as a way of
“wandering together with” the interviewee (p. 4). I presented myself as a traveler where I asked questions and wandered together with interns as they discussed their inquiry experience. This traveler stance allowed me to use my interview protocol as a compass. The interviews included follow-up questions, which led to clearer descriptions and layered dimensions of each interviewee’s experience. In the semi-structured interviews, I asked preservice teachers to describe experiences that led to new understandings and how these experiences influenced their beliefs about teaching and learning. The interviews provided information on each participant’s espoused and enacted beliefs as the preservice teachers talked about their actions in the classroom.

With Kvale’s (1996) research in mind, I conducted two rounds of interviews with each participant. I followed a semi-structured approach for my interviews (Kvale, 1996; Gubrium & Holstein, 2002, Seidman, 2013). Although Seidman’s (2013) phenomenological approach encourages three separate ninety-minute interviews, I conducting two sets of interviews due to time constraints and other requirements of the PDS internship. Seidman (2013) reminds researchers, “It is almost always better to conduct an interview under less than ideal conditions than not to conduct one at all” (p. 25).

By asking interns questions through a semi-structured interview protocol, I encouraged my interviewees to call attention to their inquiries. Seidman (2013) refers to this as “act of attention”, which allows participants to consider the meaning of a lived experience (p. 18). Through weekly journal entries, interns wrote about their experiences in the PDS. However, writing by itself did not necessarily encourage interns to reconstruct their experiences. Reflecting on individual moments, or a group of experiences, can provide opportunities to reconstruct our
past. My goal as a researcher was to help interns make the “was” come to “is” as they reconstructed their lived experiences of practitioner inquiry (Seidman, 2013, p. 18).

**Teaching Platforms**

Nolan and Hoover (2011) state that a teacher’s espoused platform reveals a teacher’s philosophy about teaching and learning. An espoused platform is derived from one’s personal history, formal education, and teaching experiences (Sergiovanni & Starratt, 2007). Supervisors can use this platform to view the classroom from the teacher’s perspective and they can help teachers reveal their espoused beliefs through conversations and writing prompts. Teachers can also use evidence from their practice to help them see the variation between their espoused platform of beliefs and platform in use, enacted beliefs. Nolan and Hoover (2011) argue that “without consciously articulating and probing into the assumptions underlying their philosophies, teachers have little hope of sustained change in perspective or teaching practice” (p. 27).

Each intern in the PreK-4 Valley PDS program was required to create a teaching platform that represents their beliefs about teaching and learning. Over the course of the year, interns developed a teaching platform that stated the interns’ key beliefs about teaching and learning and illustrated their ability to put these beliefs into practice through evidence gathered. This process, which involves writing four versions of the platform over the course of the year, helped interns make connections between their espoused beliefs and their enacted beliefs. The four versions were outlined as followed:

**Teaching Platform Version 1 (Beginning of Internship Year):** The first version of the teaching platform involved written responses to the following questions:

1. As you see it, what does it mean to be an effective teacher?
2. What are some of the most important goals you will have for the students you will teach?

3. What are some things you will do in your classroom to help students be successful in reaching those goals?

4. If you were asked to use a symbol, or a picture, or an analogy, or a metaphor to describe what you hope to become as a teacher, what would you say? Why?

**Teaching Platform Version 2 (End of Fall Semester):** The second version of the teaching platform was created as a web page/folio. This version asked the interns to identify ten beliefs about teaching and learning that they saw as particularly valuable and that they hoped to put into practice as a teacher. For version two, the interns stated the belief in a sentence and then briefly described in a short paragraph how they hoped to use that belief in their teaching. Their beliefs were required to fall into the following categories:

1) One belief about instructional planning

2) One belief about instructional delivery

3) One belief about the role of reflection and analysis in teaching

4) One belief about what it means to be a professional

5) One belief about teaching literacy

6) One belief about teaching mathematics

7) One belief about teaching social studies

8) One belief about teaching science

9) Personal teaching belief

10) Personal teaching belief
This version was shared as an electronic website template in TaskStream, an online lesson plan site provided by university. Supervising PDAs provided more feedback specific feedback after version two whereas version one was just a starting point. Typically, interns scheduled individual meeting with their supervising PDA to review the feedback and start making adjustments for version three.

**Teaching Platform Versions 3 and 4 (Middle and End of Spring Semester):** During the spring semester, each intern continued to develop their teaching platform. Interns were reminded to focus on what they did in the classroom rather than providing artifacts that highlighted their mentor’s instructional practices and beliefs. In versions 3 and 4, they revised, if appropriate, the ten belief statements from version 2 and provided examples and illustrations to show how they were putting these beliefs into practice. Examples took many forms including lesson plans, vignettes from classrooms, pictures, videos, examples of student work, journal entries, classroom activities, etc. In addition, interns wrote a justification statement that explicitly told the reader how the illustration provided evidence of the belief being put into practice. In version 4, interns were also required to write a two to three paragraph reflection of how their teaching beliefs developed over the course of their PDS internship.

For this study, I reviewed the participant’s version two and version four teaching platforms. I asked participants to select my name with the “request comments” feature on TaskStream for both versions to provide me with access to their platforms. Version two shed light on interns’ initial beliefs about teaching and learning. The second version was directly linked to preservice teachers’ espoused beliefs by asking the participants to describe their ten key beliefs about teaching and learning. This version was due in December, half way through the intern’s full-year internship. Version four was due toward the end of the academic year and
required the interns to speak more directly about their teaching beliefs by providing examples from their own practice. Specifically, version four asked interns to provide justification for each key belief in the section titled “putting into practice”. This section required interns to provide evidence of them enacting their beliefs in the classroom. I did not look at versions one and three, but version 4’s concluding statement provided a reflective description of the development of each intern’s beliefs.

**Inquiry Reports**

Each intern in the PDS internship was required to submit an inquiry report. This report is similar to a formal research paper. In the report, each intern was asked to describe the process of conducting their inquiry. After describing their methods, they provided learning statements from their inquiries, implications for their practice, and potential future wonderings based on their inquiry. The inquiry report was not due to the PDS coordinator until after the PDS’s Spring Inquiry Conference to provide interns a chance to make any adjustments based on conversations and insights gained from the conference.

I focused on the final section of the participating interns’ inquiry reports. In particular, I looked at conclusion section of this formal research report. In this section, interns were asked to draw conclusions from their inquiry journeys as a whole. They were asked to write a general reflection on their inquiries. Some probing questions provided to the interns were: What have you learned about yourself as a teacher? What have you learned about your students? What are the implications of your findings for the content you teach? What are some implications for your teaching? In addition, interns closed their reports with directions for the future. They were asked to consider: What changes will you make (or have you made) in your practice? What new wonderings do you have? The inquiry report emphasizes the preservice teachers enacted beliefs.
This report was about their own practice and inquiry experience. In the final section of the paper, interns were explicitly asked to state how conducting an inquiry has influenced their practice.

**Analytic Researcher Memos**

After my first round of interviews, it became apparent that I needed to write researcher memos. Research participants were sharing important contextual information before and after their interviews. I did not want to lose this information along with my initial noticings. These research memos helped capture emerging themes as well as provide a space for me to reflect on the interviews. I wrote my first researcher memo after the first round of interviews. For the second round of interviews, I wrote a researcher memo directly after each interview.

**Methods for Data Analysis and Synthesis**

I approached my data using Braun and Clarke’s (2006) thematic analysis approach. I analyzed two interview transcripts, two teaching platforms, and an inquiry report for each participant along with seven analytic researcher memos. Below I explain my specific analysis method for each component of my data.

**Teaching Platforms**

I analyzed the interns’ second and final teaching platforms, versions two and four, using Braun and Clarke’s (2006) thematic analysis approach described in Table 3-3. However, data analysis began during data collection. It was critical to review each research participants’ version two platforms before their first interview. When I first reviewed the teaching platforms prior to the round one interviews, I familiarized myself with the data and generated codes (phases one and two). For example, Table 3-3 below provides my initial codes from Ben’s version two teaching platform.
I did not start searching for themes, phase three, prior to interviewing each participant. I only knew one of my participant’s inquiry topics prior to our first meeting, so I felt it was necessary to hear about their inquiries before generating potential themes and identifying relationships between their inquiries and beliefs. Familiarizing myself with the data pushed our interview conversations by allowing me to point to specific beliefs that I wanted each research participant to elaborate on. For example, I asked Ben to expand on his belief on allowing students to embrace their natural leadership skills since student leadership was the focused on his inquiry. Additionally, I asked Maddie to expand on her beliefs about instruction specifically science and social studies instruction. Her inquiry focused on implementing student-centered instruction through social studies and science material during Genius Hour. As seen with examples from Maddie and Ben’s teaching platforms, the interns’ initial, espoused beliefs described in version two of their teaching platforms were used as a resource to guide the interview conversations.

Additionally, each intern’s version four teaching platform was initially analyzed prior to their round two interviews. This allowed me to point to specific teaching beliefs during the interview conversations and created a richer conversation with research participants about their belief development. Specifically, I was able to identify differences between their espoused beliefs in version two and enacted beliefs in version four. Reviewing these documents prior to
the interns’ interviews helped each participant articulate how their beliefs developed throughout their internship year.

<table>
<thead>
<tr>
<th>Phase</th>
<th>Description of the Process</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Familiarizing yourself with the data</td>
<td>Transcribing the data (if necessary), reading and re-reading the data, noting down initial ideas.</td>
</tr>
<tr>
<td>2. Generating initial codes</td>
<td>Coding interesting features of the data in a systematic fashion across the entire data set, collating data relevant to each code.</td>
</tr>
<tr>
<td>3. Searching for themes</td>
<td>Collating codes into potential themes, gathering all data relevant to each potential theme.</td>
</tr>
<tr>
<td>4. Reviewing themes</td>
<td>Checking if the themes in relation to the coded extracts (Level 1) and the entire data set (Level 2), generating a thematic ‘map’ of the analysis.</td>
</tr>
<tr>
<td>5. Defining and name themes</td>
<td>Ongoing analysis to refine the specifics of each theme, and the overall story the analysis tells, generating clear definitions and names of each theme.</td>
</tr>
<tr>
<td>6. Producing the report</td>
<td>Selection of vivid, compelling extract examples, final analysis of selected extracts, relating back to the analysis of the research question(s) and literature, producing a scholarly report of the analysis</td>
</tr>
</tbody>
</table>

Table 3-4: Thematic analysis process (Adapted from Braun and Clarke, 2006, p. 87).

**Round 1 Interviews**

The first round of interviews was conducted at the end of March and the second round of interviews was completed in the middle of May. In the interviews, I specifically aimed to discover examples and stories of practice. This data source highlighted preservice teachers’ espoused beliefs about teaching. Interns also shared stories about their actions in the classroom that referred to their enacted beliefs.
After each interview session, I transcribed the interview and requested a member check from the research participant to ensure that I was accurately representing the participant. Due to the number of school sites and time constraints, I provided participants with an electronic copy of each interview transcript shortly after each interview session. They were asked to review the transcript and make any necessary corrections or amendments with the revision and comments features in Word. I asked participants to complete the member checks within one week of each interview in order to ensure that member checking was completed in a timely manner and accurately represented the interns’ beliefs at that time of the internship.

Once the transcripts were member checked, I analyzed each interview transcript using Braun and Clarke’s (2006) thematic analysis approach (see Table 3-4). I started my analysis of this data source by generating initial codes as described in the second phase of thematic analysis. For example, Table 3-5 provides my initial codes from Jane’s round one interview.

<table>
<thead>
<tr>
<th>Initial Codes from Jane’s Round 1 Interview</th>
</tr>
</thead>
<tbody>
<tr>
<td>Willing to help the community</td>
</tr>
<tr>
<td>Support my students</td>
</tr>
<tr>
<td>Differentiated instruction</td>
</tr>
<tr>
<td>Multi-dimensional</td>
</tr>
<tr>
<td>Chance to reflect</td>
</tr>
<tr>
<td>Grow as a teacher</td>
</tr>
<tr>
<td>Not finalized</td>
</tr>
<tr>
<td>Self-centered</td>
</tr>
<tr>
<td>Missing students</td>
</tr>
<tr>
<td>Teacher and personal identify</td>
</tr>
<tr>
<td>Going to change</td>
</tr>
<tr>
<td>Time to teach</td>
</tr>
<tr>
<td>Taking on more</td>
</tr>
<tr>
<td>Initially mentor’s beliefs</td>
</tr>
<tr>
<td>Mentor’s style</td>
</tr>
<tr>
<td>Affect myself as a teacher</td>
</tr>
<tr>
<td>Didn’t experience it yet</td>
</tr>
<tr>
<td>Trying to imagine</td>
</tr>
<tr>
<td>More time as an inquirer</td>
</tr>
<tr>
<td>Mini inquiries in the fall</td>
</tr>
<tr>
<td>Affirm my belief</td>
</tr>
</tbody>
</table>

Table 3-5: Initial codes from Jane’s round 1 interview.
After the first round of interviews, I compared my analysis of the version two teaching platforms with the intern’s round one interview transcripts. I found seven emerging themes (see Table 3-6).

<table>
<thead>
<tr>
<th>Initial Themes after Round 1 Interviews</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Theme 1:</strong> Each intern’s spring inquiry aligned to at least one belief they originally had about teaching.</td>
</tr>
<tr>
<td><strong>Theme 2:</strong> Interns felt that taking over more instructional responsibilities helped them affirm and change their espoused beliefs about teaching developed in the Fall semester (connected to version 2 teaching platforms).</td>
</tr>
<tr>
<td><strong>Theme 3:</strong> Interns saw inquiry as a way to improve their practice and meet their students’ needs.</td>
</tr>
<tr>
<td><strong>Theme 4:</strong> Interns felt more confidence about inquiry now and were able to generate practical modifications for their future practice.</td>
</tr>
<tr>
<td><strong>Theme 5:</strong> Interns had “aha” moments during data collection and data analysis of their inquiries. By looking at student work and other forms of data, interns were able to develop claims, make adjustments to their practice and affirm/revise beliefs.</td>
</tr>
<tr>
<td><strong>Theme 6:</strong> Interns recognized the support of their PDAs and PDS community through instructional planning, implementation, and the development of their inquiries.</td>
</tr>
<tr>
<td><strong>Theme 7:</strong> Interns initial definitions of inquiry lacked specific details and connections to their classroom practice.</td>
</tr>
</tbody>
</table>

Table 3-6: Initial themes after round 1 interviews

As I was reviewing the themes, I created a thematic map of analysis by placing coded participant quotations under each emerging theme (see Appendix). As seen in the Appendix, I marked discrepant data in red to stay mindful of the interns’ individual experiences with inquiry. My ongoing analysis allowed me to refine the specifics of each theme and supported the development of the overall story about the influence of practitioner inquiry on the interns’ beliefs.

After completing the first round of interviews, I realized the need to write analytic memos. I wrote my first memo after completing all the round one interviews. In this memo, I reflected on the round one interviews as a whole. Specifically, I reflected on the duration of the round one interviews, the process of member checking, and how to prepare for the second round
of interviews (Researcher Memo #1: May 7, 2017). These analytic memos also served as a way to cross-check the data from other data sources.

**Inquiry Report**

Each intern in the PDS was required to write an inquiry report to share their work. The reports include sections titled as background, wondering, methods, learning statements, and conclusion. Interns submitted multiple versions of their inquiry report to their classroom PDA for feedback and a peer editor in the PDS internship. A final version was submitted to the PDS coordinator after the inquiry conference in May. I asked participants to send me a word copy of this document when they submitted their final copy to the PDS coordinator.

I decided to analyze the conclusion section of the inquiry paper for each participant in order to learn more about the influence of inquiry on their beliefs about teaching and learning. In the concluding section of their inquiry papers, interns were asked to draw conclusions from their inquiry. They were asked to share a general reflection on the specific inquiry just completed and generate possible directions for their future practice and inquiry wonderings. Some questions to consider included: 1) What have you learned about yourself as a teacher? 2) What have you learned about your students? 3) What are the implications of your findings for the content you teach? 4) What are the implications of what you have learned for your teaching? 4) What changes will you make (or have you made) in your practice? 5) What new wonderings do you have? These reflective questions were provided as probes to describe their actions in the classroom and reflect on how these actions informed their practice and understandings about teaching. In this section, interns referenced their enacted beliefs and shed light on changes in their beliefs about teaching.
The concluding section of each inquiry paper was analyzed using Braun and Clark’s (2006) thematic analysis approach (see Table 3-2). I completed the first two phases of analysis prior to the round two interviews. Furthermore, I underlined specific sentences and phrases that I wanted each intern to elaborate more on during their interviews. For example, Carrie wrote, “Going through this inquiry process, I learned many things about myself: the type of teacher I want to be and the type of classroom environment I hope to create” (Carrie, Inquiry Report). I asked Carrie to expand on this statement to learn more about her belief development and overall growth as an educator.

**Round 2 Interviews**

During the second round of interviews, I also pointed to specific belief statements from the interns’ version 4 teaching platforms. This data source was collected in between the two rounds of interviews, so it was a helpful tool to direct the round 2 interview conversations. I asked interns to talk about the development of these beliefs throughout their inquiry experiences. For instance, I asked Liz to speak specifically about the development of her beliefs on planning and instruction. Her inquiry focused on using her students’ multiple intelligences in her daily practice. Additionally, I asked interns to expand on quotes from their initial interviews. For example, Ben stated, “Inquiry has been very important with informing me whether my beliefs are valid in practice.” I asked Ben to share how inquiry was validating his beliefs through his practice. He provided specific examples from the various leadership activities he incorporated into his classroom based on his inquiry wondering. Highlighting specific belief statements and quotes from the round one interviews allowed interns to reflect more deeply about their inquiry experiences and its influence on their belief development.
A more formal data analysis of the interns’ teaching platforms and the other data sources was completed after data collection. In phases three through six of Braun and Clarke’s (2006) thematic analysis, I triangulated data provided from the data sources including my analytic researcher memos to create a fuller picture of the phenomenon under review and enhance the methodological validity of the study.

I revisited the original chart created after the first round of interviews. From this chart, I was able to compare the interns’ initial beliefs and emerging themes to their current enacted beliefs and new themes. Ongoing analysis of the seven emerging themes from the original chart, thematic map of analysis, generated five clear themes. Naming and defining these themes continued as I started to select vivid quotations from the interns’ interview transcripts, teaching platforms, inquiry reports, and my researcher memos. Table 3-7 below illustrates the process of naming and defining themes.

<table>
<thead>
<tr>
<th>Naming Themes</th>
<th>Defining Themes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Means for self-investment</td>
<td>• Inquiry as aligning</td>
</tr>
<tr>
<td></td>
<td>• Inquiry as motivating</td>
</tr>
<tr>
<td>2. Means for deepening and expanding</td>
<td>• inquiry as affirming</td>
</tr>
<tr>
<td></td>
<td>• inquiry as developing</td>
</tr>
<tr>
<td></td>
<td>• inquiry as enacting</td>
</tr>
<tr>
<td></td>
<td>• inquiry as strengthening</td>
</tr>
<tr>
<td>3. Means for learning about students</td>
<td>• inquiry as shifting</td>
</tr>
<tr>
<td></td>
<td>• inquiry as seeing</td>
</tr>
<tr>
<td></td>
<td>• inquiry as responsive teaching</td>
</tr>
<tr>
<td></td>
<td>• inquiry as differentiating</td>
</tr>
<tr>
<td>4. Means for developing professionalism</td>
<td>• Inquiry as agency</td>
</tr>
<tr>
<td></td>
<td>• inquiry as belonging</td>
</tr>
<tr>
<td></td>
<td>• inquiry as validating</td>
</tr>
<tr>
<td>5. Means for influencing preservice teachers’ teaching stance</td>
<td>• inquiry as embedded</td>
</tr>
<tr>
<td></td>
<td>• inquiry as cyclical</td>
</tr>
<tr>
<td></td>
<td>• inquiry as disrupting</td>
</tr>
</tbody>
</table>

Table 3-7: Naming and defining themes.
The descriptors in Table 3-7, emphasize the nuances of each theme and helped keep my data analysis close to the participants’ voices. From my data analysis, five assertions emerged (Chapter 4): 1) Inquiry is a means for self-investment in preservice teacher learning to support the authenticity of beliefs. 2) Inquiry is a means for deepening and expanding preservice teachers’ understandings of what is happening in their classrooms to support the complexity of beliefs. 3) Inquiry is a means for learning about students in order to implement student-centered practices that support the enactment of beliefs. 4) Inquiry is a means for developing professionalism to support the empowerment of beliefs. 5) Inquiry is a means for influencing preservice teachers’ teaching stance to support the transferability of beliefs. After completing a thorough analysis, I was able to think more broadly about implications of this research and developed various research-related recommendations (Chapter 5).

**Ethical Considerations**

Although no serious ethical threats were posed to any of the participants, this study employed multiple safeguards to ensure the protection of the participants. First, written informed consent was received from each participant. Second, the participants’ privacy remained of primary importance when reporting the data. I created pseudonyms for each participant, school site, the district, and Professional Development School. Additionally, I was the only person that had access to this material on a password protected computer to ensure secure storage of research-related records.

**Issues of Trustworthiness**

To establish the trustworthiness of this qualitative study, I attempted to control potential biases throughout the design, implementation, and analysis. The study was completed during my second year working as a PDA within the PDS described above. My assistantship role presented
a personal perspective to this study and internship experience. In year one, I was a methods course instructor in the fall for Classroom Learning Environments and supervised four interns. In year two, I co-taught the Social Studies methods course and supervise three teacher candidates. During the first year, I worked at two different elementary school sites. My second year, I only supervised at one school, but the school was at a different site than the two from the first year.

Along with co-teaching and supervising, I worked on the developing and leading the inquiry focused spring seminars. In year one, I co-planned with a university professor and reassigned classroom teacher. I was learning the ropes as the inquiry process and PDS context were still new to me. In year two, I took on a leadership role with the interns’ inquiries and inquiry focused spring seminars. I worked with a reassigned classroom teacher who was new to the PDA role and another graduate student who was also in her second year as a PDA within the PDS.

Prior to starting my doctoral program, I was a third-grade teacher in rural South Carolina for two years. During this time, I struggled with the complexities of being a new teacher in a state that I was not from. The pressures of standardized testing, the school district’s lack of funding, and the struggles presented from students’ home lives were daunting. I left the classroom in hopes of learning more about teacher education and how to support new teacher candidates. In my first year as a doctoral student, I learned about practitioner inquiry and observed teachers in the local school district using inquiry to inform their practice. Immediately, I was drawn to the support inquiry provided these teachers through the intentional study of their practice and inquiry communities across various schools in the district.

In my second year, I started a new graduate assistantship within the Valley Professional Development School. As a PDA, I was able to work directly with teacher candidates and support
them through their own inquiries into their practice. While working closely with teacher candidates, I also conducted my own inquiry into my practice with a fellow doctoral student. We used duo-ethnography as a methodology to capture the complexities of learning to supervise, while (re)conceptualizing supervision as a collaborative learning experience. By year three of my doctoral program, I had witnessed and experienced the power of inquiry for both teacher candidates and classroom teachers.

My previous experiences and role in this PDS program highlight my insider perspective and my favorable view of inquiry. I realize that being close to the interns’ inquiry process and my personal beliefs are problematic when thinking about what I noticed throughout my data collection and analysis. I paid careful attention for potential distortions to my data such as personal biases about inquiry and my participants wanting to please me by providing responses that they believe were favorable and aligned with the program’s beliefs about inquiry.

I remained open to what my data revealed against inquiry and actively listened to my participants as they described their inquiry experiences. The purpose of a phenomenological study is to understand the constructions of participants’ experiences in their own terms (Moustakes, 1994). Therefore, creating a description that does not align with the participants’ realities would have hurt the trustworthiness my study.

Establishing trustworthiness and limiting researcher bias was supported by the use of techniques including credibility and transferability (Erlandson, Harris, Skipper, & Allen, 1993). Credibility was established through triangulation and member checking. I used multiple data sources including qualitative interviews, teaching platforms, inquiry reports, and analytic researcher memos. Comparing these sources highlighted different perspectives of the interns’ beliefs about inquiry and helped support my knowledge claims. Writing memos throughout the
data collection process helped me identify and constantly check on my researcher bias. I noticed times in the memos where I added a side comment that was not shared during the interviews. These comments were based on previous interactions with the research participants and PDS community.

Member checking each interview transcript provided credibility to my study by allowing participants to determine if the interview transcripts accurately represented the participants’ experiences and beliefs. Reviewing the interview transcripts provided participating interns the opportunity to delete, modify, or expand on any information that may not accurately represent themselves. Interns did use this opportunity to reflect on their inquiries, PDS experiences, and teaching beliefs. There were multiple cases where interns made adjustments to the transcripts by writing “this is what I actually meant to say here…” or “also, I feel that…” One intern even noticed a time where I made a mistake in the transcription. The effort of each intern’s member checking supports the credibility of this study.

To promote transferability, I provided a thick description to introduce each participant and the context of the study. Additionally, I used quotes from the participants’ interviews supported with evidence from their teaching platforms, inquiry reports, and my researcher memos. The detailed descriptions of the interns’ inquiry experiences provide the basis for claiming relevance to the broader teacher education context.

**Limitations of the Study**

The study contains several limiting conditions including participant sample size and participant reactivity. Only five interns from the 51 potential PDS interns participated in this study. There was a chance that all five research participants looked favorably at inquiry and did not make any changes to their initial beliefs shared in their teaching platform. Interviews and the
teaching platforms revealed that this was not the case, but a larger sample size may have shown a
larger variance of preservice teacher belief development and thoughts about practitioner inquiry.
I addressed this limitation by paying careful attention to discrepancies in the data.

A related limitation known as participant reactivity (Maxwell, 2013) may have limited
the interns’ responses. The interns knew me prior to participating in the research study as a
course instructor for their social studies methods course and as an instructor for their spring
seminars focused on inquiry. I was not the direct supervisor of the research participants nor did I
work at their school sites. Still, their responses may have been influenced or affected by their
previous relationship with the researcher. They may have offered responses that they perceived I
was seeking to hear as an inquiry seminar instructor and supervising PDA. Participants may
have been guarded and less candid with their responses. However, at least two participants,
Carrie and Liz, clearly stated that they were sharing information that they did not feel
comfortable sharing with their classroom mentor and/or classroom PDA. In those cases, the
interns felt more comfortable articulating their successes, frustrations, and beliefs during their
interview sessions, because any information shared during the study could not affect their inquiry
grade or internship standing.

Chapter Summary

In summary, the chapter provided a detailed description of the study’s research
methodology, research participants, context, methods, data analysis, and limitations. A
phenomenological qualitative methodology was used to illustrate the influence of engaging in
practitioner inquiry on teacher candidates’ beliefs about teaching. The participant sample was
made up of five purposefully selected PDS interns. Data sources included two rounds of
individual interviews, two versions of teaching platforms, five inquiry reports, and seven analytic
researcher memos. The data were reviewed through thematic analysis (Braun & Clarke, 2006). Credibility was accounted for through various strategies including source triangulation and member checking.
CHAPTER 4

ASSERTIONS

This phenomenological study investigated ways in which practitioner inquiry influenced preservice teachers’ beliefs about teaching and learning. This research responds to the following questions: 1) What is the influence of conducting classroom inquiry on teacher candidates’ beliefs about teaching and learning? 2) What aspects of inquiry, if any, were most influential in changing beliefs? Teacher candidates’ experiences with classroom inquiry were examined using a phenomenological lens. This approach focused on revealing the lived experiences of interns through the participants’ voices. The study contributes to the literature on preservice teacher beliefs by examining how inquiry may act as a means for supporting belief development. The research questions aim to explore how teacher candidates’ beliefs develop through inquiry experiences and what aspects of practitioner inquiry are most influential on one’s beliefs about teaching and learning. With limited research on how preservice teacher beliefs develop, this study responds to a gap in the literature on preservice teacher beliefs (Löfstrom & Poom-Valickis, 2013; Pilitsis & Duncan, 2012).

The study followed five teacher candidates completing an internship in a Professional Development School (PDS) during the final year of their teacher preparation program. Inquiry was a strong theme in the PDS curriculum and interns were first introduced to practitioner inquiry during their fall methods coursework. After completing several inquiry cycles on a smaller scale in fall, teacher candidates engaged in a classroom inquiry during the spring semester of their internship. Data collection for this study began in early spring of 2017 and ended at the end of the school district’s academic year in June of the same year. Ongoing
formative data analysis occurred during data collection and summative data analysis occurred for two months after data collection ended.

This chapter presents the key assertions obtained from ten in-depth interviews, ten written teaching platforms, five written inquiry reports, as well as numerous researcher memos based on the experiences of five preservice teachers engaged in teacher inquiry during the final year of their internship program. The voices of teacher candidates are used to describe the influence participation in conducting classroom inquiry had on their beliefs about teaching and learning. Five major assertions emerged from this study:

1. Inquiry is a means for self-investment in preservice teacher learning to support the authenticity of beliefs.
2. Inquiry is a means for deepening and expanding preservice teachers’ understandings of what is happening in their classrooms to support the complexity of beliefs.
3. Inquiry is a means for learning about students in order to implement student-centered practices to support the enactment of beliefs.
4. Inquiry is a means for developing professionalism to support the empowerment of beliefs.
5. Inquiry is a means for influencing preservice teachers’ teaching stance to support the transferability of beliefs.

A discussion of the assertions responding to the research questions follows with evidence that supports and explains each assertion. Illustrative quotes taken from interview transcripts attempt to portray multiple participant perspectives and capture the complexity of the phenomenon, engaging in practitioner inquiry. Using thick description (Denzin, 2000) adds to the richness of this chapter. Portions of the teacher candidates’ written teaching platforms, inquiry reports, and researcher memos are also woven in with the interview data to solidify the discussion.

**Background**

As mentioned in Chapter 3, Dana and Yendol-Hoppey’s (2014) *The Reflective Educator’s Guide to Classroom Research* guided interns throughout their inquiries. At a
culminating PDS session toward the end of the fall semester, interns developed a list of wonderings, or burning questions, to guide their inquiries (Dana & Yendol-Hoppey, 2014). They were also introduced to Dana & Yendol-Hoppey’s eight passions: a child, curriculum, content knowledge, teaching strategies/techniques, beliefs about practice, personal/professional identity, social justice, and context (2014). Recall from Chapter 3, interns were asked to consider how these passions connected with their own tensions and classroom realities. The Professional Development Associate (PDA) team asked interns to think about how their own passions were merging and overlapping with these eight passions.

While examining the inquiry topics of the participants, it was clear that each participant’s inquiry topic connected to a passion for teaching. All five participants were able to articulate strong connections between their inquiry topics and individual teaching passions:

1) Maddie’s interests in student-centered learning and integration guided the development of her inquiry on incorporating Genius Hour, “a movement that allows students to explore their own passions and encourages creativity in the classroom”, during social studies and science instruction to engage her third-grade students in their own inquiries (“What is Genius Hour”, 2017). During Genius Hour, students choose what they learn during a set period of time during the school day. Similar to the inquiry cycle, students select topics to research and create a product to share with their peers, school, and possibly others in the local community. Her inquiry connected to Dana and Yendol-Hoppey’s (2014) teaching strategies/techniques passion as she inquired into student-centered practices.

2) Ben’s passion for sports leadership guided his inquiry on teaching leadership in a second-grade classroom. His own personal interest in hockey and professional identity as an ice hockey
coach guided the development of his inquiry. His inquiry connected to Dana and Yendol-Hoppey’s (2014) personal/professional identity passion as he inquired into student leadership.

3) Jane’s investment in student diversity, inclusion practices, and passion for empathy led her to inquire into developing empathy and tolerance through collaborative work for second-graders. She was committed to developing a classroom environment that respected and represented the diversity of her students. Her inquiry connected to Dana and Yendol-Hoppey’s (2014) social justice passion as she inquired into developing a more empathic and socially-just classroom.

4) Carrie’s former major, human development, and passion for child development inspired her to wonder how the classroom environment and daily routine influenced her fourth-grade students’ conflict resolution skills. Her prior beliefs about practice developed from her former classroom experiences and coursework guided the development of her inquiry wondering. Her inquiry connected to Dana and Yendol-Hoppey’s (2014) beliefs about practice passion as she inquired into her students’ conflict-resolution skills.

5) Liz’s experiences as a dancer and artist, and interest in multiple intelligences, led her to develop a wondering about how providing a variety of ways to demonstrate student learning might influence her third-grade students’ motivation to complete quality work. Her inquiry connected to Dana and Yendol-Hoppey’s (2014) teaching strategies/techniques passion as she inquired about how to support her students’ multiple intelligences.

Based on the interns’ own descriptions, there appeared to be a strong connection between the interns’ inquiry questions and a specific passion they had for an aspect of teaching. Passions focused on integration, leadership, empathy, conflict resolution, and learning styles led each intern down an individualized inquiry path. This study’s first assertion came out of the development of wonderings steeped in passion.
Assertions

Assertion #1: *Inquiry is a means for self-investment in preservice teacher learning to support the authenticity of beliefs.*

Interns were assigned the task of choosing their own inquiry, but selecting inquiry wonderings rooted in individualized passions allowed inquiry to act as a means for investment in their own development. Furthermore, engagement with practitioner inquiry encouraged interns to study their practice in a way that made their internship experience more meaningful. Intentionally studying a specific element of their practice supported interns in developing more authentic beliefs about teaching and learning. Interns expressed their investment and the increased authenticity of their beliefs in the following ways.

**Maddie.** Maddie described how implementing Genius Hour as her inquiry connected to her belief in student-centered learning. She stated:

> I believe that learning should be student driven around experiences. My inquiry is a lot about being student driven and then students going through their own student inquiry. I feel like I have been developing this belief as I am going through the inquiry cycle in my classroom. (Maddie, Round 1 Interview)

Specifically, one of the key beliefs she espoused in April stated, “I believe that learning should be student-driven around experiences.” In her justification for that belief she wrote:

> Genius Hour truly represents my thoughts about teaching in the classroom. I feel that student-centered classrooms are important for students as they grow. Genius Hour gives students the opportunity to take control of their learning. The students choose topics of their choice, research them, create a presentation, and share it with the class. This is a student inquiry process that my students are going through. The process gives them the
opportunity to learn about something that interests them and still share their learning with others. (Maddie, Teaching Platform 4)

As Maddie engaged in practitioner inquiry on the use of Genius Hour in her classroom, she was able to systematically and intentionally study one of her personal passions: student-centered learning. Researching the use of Genius Hour as a student-centered practice created opportunities for Maddie to develop in a belief that she personally valued as an educator.

**Ben.** Ben also saw his inquiry directly aligning with one of his teaching beliefs, which motivated his actions in the classroom. In his initial interview, Ben described how his inquiry was starting to shape this particular belief about student leadership in the classroom.

It was one of my personal beliefs that I wanted to incorporate leadership into the classroom and it’s not as easily done without some research put into it. I think inquiry helped me track that progress and kind of get some pre-assessment data and being able to see how my students react to that, which I wouldn’t necessarily have had if I just taught a unit on it. Rather than actually tracking the data and doing my research that I did to find credible sources, to try and find as much information as I could about my personal inquiry. Just in general being able to see that data in front of me and it helped me inform how I can go and do it in my future classroom as well. (Ben, Round 1 Interview)

In April, Ben stated, “I believe in fostering tomorrow’s leaders by providing opportunities to lead and instilling those traits in my students so that they can build confidence in a safe community.” Additionally, he provided pictures from various lessons on leadership including a class picture with the local university’s ice hockey team captain to show evidence of this belief. He justified these visual artifacts in the following way:
These examples illustrate my belief in teaching leadership by helping students self-identify as leaders at a young age. Giving them opportunities to succeed and practice good leadership habits allows them to build on that experience as they grow older. Since my class had a number of hockey players, I was able to schedule a (local university) hockey captain to visit our classroom and talk to my students about what he does as a leader on and off the ice. (Ben, Teaching Platform 4)

Ben’s description exemplified how his inquiry aligned with his belief about student leadership and his dedication to his own learning. Ben was not required to contact members of the local community to support his inquiry. He made these arrangements on his own, which highlights how Ben went above the traditional expectations of preservice teachers during their teacher preparation programs. Ben was invested in his own professional growth, and practitioner inquiry allowed him to explore a belief that he was genuinely passionate about.

Jane. Jane was also able to make a connection between her inquiry and beliefs about teaching and learning. She articulated a connection between her belief in fostering and maintaining a strong classroom community to her inquiry on community building. Jane recognized that community building activities often got pushed to the side after the first few weeks of school, but she recognized the value of maintaining this strong bond between her students throughout the year.

I believe it is important to maintain building community throughout the school year. Not just at the beginning of the school year, but continuing it. I think allowing kids to have, whether it’s math, writing, or something else, the chance to collaborate and time to think creatively with one another is important. Also, I see the importance of struggling together. Simple things like that. I think they are so important that they sometimes get
pushed to the back of our mind. “I could use 10 extra minutes for reading rather than doing morning meeting” but it’s really important. I think that’s going to help me in the future when designing my instruction and my classroom. (Jane, Round 1 Interview)

Jane was committed to fostering a positive classroom community beyond the first two weeks of school and helping her student develop empathy for one another. As she navigated through the inquiry cycle, Jane’s work exemplified her commitment to her students and investment in her belief about maintaining a strong classroom community throughout the entire school year. For instance, in April, Jane shared, “when the teacher allows for classroom management to be a shared responsibility between the teacher and student, the students will feel as though they are a part of the classroom community from the beginning of the year.” Jane wanted all of her students to have a voice and feel that they belonged in the classroom. Throughout her inquiry into fostering an empathic and inclusive classroom community, Jane let her student take a role in shaping her inquiry. She described this democratic relationship in her inquiry report.

From the start of my inquiry, I was able to learn how eager kids are to help! As soon as I told my students I was engaging in my own inquiry, they were thrilled, immediately asking what they could do to help me. I’ve also learned the importance of sharing data and involving students in the whole inquiry process. Again, my students had such a desire to assist and I could tell that by involving them in the steps of collecting and analyzing data made the inquiry process that much more meaningful and engaging. No student wants to learn when they don’t understand the purpose of what they are learning. For now, and in the future, I understand that before diving into an inquiry, it is helpful and
more meaningful when the students are involved in more ways than just being the “test
monkeys” to your research. (Jane, Inquiry Report)

Jane continuously made references to her students and how conducting inquiry helped her
realize the importance of including her students in her practice. Jane’s passion for establishing a
strong classroom community was authentically represented in her beliefs with the support of her
inquiry.

Carrie. Carrie also had a strong interest in community building among her classroom
community. She was invested in moving beyond surface level community building activities
with her students which created the foundation for her inquiry.

I really like the whole idea of sharing as a community. I am really interested in my belief
about community building. I often think that I need a strong community in my classroom,
but how? There are surface level community building activities that we do like our share
box every Thursday, but I don’t think that is enough. For my inquiry, I tried having my
students look at scenarios. I think it’s helping more than a share box or having everyone
say their thoughts and feelings. Again, those activities are important, but I don’t think it is
enough to foster a strong sense of community in the classroom. We are a family, like this
PDS community. (Carrie, Round 2 Interview)

As Carrie researched her classroom community, she quickly realized that fostering
conflict resolution skills among her students needed to be the center of her inquiry interventions.
Carrie spoke in depth about the ways in which she attempted to develop these skills in her
students through “sticky scenarios” and other small group activities (Researcher Memo #6, May
16, 2017). Carrie’s practitioner inquiry allowed her to develop beliefs that authentically
represented the ways in which she wanted her classroom community to function.
Liz. While most interns’ inquiry topics had a strong connection to one specific belief about teaching, Liz made a variety of connections between her inquiry topic and her teaching beliefs. Liz saw her inquiry as an opportunity to explore her students’ multiple intelligences within curriculum by thinking outside of the standardized testing culture.

My inquiry was very much about creativity and originality and letting students have that outlet especially in the older two grades where testing starts becoming so much more prevalent than in the younger grades. I guess just giving the inquiry itself the question I had, really didn’t change my belief because I always did think that creativity was important, which is why I looked into it. However, inquiring into my students’ multiple intelligences helped me realize how important this belief is to my practice and vision for myself as a teacher. (Liz, Round 2 Interview)

When reflecting on her inquiry, she highlighted how she saw her students “flourish in activities that incorporated the arts and technology” (Liz, Inquiry Report). These noticings directly influenced her belief about teaching social studies. In December, Liz wrote, “I believe that it is our duty to teach our students how to be young citizens and teach them about the world around them – from both the past and present.” By April, she revised this teaching belief to state, “my key belief about teaching social studies is that meaningful classroom discussion of social studies concepts will encourage students to think critically about their world.” In addition, she described a geography lesson where students looked at Japan on Google Maps and discussed how Japan’s geography affects the lives of the people living there. The shift from December to April highlights that Liz was able to articulate what she believed about teaching with clear illustrations provided from activities used in her inquiry. Originally, her belief did not provide a clear description of what she meant by “our duty to teach our students how to be young citizens.”
Liz’s belief about teaching social studies was revised based on her teaching practices guided in her inquiry on multiple intelligences.

Each participant in the study had an individual inquiry topic that they explored throughout the spring semester. Each participant’s inquiry topic connected to a personal belief about teaching and learning, which allowed inquiry to act as a means for investment. Connecting their inquiries to a personal passion intrinsically encouraged interns to delve into their practice. This first assertion suggests that by allowing interns to select an inquiry topic that connects to an individual passion, inquiry can support preservice teachers as they develop more authentic beliefs about teaching and learning.

**Assertion #2:** Inquiry is a means for deepening and expanding preservice teachers’ understandings of what is happening in their classrooms to support the complexity of beliefs.

At the beginning of the school year, interns felt that they barely knew their class schedules, let alone what their instruction would look like. They heavily relied on their personal experiences with schooling and instruction when developing their initial beliefs about teaching and learning (Richardson, 2003). Over time, interns were able to live out their initial beliefs by putting them into practice. Experiences in the classroom helped to confirm their beliefs or call them into question (Calderhead & Shorrock, 1997; Fang, 1996; Joram & Gabrielle, 1998). Specifically, implementing practitioner inquiry allowed interns to enact their initial espoused beliefs through various classroom activities and teaching practices. Practitioner inquiry invited interns to investigate the multiple dimensions of their beliefs, which created a more complex understanding of teaching and learning. As interns tried out more interventions and activities in their classroom, they developed deeper understandings of their practice. Interns expressed their belief development in the following ways: inquiry as deepening and inquiry as expanding.
Inquiry as Deepening

Interns saw inquiry as a means to affirm and enact their initial beliefs about teaching and learning. They entered the internship with prior beliefs and through systematic and intentional study of their practice, they were able to deepen several of their initial beliefs. Specifically, Maddie and Ben spoke directly to this theme.

Maddie’s inquiry focused on the use of Genius Hour in her classroom. Teachers use Genius Hour as a time set aside for students to explore their own passions and wonderings (Genius Hour, 2017). Often students select their own topic and their projects are framed around an inquiry question. Throughout Maddie’s interviews, she focused on her use of Genius Hour in the classroom and how this inquiry provided a clear example of her enacting an initial belief about implementing student-centered teaching.

I feel like more of my beliefs have gotten stronger. Not that they have changed necessarily, but just that they have been reinforced by what I have done in my classroom this school year. I believe in making my teaching student-centered, I have been doing a lot of student-centered activities like Genius Hour. (Maddie, Round 2 Interview)

By inquiring into the implementation of Genius Hour in her classroom, Maddie was able to affirm her belief about student-centered learning. Her key belief about learning remained the same from her teaching platforms submitted in December and April. She wrote, “I believe that learning should be student-driven around experiences.” While her belief statement did not change, the way she articulated and supported her belief changed between the two platform versions.

Throughout her inquiry, Maddie was able to put this belief into action through her instruction. In December’s Teaching Platform 2, she said that she would use student wonderings
and ideas to drive her lesson planning. She described her role as a facilitator using students’ ideas to guide instruction. In April, she provided a specific example of this type of instruction from her inquiry she could only describe in December. She explained that Genius Hour represented her thoughts about teaching and how this time provides students with an opportunity to take control of their learning. In her inquiry report, she wrote, “Teaching Genius Hour has helped me realize the importance of student choice in the classroom. Giving students choice in the classroom is one way to be a responsive teacher.” In support of Maddie’s inquiry reflection, Joram and Gabrielle (1998) found that preservice teachers adopted a student-centered teaching approach during their teacher preparation program.

Maddie already saw the importance of taking a student-centered approach when entering her internship. However, practitioner inquiry offered Maddie a space to deepen this belief about student-centered instruction and implement this approach through her practice. Specifically, she was able to try out student-centered activities through the use of Genius Hour. She noticed how positively her students were responding to this type of instruction. Her practical experience with implementing student-centered instruction provided evidence to support and strengthen her beliefs.

However, it is unclear if Maddie would have explored student-centered learning without practitioner inquiry. Requiring the interns to complete an inquiry cycle on their topic of choice pushed interns to consider their own passions about teaching and frustrations they were feeling during their daily practice. Then, interns used inquiry as a means to systematically study these areas of passion by enacting their beliefs through activities in the classroom. In Maddie’s case, inquiry was essential for enacting her belief about student-centered learning because Genius
Hour was not a part of her mentor’s instruction or something that Maddie knew much about prior to researching inquiry topics.

Yet, it is still difficult to confirm if Maddie would have come to the same conclusion just by teaching and reflecting on her classroom experiences. Kyles and Olafson (2008) found that preservice teachers began to change their beliefs by uncovering their existing beliefs and biases about student diversity. Simply writing out their beliefs through the four teaching platforms may have helped interns start this belief affirming and changing process. However, using inquiry as a systematic and intentional study of one’s practice pushed interns to develop a deeper understanding of their beliefs by becoming more action-oriented. This is because through inquiry, each intern researched literature on their topics, collected baseline data from their classrooms, developed interventions/activities, collected data from their interventions/activities, analyzed their data to make informed instructional decisions, and shared their inquiry experiences with other educators. Engaging in the inquiry cycle encouraged interns to think about and act upon what their new understandings and practices meant for their beliefs about teaching and learning.

Similar to Maddie’s inquiry experiences, Ben described how conducting practitioner inquiry gave him evidence to deepen his beliefs.

There were certain things in my practice, beliefs in the Fall, that I didn’t necessarily have concrete evidence of, but I think whenever I was able to use inquiry I was able to find evidence, and I was able to research it that much more, to find out how that would visibly look in my classroom. I think being able to use the inquiry gave me some answers that maybe I wouldn’t have been able to do. (Ben, Round 2 Interview)

This quote from one of Ben’s interviews supports the argument that beliefs are reinforced when one has concrete evidence of them in practice (Kagan, 1992). Ben’s inquiry helped him
make connections between his classroom experiences and beliefs about teaching and learning. His experience, like many of the other participants, emphasized how engaging in practitioner inquiry supported the connection between theory and practice (Cochran-Smith & Lytle, 1993; 2001).

Specifically, Ben theorized the importance of student leadership and admitted that he did not have the “ammo” to back up his beliefs in the fall semester (Ben, Round 2 Interview).

I am noticing over the course of the semester a lot of my lessons based on my inquiry have to do with being receptive to my students. I think I always planned that to be a part of my beliefs system in the classroom, but I didn’t necessarily have the experience to back it up. I think looking at my evidence and beliefs and being able to put it into practice and justifying those, gave me the experience and ammo to back up what I already had in mind. (Ben, Round 2 Interview)

Ben’s description highlights how preservice teachers’ initial espoused beliefs can move into enacted beliefs throughout their teacher preparation program (Fives & Buehl, 2012).

Through inquiry, he saw himself being responsive to his students’ needs. Before inquiring into student leadership, he did not have experiences to justify his belief. As he engaged in practitioner inquiry, he was able to implement instruction that emphasized leadership skills for his students. In this way, Ben’s inquiry acted as a bridge between his belief in student leadership and his new instructional practices that created opportunities for his students to build their own leadership skills.

At the beginning of the internship year, Ben stated, “I believe in fostering tomorrow’s leaders by practicing leadership traits in my students that they can practice in a safe community” (Teaching Platform 2). He wanted students to embrace their natural leadership skills and work on
collaborating together. Early on in the internship year, Ben felt strongly about this initial belief and while developing his inquiry wondering, he realized that his personal interests in sports and leadership drew him to the topic of student leadership. However, Ben did not have to provide specific examples or clear evidence from his teaching. He believed strongly in student leadership, but he did not have research to make visible connections to his classroom.

By the end of the internship year, Ben’s revised belief about student leadership read, “I believe in fostering tomorrow’s leaders by providing opportunities to lead and instilling those traits in my students so that they can build confidence in a safe community” (Teaching Platform 4). In April, Ben provided examples from his inquiry where students had opportunities to listen and collaborate with one another in small groups. He also shared an account where he invited one of the local university’s ice hockey players to speak to the class about leadership on and off the ice. He knew that many of his students played hockey and enjoyed meeting collegiate athletes from the local university (Researcher Memo #5, May 11, 2017). This real-world example helped his students apply this information to their own experiences in the classroom while helping to shape Ben’s own belief about student leadership.

In his inquiry report, Ben stated that he has envisioned leadership as an important topic for his future classroom. Rather than teaching leadership skills as isolated instances, he wants to integrate student leadership into his instruction and real-life situations. From this inquiry, he learned that “even the quietest and unlikely students can feel success when given opportunities to take the lead.” He also saw more value in “being responsive to my classroom and providing opportunities to work as a team.” Ben’s reflections emphasize how inquiry was a means to deepen his belief about student leadership by affirming and enacting his beliefs through the opportunity to consider inquiry data sources such as a university hockey leader visiting his
classroom. Ben was able to be more specific and action-oriented in his newly developed beliefs than he initially could prior to engaging in practitioner inquiry.

I put such an emphasis on leadership, community, and team building. If I was in a community that didn't emphasize inquiry, I don't think I would be as inclined to study this and put as much into it. Inquiry does take work and whenever I see other people motivated enough to say "This is something important that I value in my classroom", it motivates me to want to do it more and see what I can find out about my own practice.

(Ben, Interview 2)

Without the partnership’s focus on inquiry and the internship’s inquiry requirements, Ben may not have had the opportunity to explore and fully enact his belief on leadership during his teacher preparation program. Being a part of a community of inquirers encouraged Ben to want to learn more about his practice. The culture of inquiry promoted by this PDS context encouraged interns to develop a deeper understanding of their beliefs about teaching and learning by offering multiple opportunities to intentionally study their practice by deepening their beliefs about teaching.

Problematizing their practice allowed Ben and Maddie to reevaluate their prior beliefs about teaching and learning. In both cases, inquiry reaffirmed their initial beliefs. By systematically and intentionally studying their practice, they were able to consider why they choose to teach, learn, and lead in specific ways (Cochran-Smith & Lytle, 1993; 2001). Specifically, Maddie was investigating the use of Genius Hour in her classroom to implement more student-centered practices and Ben was incorporating collaborative teamwork activities into his daily practice to encourage student leadership.
Parker et al., (2016) suggested that practitioner inquiry can strengthen the link between theoretical course work and classroom experiences. Inquiry provided a space for the study participants to make connections between theory and practice visible. Investigating their practice, encouraged interns to take concepts from their methods coursework, former classroom experiences as students, and mentor teachers’ modeling, and connect them to their own practice. For instance, Jane spoke of the importance of democracy that was a critical element of her social studies methods coursework. She felt that this was an important concept, but did not have evidence to support this belief prior to inquiring into social-just practices and building an empathic classroom community. Inquiry offered Jane opportunities to study her practice while making connections to her social studies methods coursework.

Similarly, Darling-Hammond and Snyder (2000) argued that inquiry provides preservice teachers opportunities to ask questions about the uncertainties of teaching through the process of research and implementation. Ben and Maddie’s inquiries helped problematize their practice by allowing them to develop wonderings about their internship experiences based on their own passions and felt tensions (Dana & Yendol-Hoppey, 2014). They continued to deepen their beliefs as Maddie implemented student-centered practices during Genius Hour and Ben incorporated leadership opportunities for his students into his instruction.

**Inquiry as Expanding**

Teachers hold complex and multifaceted beliefs about their students, practice, and school systems (Fives & Buehl, 2012). Study participants saw inquiry as a means to develop the multi-dimensionality of their beliefs by offering them opportunities to expand on their beliefs in the classroom. Furthermore, inquiry offered support as interns strengthened their confidence in their
own beliefs about teaching and learning. As interns developed their beliefs, interns were required to find evidence of their beliefs through data collection and analysis.

At the beginning of the internship year, interns had limited teaching and classroom experience. Specifically, all five interns described their initial beliefs as underdeveloped with a singular focus. Most participants said that the initial beliefs developed were based on concepts from methods coursework, their mentor teachers’ instruction, and their own experiences as PreK-12 students (Lortie, 1975). As the year progressed, interns had more personal classroom experiences to based their beliefs on. In support, Parker et al. (2016) found that inquiry helped teacher candidates explore their own sense of teacher agency. This sense of agency afforded teacher candidates the confidence to expand their beliefs by trying new classroom activities and interventions.

Jane expressed how her beliefs started out as one-dimensional and continued to evolve throughout her inquiry experiences:

My beliefs in the past only had one dimension to them. Through my reflections, inquiry, and overall growth as a teacher, I realized that my beliefs don’t have to just be an end all be all. I’ve realized that my beliefs can be multi-dimensional. When first developing my beliefs, I thought of one thing that really stood out to me. I have come to realize through my inquiry that as a teacher there are multiple things that play into my beliefs about teaching math, language arts, science, etc. (Jane, Round 2 Interview)

During her interviews, Jane described her beliefs developing into multiple dimensions. She continued to reflect on the development of her beliefs:

When thinking back to the first time I talked about my beliefs as a teacher, I notice just how much my thinking has changed. At the beginning of the year, my teaching beliefs
seemed to be very self-centered. There was no “When the teacher does this, it allows students to...” I was more focused on my practice about my students’ needs. I was more or less thinking about what my idea of an effective teacher would be. I had also thought a lot about what might be the “right answer” to a belief in certain areas (Jane, Teaching Platform 4).

Similar to Jane’s developing beliefs, Joram and Gabrielle (1998) reported that teacher candidates recognized a change in their beliefs about teaching. Preservice teachers noticed that they were constructing their own understandings based on classroom experiences rather than absorbing information from coursework. Instead of looking for the “right” answer, inquiry invited Jane to develop her own beliefs about teaching and learning. Inquiry allowed Jane to examine her practice for answers by collecting and analyzing data about her students rather than solely relying on her mentor’s modeling or PDA’s recommendations.

Jane’s description focused on her beliefs as a whole rather than highlighting how her experiences with inquiry influenced a specific belief about teaching and learning. Further analysis of Jane’s teaching platforms and inquiry report show more specifically how practitioner inquiry developed multi-dimensionality of her beliefs: analyzing student work and responding to student feedback through her instruction.

In December, Jane provided a blanket statement about the use of inquiry and her belief was focused on her role as a teacher:

When thinking of inquiry and analysis, I feel as though these are two aspects of teaching that a teacher never fully masters. As educators, we should always be questioning our practice and the ways in which our students learn. We should strive to inquire and
analyze our pedagogical practices in order to be the best possible teacher to teach every single one of our students. (Jane, Teaching Platform 2)

By April, her key belief about inquiry and analysis was condensed and emphasized the relationship between teachers’ actions and student learning. She wrote, “When teachers continue to strive to improve their pedagogical practices through inquiry and analysis, students will continue to show growth throughout the school year.” She provided results from a student survey that she used to collect data on her inquiry about empathy and tolerance development to justify this belief (Jane, Teaching Platform 4). She also described how analyzing baseline data from surveys and listening to her students’ feedback emphasized a class need for instruction on mindful listening. She wrote,

As a part of my inquiry, I taught a lesson on how to develop a growth mindset. During the lesson, the students completed a challenging task and while this was happening I documented all the negative things I heard. Then, we worked together to revise our thinking to adopt a growth mindset as a class. (Jane, Teaching Platform 4)

Along with this sample lesson, Jane included data from other lessons she taught based on her inquiry. For example, she included a student poll where she asked students about their own mindful listening habits. By including multiple examples of how she was inquiring into her practice, she provided evidence to support the notion that inquiry was developing the multidimensionality of her beliefs about teaching and learning. Instead of one instance, Jane provided a variety of examples to support the connection between her beliefs and her inquiry into empathy.

Price and Carr (2007) view inquiry as a way for teacher candidates to “tell their own stories and create their own meaning in their own voice” (p. 208). Through Jane’s changing
descriptions and justifications, it is evident that she was developing the multi-dimensionality of her beliefs about teaching and learning. As Fives and Buehl (2012) recommended, Jane was reflecting and examining her beliefs throughout her internship.

Similar to Jane’s description of inquiry, Carrie also identified how her beliefs were expanding. She described her belief development in the following statement: “I had the same overall beliefs. They are just so much stronger. It’s like a muscle” (Carrie, Round 2 Interview). When asked to describe how her beliefs had developed, Carrie argued that her beliefs were still the same from the beginning of her internship. Specifically, our conversations focused on her belief about community building, since that was the emphasis of her inquiry (Carrie, Teaching Platform 2 & 4). In December, she stated, “My additional key belief is in community building. I believe that a classroom should have a strong community and in having a strong community everyone will feel safe and comfortable” (Carrie, Teaching Platform 4). This belief statement was almost identical to her belief in April. Her reflection on beliefs over time in her Teaching Platform 4 speaks to this point. She wrote:

> It has been difficult to describe my strong passion for community building and encouraging empathy among students and how that is developing. I tried to integrate activities through my inquiry that helped my students learn to care and understand each other’s point of view. I believe empathy is essential in building a supportive community of students. (Carrie, Teaching Platform 4)

Even though Carrie struggled to articulate the development of her passion for fostering a strong sense of community among her students, other data sources such as our interview conversations and her inquiry report highlighted the expansion of her beliefs through the use of practitioner inquiry. Originally, Carrie described her belief in community building through
positive interactions among students. Through inquiry, Carrie furthered explored and developed a deeper understanding of her belief on community development by researching the literature on students’ conflict-resolution development and activities that she implemented in the classroom.

At the beginning of her inquiry, she surveyed students to learn more about how they reacted in stressful situations. From her initial survey data, Carrie found that students who were very self-regulated had multiple strategies to calm down, whereas other students admitted that they struggled to control their emotions. Additionally, literature on positive interactions among students suggested creative opportunities for her students to practice effective social skills (Bovey & Strain, 2003; Crowley & Saide, 2016). Her baseline data and review of literature emphasized the need to teach her students conflict resolution and problem-solving skills. She decided to implement “sticky situation scenarios” in her classroom where students wrote written reflections about difficult classroom situations and discussed a solution as a class. Through this inquiry intervention, she noticed that her students thought about and responded differently to situations. Her students needed to continue practicing these conflict-resolution skills.

Over time, she did notice that her students were starting to take more initiative in developing solutions for the “sticky situation scenarios” and for other individual problems throughout the school day. These noticings supported her belief about the importance of continuing to develop a strong class community through the entire school year by showing how her students could adopt new strategies for challenging situations. If she would have stopped after a week or two of this intervention, her students might not have developed independence and self-regulating strategies needed to create a positive classroom environment. In her inquiry report, Carrie was able to explain how her belief in community building was expanding and what this inquiry meant for her students:
Through my inquiry on positive student interactions, I have learned many things about myself as the type of teacher I want to be and the type of classroom environment I hope to create. The overall goal of my inquiry was to implement positive interactions among my students through conflict resolution skills and problem-solving skills. I hope to bring different types of emotional support and behavioral situations into my classroom. I want to help my students understand right from wrong and to help them resolve their own problems. (Carrie, Inquiry Report)

Carrie’s inquiry report highlights how practitioner inquiry enabled interns to reach deeper levels of reflection about their internship experiences by expanding on her complex beliefs. Before engaging in practitioner inquiry, Carrie struggled to describe her belief about classroom community. Through data collection of student surveys and written reflections, she was able to see how her students’ self-regulation skills were changing and this impacted her belief development by providing her evidence from her own instruction. Literature also helped Carrie connect with other educators who were facing similar tensions in their classrooms. By the end of her inquiry, Carrie was able to articulate a deeper understanding about her belief in having a strong classroom community. She was able to identify concepts that were necessary (conflict resolution skills and problem-solving skills) to promote a positive and safe classroom environment for her students.

By the end of the internship, interns felt that they were able to apply their teaching beliefs to their classrooms and more specifically that their inquiries provided them with opportunities to further expand on these complex beliefs. Practitioner inquiry encouraged the interns to be action-oriented in their classrooms. Rather than taking back-seat and solely observing, inquiry was a means for interns to develop interventions and classroom activities to learn more about their
practice and their students. Maddie implemented Genius Hour with her students on a weekly basis, Jane introduced her students to the concept of growth mindset, and Carrie used scenarios cards to investigate the ways in which her students were developing conflict resolution skills.

As the interns moved away from general statements about teaching, they shared specific and detailed examples from their inquiries to justify their own beliefs on student-centered practices, empathy, and community building. Through data collection and analysis, interns had opportunities to see what worked rather than saying what might work. The interns could stand behind these beliefs now because they had data to back them up. They were able to build onto initial beliefs and make adjustments to what they actually believed in based on what they were doing in their classrooms. How inquiry acted as a means for deepening and expanding their beliefs was noticeable in the interns’ belief statements. Specific beliefs were more developed, because they had evidence to support their belief statements from various instructional practices. Practitioner inquiry was the process that enabled the study participants to achieve deeper reflection about their internship experiences. The participants’ experiences spotlight clear examples of how the interns’ inquiries deepened and expanded their complex beliefs.

**Assertion #3:** Inquiry is a means for learning about students in order to implement student-centered practices to support the enactment of beliefs.

At the beginning of the spring semester, interns stated that they wanted to focus on their students, but they were more concerned about their own practice. As interns engaged in practitioner inquiry they learned about their students’ needs and started to adopt more student-centered teaching practices seen in their inquiry interventions and classroom activities. As they conducted their inquiries, their understandings of teaching and how they conceptualized their role as teachers started to shift. Interns self-reported the adoption of more student-centered
practices. Changes in their practice were also recorded through their teaching platforms and inquiry reports. Interns expressed the enactment of their student-centered beliefs in the following ways: inquiry as seeing and inquiry as responsive teaching.

**Inquiry as Seeing**

The study’s participants initially focused on themselves in their teaching beliefs submitted in December. As interns continued through their internship, they started to focus more on their students. One intern was even able to self-identify the shift,

> When I first started teaching I was so worried about how I was doing. When I would plan and write lessons I was so worried about what I was going to say because I had never done much teaching before. The same with my beliefs, I was only thinking about how my beliefs would affect myself as a teacher and I wasn’t really thinking about what they would do for my students or how they would make my classroom look. (Jane, Round 2 Interview)

Even though the other four participants did not articulate this shift during our interview conversations, data analysis of their teaching platforms and interview transcripts showed a clear change from egocentric language to student-centered thinking. Interns spoke directly to how inquiry allowed them to learn more about their students’ by seeing their thinking. As interns collected and analyzed data they used this information to inform the instructional decisions they were making as they continued through the inquiry process.

Specifically, Ben saw inquiry informing his instructional decisions through opportunities to consider inquiry data sources and boosting his confidence in the decisions he was making in the classroom.
Inquiry gives you that much more confidence when you are going and making decisions on how you want to run your classroom. It gave me affirmation in what I wanted to do and gave me more data on things that were working and what wasn’t. With that information, I can inform my practices in the future. If it turns out that it wasn’t working out, I would plan to take a different direction. (Ben, Round 1 Interview)

Ben described how inquiry was informing and improving his practices by having data to prove to himself and others that his instructional practices were working or if he needed to make adjustments to meet the needs of his students. He was able to see which inquiry interventions and classroom activities were effectively reaching his students. He felt that practitioner inquiry provided him with data about his students to make more informed decisions about his practice. Furthermore, Ben explained that engaging in his inquiry supported the enactment of his belief about student leadership in the classroom. In his round 1 interview, he articulated this belief development.

I think in the fall one of my beliefs wasn’t necessarily on a specific curriculum subject, but it was one of my personal beliefs that I wanted to incorporate leadership into the classroom. I realize that it’s not as easily done without some research put into it. Inquiry helped me track that progress and get some pre-assessment data. I was able to see how my students reacted to that through their actions at recess, in the classroom, and even comments from parents at home. I wouldn’t have necessarily have known if I just taught a unit on leadership rather than actually tracking the data and doing my research to find credible sources. I tried to find as much information as I could about my personal inquiry. Overall, being able to see the data in front of me helped me inform how I could move forward and apply it to my future classroom. (Ben, Round 1 Interview)
Inquiry enacted his belief on student leadership by providing him with data to track his students’ progress. Rather than teaching a unit on leadership skills, Ben was able to systematically and intentionally study his practice by collecting data about his students’ initial leadership skills, incorporating leadership activities into his classroom, and analyzing this data to make more informed decisions about the ways in which his students had opportunities to be leaders in the classroom.

Similarly, Maddie explained how her inquiry was influencing her beliefs by effecting what she was noticing about her students.

I am seeing that I am being responsive to what my students need from me and planning lessons that will help them develop the skills that they need to accomplish what we are doing but I don’t just want to give them skills that we are using in the classroom. I want them to learn skills that they can use outside of the classroom. So those twenty-first-century skills like communication, collaboration, creative thinking, and creativity. I want them to develop skills that they will be able to transfer from year to year and also outside of school. (Maddie, Round 2 Interview)

As described earlier in this chapter, Maddie’s inquiry focused on the implementation of Genius Hour in her classroom. This student-centered experience directly connected with her belief about student-centered learning opportunities. Through this inquiry, Maddie noticed herself seeing what her students needed and realizing that she wanted to teach her students skills that could be applied to situations outside of the classroom.

Liz also felt that inquiry was influencing her beliefs by teaching her about the students in her classroom. In particular, she felt that her inquiry topic on multiple intelligences was helping see what motivated her students.
I think that my inquiry topic has made me really think about how I am as a teacher and how I can make my teaching, my lessons a lot more student-centered because I am thinking about what they like to do, how they will be motivated, and how I can help them create original work that’s their own that they are excited about. I think that it has taught me the importance of assessment and how to think more about your students in your lessons than yourself. (Liz, Round 2 Interview)

When describing how they engaged with inquiry, interns emphasized the importance of looking at the data. Student work, surveys, and field notes were valuable sources of information about their students’ academic progress and provided feedback on their instructional practices. Preservice teachers’ experiences with inquiry help them to see and listen to their students (Price & Valli, 2005).

In particular, Liz described a shift from not wanting to take data to seeing the importance of having data to inform her practice for the benefit of her students.

Data really helps you understand what’s going on in your classroom. At first, I wasn’t the biggest fan of taking data which I am still not like, “Oh I can’t wait to do a systematic observation” but it really does help and you can see [things more clearly]. It shows you what you don’t see with your own eyes. It can show you things. Taking that data throughout teaching and realizing how important that is - whether it is behavior or academics. I’ve learned that data really helps and shows you more than you think it will. (Liz, Round 2 Interview)

Liz was starting to realize how collecting data for her inquiry was provided her with information that she would normally miss. Data collection allowed her to see what she was missing. Liz also shared how her inquiry data analysis was influencing the teaching of her
students’ social studies unit on Japan. Collecting data on her students’ motivation, helped her think about ways to more fully engage her students. She responding to this data by creating classroom activities that allowed students to use their multiple intelligences.

The first intervention was water colored kimonos. I taught them all the different symbols that were sacred in the Japanese culture and the different colors of kimonos they wear and how they symbolize things. Instead of having them write down, “I learned that this means this” or “I identify with this,” they made little origami kimonos when we talked about origami. Then the next day, they drew with crayon the symbol that meant the most to them. They got to pick what their kimonos looked like, select a symbol and choose a color that represented who they were as a person. My students were really excited about this activity, because I based it on what I was learning about my students through my inquiry. (Liz, Round 2 Interview)

After the interns’ inquiry reports were due, Liz continued her interventions and strategies learned from her research to help increase her students’ intrinsic motivation, creativity, and engagement. She described a science activity that she completed during the same day as her second interview.

My inquiry data showed me that my students responded well to activities that incorporated their interests. Seeing this data made me want to be more exciting and creative. Today we did a red light, green light, potential kinetic energy game outside. I was planning on it being one of my interventions, before our inquiry papers were due, because I realized from my data that my students would really enjoy the physical component of the activity. (Liz, Round 2 Interview)
During her second-round interview, she also shared that her inquiry taught her that bringing in student interests helps increase student engagement and that looking at data helps her as a teacher. Data collected from her instruction taught her more about her students’ current understandings and motivation. She was able to use this data to make more informed instructional decisions and think about creative ways to incorporate her students’ multiple intelligences in future lessons. Even though the required intervention period was over for the interns’ inquiries, Liz had already planned for additional inquiry related activities in her scope and sequence. She did not feel a need to change these inquiry-based activities because she was seeing positive results from her inquiry data. Liz planned to continue more activities that responded to what she noticed from her data analysis for the rest of the school year.

Along with seeing the importance of taking data, Maddie also mentioned using data to make adjustments to her instructional practices. Specifically, Maddie identified a need to change how her students selected topics for their Genius Hour projects. At first, Maddie required her students select topics that directly connected to their social studies and science units.

I felt that I was hindering them. I felt towards the end that I was forcing them to look into concepts that they might not be interested in. My students had to pick a topic directly related to science or social studies. I realized from the data that I was collecting and analyzing that they would still be thinking about science and social studies no matter the topic they chose. (Maddie, Round 2 Interview)

Maddie quickly realized that her students’ interests were much broader than these two subjects and that they could make connections throughout the curriculum when provided with opportunities to study topics that they were truly interested in. She noticed that two students, in particular, were disengaged during Genius Hour time. She felt this pressure was limiting these
students’ intrinsic motivation. When she expanded her students’ options, she noticed that these two students, and others in the class, were more excited for their research time. This shift was a direct result of her use of inquiry data to see what her students needed.

**Inquiry as Responsive Teaching**

One of the biggest takeaways from inquiry for the participants was being responsive to their classrooms. Interns spoke about their struggles to cover the curriculum while also meeting their students’ diverse needs. As the interns learned more about their students through the inquiry data they collected and analyzed, there was a clear need to respond based on their new understandings.

From Ben’s inquiry field notes and other data sources, he saw the need to connect more with his students through different learning styles and student interests. He explained this new understanding in the following way:

> I thought about my students’ baseball cards and Pokémon cards and how they organize them in their binders. I now try to apply what they like to do at home to my instruction. I think about making learning visible and taking it home with them rather than just using these isolated worksheets because it is a part of the curriculum. I think that’s where the real art of teaching comes in, where you can adjust your plans and be responsive and receptive to what your class interests are. You think about how they will respond and through inquiry, start to get a feel of your classroom. This is very important in terms of engaging them, making sure they are getting as much as they can out of what you’re trying to teach them. (Ben, Round 2 Interview)

Ben saw the importance of connecting student leadership activities for his inquiry to his students’ personal interests. Furthermore, inquiry data was helping him notice things about his
students and through his data analysis, he was able to grasp how he could respond to the needs of his students. Gathering and analyzing data about his students helped Ben be responsive in his practice.

Jane also realized the importance of being responsive to herself through the inquiry process and ultimately being responsive to her students. Jane realized that the inquiry process was messy without a clear-cut path. She needed to be responsive based on the data that she was collecting and analyzing. From these new insights into her students’ learning, she was able to make her own course and respond to the needs of her students. She explained:

I’ve also learned that you need to let your inquiry take its own course. I’m at the point now where I look back to my big wondering and I realize that I strayed from it a little bit and that’s totally OK! I am a perfectionist at heart so it was kind of hard for me when I first realized that I wasn’t answering my exact wondering. Instead, I was being responsive to my students’ needs, the ways they were responding to interventions and what I thought they could benefit from in regards to my inquiry. Inquiry doesn’t have to be this strict cycle that you follow, you may collect data and analyze and then realize you have a new wondering or realize that you need more data to support your learning. I know we talked about this at the beginning of the year how inquiry is not always cyclical and I’ve definitely come to discover that on my own. (Jane, Round 2 Interview)

Through Jane’s inquiry, she was started to reconceptualize the flexible and messy nature of practitioner inquiry. Similar to Jane’s new understanding of inquiry, Liz noticed the importance of including her students in the decisions she made along her inquiry journey.

I’m thinking about the importance of really involving my students in the whole process of being a teacher. I tried a lot to involve my kids in my inquiry with surveys and
interviews. I think that was helpful. My students were excited about helping with my inquiry, so I think that helped me be responsive to them. I think it’s really important to involve the students and let them know what’s going on. They want to know, “Why are you teaching this lesson on mindfulness?” I tried to keep them in the know and made sure that it wasn’t just me front and center. I want my kids alongside me with whatever I do in the classroom. (Liz, Round 2 Interview)

As Liz collected and analyzed data from her instruction, she realized that she was being more responsive to her students’ needs. She expressed the importance of putting her learners first when developing instructional activities. She wanted her students to be involved in her inquiry so that adjustments to her instructional practices met the needs of her students.

Differentiation was a noticeable area of change as interns implemented more responsive teaching practices as they engaged in inquiry. At first, participants were able to talk about the importance of this responsive teaching strategy. Then towards the end of their internship year, interns were able to speak to specific examples of how they were differentiating instruction through inquiries interventions and activities to meet the needs of their students.

Maddie expressed her understanding of differentiation in relation to her inquiry in the following way:

I know that differentiation is so important. I’ve noticed that I am able to differentiate for my students during Genius Hour. It helps that most of my students are able to figure out what they can or cannot understand and ask for those supports when needed. From my students’ survey results and observational notes that I collected during my inquiry, I quickly realized that the texts they found on their Genius Hour topics were a little bit too difficult. I helped them find videos related to their topics that we could watch together
and then talk about. I also created different note taking sheets for students that were struggling to collect data. I tried to do whatever helped them organize their thinking the best. (Maddie, Round 2 Interview)

Maddie described two of the challenges her students faced while conducting their own inquiries during Genius Hour. When various texts’ reading levels were too difficult for her students to grasp a clear understanding of the material, Maddie found videos to supplement the reading material. When students struggled to take detailed and organized notes, Maddie created note-taking sheets to support her students’ research. Maddie first noticed these Genius Hour challenges by collecting data such as student surveys and observational notes. As she analyzed her inquiry data, she was able to develop ways to respond to the needs of her students. Specifically, Maddie decided to differentiate her instruction by creating a variety of note-taking sheets and finding informational videos to help students conduct their own research.

Jane also described how flexibility allows students to be more successful in the classroom rather than sticking to a set plan for all students to follow. Going through the inquiry process helped Jane see the importance of being responsive to her students’ needs rather than sticking to her planned lessons.

I’ve learned through my inquiry lessons, that you need to let things kind of take their natural course. Let things go. You’ll be more successful if you let them flow naturally rather than trying to force it. If you know that’s not what your students end up needing then you follow the path that is being built…As I collected more and more data for my inquiry, I noticed that teaching is more than just planning whole group instruction. I need to think about differentiating for my students. Having different opportunities that allow all students to be more successful. Multiple times my students responded differently to an
inquiry intervention than I thought they would. What worked for some students didn’t support everyone in the classroom. I now realize that I need to be flexible and open to the possibility that things might change. (Jane, Round 2 Interview)

Being responsive to student needs was spreading beyond the interns’ inquiries into other aspects of their teaching. Jane shared an instance where she supported a student during Measure of Academic Performance (MAP) testing.

Reflecting on what I’ve learned from my inquiry just reminded me of the ways I try to teach my students in other parts of our day. For example, today my students were taking the math MAP assessment and one student was attempting to use an algorithm to solve an addition problem. She was getting frustrated when she was unable to solve it. So, I said to her to “Take a step back, look at what the problem is asking, and wonder if you can solve it a different way?”. The question that I asked her is something that I’ve been working on all spring with my inquiry and I want my students to become mini inquirers too. How can we solve problems on our own? If something isn’t working, take a step back and ask yourself how can you fix it. (Jane, Round 2 Interview)

Through the interns’ various experiences with practitioner inquiry, they saw inquiry as a means to learn more about their students and implement student-centered practices which supported the enactment of their beliefs. By collecting and analyzing data, interns learned more about their students. They used their new understandings to be more responsive to the needs of their students. Making adjustments to their instructional practices helped interns enact their beliefs by adopting more student-centered practices.
**Assertion #4: Inquiry is a means for developing professionalism to support the empowerment of beliefs.**

As interns reflected on their inquiry experiences, they expressed an increased sense of professionalism. They spoke directly about their increased confidence as teaching professionals, which supported the empowerment of their beliefs about teaching and learning. Specifically, interns expressed how their sense of professionalism and beliefs were validated through their experiences with practitioner inquiry.

When discussing self-confidence, it is important to consider that this term includes a variety of elements such as demeanor, teaching presence, and self-efficacy. Price and Valli (2005) suggest that inquiry also has an emancipatory dimension. For this study’s participants, a personal level of emancipation was seen. Interns felt less regulated and constrained by school regulations and curriculum requirements. They became more confident in their own instructional practices and beliefs through the use of inquiry because they had data to support their decisions. They saw themselves as change agents with a professional voice that could contribute to the larger educational community. Interns’ reflections about their practitioner inquiry experiences emphasized their new sense of professionalism and the empowerment of their beliefs about teaching and learning.

Furthermore, Parker et al., (2016) found that inquiry created a space for teacher candidates to develop their sense of teacher agency. Agency can be defined as “the capacity for people to act purposefully and reflectively on their world” (Rogers & Wetzel, 2013, p. 63). The study’s participants felt that they were starting to become a part of a larger community of educators through their inquiry experiences, specifically by presenting at the inquiry conference.
All participants conveyed this sense of agency in their round two interviews after presenting at the partnership’s inquiry conference.

In particular, Maddie shared that she is normally nervous to speak in front of a group of adults, but the confidence she had in her inquiry calmed her nerves.

I was able to get up in front of a group of people that normally I wouldn’t be able to get up in front of and speak. I am okay in front of the kids but getting up in front of adults and peers is so much harder for me. As I prepared my presentation and spoke at the conference, I felt a lot more comfortable because I was so confident in what I was talking about. I really dove into our Genius Hour along with my students and I was proud to share my inquiry data and findings with other teachers. (Maddie, Round 2 Interview)

Maddie realized that sharing her inquiry was less intimidating than originally expected. She was sharing the data that she collected and how she responded to information from her data sources. Along with building confidence, Maddie felt that presenting at the inquiry conference validated her position as an educator. She shared:

Presenting my inquiry gave me so much more confidence in myself. First, I was nervous, but after hearing input from my presentation and people telling me “Oh my gosh, you look like a teacher now.” It was just reassuring for others to see what I’ve been doing all year. This inquiry process has been really beneficial for my students and it has helped me grow a lot as an educator. (Maddie, Round 2 Interview)

The audience’s responses to Maddie’s inquiry presentation helped validate her role as a professional in the field of education. Liz also found practitioner inquiry to be a rewarding experience. During her presentation, she was able to expand on the directions she took during her
inquiry. After presenting, Liz was able to reflect on what she gained from the overall inquiry experience.

At the beginning of my inquiry presentation, it was a little nerve-wracking to have so many people listening, especially people I look up to. But at the same time, it was very exciting and rewarding. I was really able to dig deep into what I did and really share the specific choices that I made during my inquiry. I shared my results and my reflections as well. I felt like it was a good amount of time to really share and give my audience an idea of what I did. Presenting my inquiry was exciting because the inquiry process was a lot of hard work. It was nice to have the inquiry conference experience to kind of close it all.

(Liz, Round 2 Interview)

Liz felt that sharing at the inquiry conference was a culminating experience. After months of intentionally studying her practice, she was able to look back on her experiences and share her new understandings with other educators in the local community. Carrie continued to reflect on what she gained from her practitioner inquiry experiences:

I feel like some people don’t really understand how much work inquiry really is. Not that they don’t realize how hard we have all worked but at least sharing my inquiry verifies what I’ve been through and all of my struggles. It’s been a lot. (Carrie, Round 2 Interview)

Sharing about her inquiry experience, seemed to be therapeutic for Carrie. She described the inquiry process as intense and demanding. Presenting at the inquiry conference encouraged Carrie to reflect on her accomplishments and what she learned about her practice and students by collecting and analyzing data from her classroom.
It is important to remember that inquiry is embedded in this PDS and the local school district. Support from both sides of the partnership encourages the use of inquiry in classrooms as in-service teachers, preservice teachers, and even students inquire into their practice to promote learning. Therefore, using inquiry with preservice teachers in this context provided an opportunity for interns to feel connected to their mentor teachers and other educators in the district.

Ben shared a detailed description of how his inquiry gave him a sense of belonging in the partnership.

My inquiry made me feel like a part of the bigger community of educators that we’ve (interns) been a part of all year. I think it was important to have that sense of belonging validated by presenting my research and having conversations where other educators at the conference. Veteran teachers shared different ideas and said things like “Hey this is a cool idea. This is how you can make it even better.” Being able to take their feedback and get my brain turning on the other ways to move forward with my inquiry was a powerful experience. (Ben, Round 2 Interview)

Interns in this PDS context were considered part of the school district community from the beginning of the school year. Along with joining their mentors two weeks before school started, interns attended the new employees’ induction ceremony with novice and new district educators. Despite these opportunities and many others such as in-service day trainings throughout the year to immerse the interns in the local school district community, the interns clearly still felt like outsiders. Engaging in practitioner inquiry and specifically sharing their inquiries at the inquiry conference provided interns with opportunities to feel a sense of belonging within the school district community.
Sharing their practitioner inquiries with the school district community also helped them validate their instructional practices. The interns had evidence from their classrooms to support the decisions that they made, which empowered their beliefs about teaching and learning. The interns also valued being heard by other educators and receiving feedback to support their own growth as professionals.

Liz clearly described how sharing her inquiry with other educators validated her beliefs. She realized that her findings were authentic and important to her practice, especially since she had data from her students to support her findings. She realized that other educators could be genuinely interested in what she had to share about her inquiry.

Through my inquiry, I’ve learned to comfortable in who you are as an educator. Your inquiry findings are real and important. Sharing them is important too. Even if you think what you did isn’t new or insightful it might be to someone else. It’s important to share what you are doing especially with colleagues. What I learned from my inquiry supports my belief in using my students’ multiple intelligences as motivation. My data showed how well my students responded to the changes I made in my instruction and presenting my work at the conference really validated this belief (Liz, Round 2 Interview)

In a similar light, Ben became more comfortable during his presentation as he realized that he was simply talking about what he learned from working with his students.

I could tell that the beginning of my presentation was scripted and kind of forced. I didn’t like the way I started my presentation, but then I started talking about my data and my students. I felt a lot more comfortable by the end. (Ben, Round 2 Interview)

Ben became more comfortable once he realized that he was sharing about the different student leadership interventions that he had been trying out in his classroom throughout the
spring semester. No one knew his data better than him and other educators were eager to learn about his inquiry experiences. The interns shared how rewarding it felt to present their inquiries to an audience that provided meaningful feedback and engaged in discussion around their topics. Their experiences with inquiry and beliefs were validated when the interns realized that they had data from their classroom activities and interventions to support their new understandings.

Additionally, the interns were required to stay for the entire conference and attend other inquiry presentation sessions. Attending other inquiry presentation sessions at the conference encouraged interns to reflect back on their own inquiries and think about how they could continue inquiring into their practice.

After attending other interns’ presentations, Ben wished he would have conducted his inquiry differently.

My inquiry was more interpretation because it was observations of course, but it was interesting to see different ways you could go and collect data. As I was listening to other presentations, I thought about how I might change my approach. Other interns’ presentations were sparking new interests in how I could move forward. It allowed me to think about how I could have organized my inquiry differently. I probably wouldn’t have so much paperwork. My PDA warned me. She said, “You are going to have so much data, you won’t even know what to do with it.” Being very concise and purposeful with my observations was one takeaway from the inquiry conference. (Ben, Round 2 Interview)

Ben was overwhelmed by the amount of data he collected. He felt that it was almost impossible sort through everything in a semester-long inquiry. Through conversations with his
PDA and listening to others’ inquiry experiences, he realized the importance of purposeful data collection to gain insights focused on his specific wondering.

Jane also left the inquiry conference with new understandings about data collection, selecting an inquiry topic, and her practice.

Staying organized is really difficult for me and trying to be purposeful in the data that I collect. Those are two things that I know I need to continue working on. I saw other people who did one intervention over a long span and I thought, “wow, I could have done that.” After hearing about other interns’ experiences, I realized that you don’t need to take over the whole world. Choosing an inquiry that can be overwhelming, but I realized that students might benefit from doing one thing over a long period of time rather than multiple things in a few weeks. (Jane, Round 2 Interview)

Similar to Ben’s concern about purposeful data collection, Jane realized the potential impact of a focused inquiry topic. Rather than taking on the world, Jane understood that inquiry could be focused on one area of her practice. Following this one area closely over a long period of time could still provide new insights into the profession of teaching.

When reflecting back on their final semester, interns expressed their interest in continuing inquiry. At first, interns felt overwhelmed with the messiness and unknown that often is associated with the word inquiry. However, interns found that systematically and intentionally studying their practice supported their own professional development along with their students’ learning needs. Inquiry validated some of their instructional practices, encouraged them to make adjustments when necessary, and empowered their beliefs about teaching.

However, the interns also expressed some relief to be done. With the end of the semester deadlines, job applications, and increased classroom responsibilities, they were happy to check
something off their lists. While this mindset is not ideal in teacher education, it is difficult to avoid the reality that each intern received a grade for their inquiry paper and conference presentation. It can be challenging to avoid the evaluation element of inquiry when it is often introduced as a course assignment (Parker et al., 2016).

**Assertion #5:** Inquiry is a means for influencing preservice teachers’ stance toward teaching to support the transferability of beliefs.

Engaging in practitioner inquiry during the year-long internship experience helped interns see inquiry as an integral part of their daily teaching practices. When reflecting back on their engagement with practitioner inquiry, interns felt that inquiry was becoming a part of their daily practice. Rather than separating their spring inquiries, most participants felt that their inquiries were integrated into their instruction, which blurred the boundaries between inquiry and practice (Cochran-Smith & Lytle, 2009). Cochran-Smith and Lytle (1999) describe stance as the ways teachers stand, the ways teachers see, and the lenses that they see through. Therefore, the term stance describes the positions that teachers take toward their work, their knowledge, and pedagogies.

As seen in the research participants quotes about inquiry becoming a part of their daily practice, interns also described how inquiry was spreading to other parts of their instruction and interactions with students. Specifically, Ben realized that his inquiry on leadership did not need to be a separate part of the day. He realized that he could integrate community building and team challenges during morning meeting and other times during the school day such as writing and science.

A lot of my inquiry lent itself to collaborative projects because naturally you usually work as a group for that kind of situation. We did an apple floating project for science.
Students had to build a raft that was made out of sticks. They had to work as a group of like 3 or 4 kids to create a design that would make the raft. The students would give us the design and tell us exactly how they wanted it wrapped so they would have leaders within those little smaller groups. We purposefully didn’t even emphasize “who’s the captain here?” They started bouncing ideas off of each other and some students took on leadership roles. (Ben, Round 2 Interview)

Through this example, Ben saw his beliefs about student leadership transferring to other elements of his practice such as science instruction. Ben also shared that his students were using these collaborative teamwork and leadership skills on the playground. Ben started to consider how his belief in student leadership could spread throughout his practice.

For Maddie, inquiry was embedded into her growth as an educator. She made a strong connection between inquiry and her future teaching practices.

Inquiry to me is like a stepping stone almost into future teaching practices. Really getting the chance to explore something that I am passionate about and feel is going to be beneficial in my classroom. Learning more about something with my students and helping them through whatever process. It might not necessarily be something I implement like a Genius Hour, it might be something more behavioral. I want to figure that out with them and then share what I am learning with other teachers. (Maddie, Round 2 Interview)

She described inquiry as providing a means to continuously learn more about her students through her practice beyond the use of Genius Hour. Inquiry by its nature is cyclical (Dana & Yendol-Hoppey, 2009). Therefore, teacher candidates need to engage in multiple rounds of inquiry to understand this process. Interns in this PDS engaged in multiple inquiries throughout
their methods coursework prior to completing their spring inquiries and by the end of their internship interns like Maddie and Ben were able to describe the cyclical nature of inquiry.

Maddie continued to expand on her understanding of inquiry by explaining the nonlinear process. She saw inquiry as a means to transfer her belief of student-centered learning to other elements of her practice.

I think going through the inquiry process has been very beneficial for me to see. I have actually been following it very closely for my students as well and making tweaks, grade level tweaks that make sense. It is very helpful to go through this process because I am really thinking about what I am doing as a teacher and that is translating into other areas as well not just in my inquiry on Genius Hour. (Maddie, Round 2 Interview)

She was constantly making adjustments to how she engaged her students in Genius Hour to best support their needs based on the student feedback and the other sources of data she was collecting during her inquiry (Researcher Memo #2, May 9, 2017). She described how going through the process of analyzing her inquiry data was helping her to think about how her inquiry experiences could translate to other areas of her instruction.

Jane also found herself thinking about how inquiry could be more than a one-time project. She described the process of inquiry in the following way:

Inquiry is something that comes more natural now. I feel like I’ve learned to build it into my teaching already. It doesn’t have to be this semester long thing. It can even be a week long. It’s definitely become more natural for me. I don’t see it as teaching and doing my inquiry. I think there are ways you can integrate them. (Jane, Round 2 Interview)

Jane saw inquiry becoming a natural part of her practice. Throughout her PDS experiences, she learned to incorporate inquiry into her daily instruction and interactions with
colleagues. She did not see inquiry as a separate entity from her practice, rather inquiry was integrated into her instruction.

Additionally, Liz expressed how teachers are constantly questioning their practice and wanting to learn more about their students. She saw inquiry as a means to continually seek information about her students and inform her practice.

What I have learned from inquiry is the importance of taking data and looking into the questions you have as a teacher and researching them. We can always learn more about our students and our teaching…It doesn’t have to be super official when you do it. I think our inquiry this semester was very official, which I think was good because I know how to use inquiry to inform my practice. I see inquiry as an opportunity to keep learning about who I am as a teacher and more about my students. (Liz, Round 2 Interview)

Jane and Liz’s descriptions of integrating inquiry with one’s practice highlights an important point. Engaging in practitioner inquiry does not and should be seen as an official project (Dana & Yendol-Hoppey, 2009). Instead, as teacher educators, we should constantly be focusing on improving our practices to meet the diverse needs of our preservice teachers (Price & Valli, 2005).

Despite four participants looking favorably towards the use of practitioner inquiry, one intern addressed a major concern raised in the literature on practitioner inquiry in teacher education programs. Schulz and Mandzuk (2005) report that teacher candidates worry about the sustainability of inquiry once entering the classroom. Specifically, preservice teachers wonder if inquiry can be a realistic component of their practice with the demands that face novice educators.
Carrie felt the tension between her beliefs about teaching instruction and engaging with inquiry. Carrie shared that inquiry makes her “weary with instruction.” She continued to explain her concerns by sharing, “It kind of makes me worried how I am going to fit anything in?” She felt that inquiry was important, but not essential as other elements of practice. She shared that inquiry was not in the standards and she was concerned with continuing to do inquiry related activities that were not tied to specific standards.

When asked to expand on this tension between her beliefs about instruction and her beliefs about community building since that was so closely connected to her inquiry, Carrie shared, “I feel like they don’t go together.” She also shared concerns with timing. Due to time constraints, she only had 30 minutes for her inquiry once a week.

I have a half hour every Thursday for my inquiry. It’s hard to squeeze things in. We just make it work. I try not to over think it or get upset about the lack of time, because there is nothing I can really do. That’s the only time I have. To be honest, I love helping my students with their social skills, but I also want to do all the spelling and grammar that I use to do. It’s very conflicting. I feel like I don’t have enough time to even fit inquiry into the day. (Carrie, Round 1 Interview)

This timing issue was elaborated on in Carrie’s second interview where she shared about ending her inquiry weeks earlier than originally planned.

The last three weeks before inquiry, we didn’t have enough time with PSSAs and other things. We didn’t do any of my interventions. We only had like two months to begin with. It was hard. I felt like I wasn’t doing enough, but I’m sure other interns felt like that too. (Carrie, Round 2 Interview)
In her second interview, Carrie shared that she felt “so much damn pressure all the time.” She further expressed her concerns with the pressure from her spring inquiry and relationship with members of her triad.

The overwhelming pressure is the thing that stands out the most to me when I reflect on my inquiry experiences. Trying to squeeze time into a spot and working with others. I feel like it might be easier to do inquiry when you are on your own, because you can make time. The fact that I had to make time with my mentor time was really hard. She was pretty flexible, but it was still hard. I always felt like I was stepping on her toes to do this. That was one of the hardest thing when I think about what I was trying investigate and learn more about through my inquiry. (Carrie, Round 2 Interview)

When asked to consider a different internship situation where she might have felt more comfortable, Carrie thought a different outlook on inquiry was possible. She said “I might have viewed inquiry as part of the day and not something that I am trying to squeeze in.” Unlike the other participants, she did not see inquiry as an integrated part of her day. When asked about how she might use inquiry in her future practice, she brought up concerns with fitting inquiry in to the day and not having the flexibility to do so, which was similar to how she described her situation with her mentor’s classroom. Therefore, I was unable to separate Carrie’s understanding of inquiry from her classroom experiences with her mentor teacher.

Despite the lack of connection to other participants’ experiences, Carrie’s frustrations with inquiry relate to the literature on the implement of practitioner inquiry in teacher education. Cochran-Smith, et al. (2009) noted that preservice teachers either saw inquiry as looking at their practice as a fluid and ongoing process or as a linear process that was unconnected to their instructional decisions. Carrie clearly articulated how inquiry was interrupting her instructional
practice. Carroll and Yarger-Kane (2000) argued that the disconnect between inquiry and research can lead to misunderstandings about the purpose of inquiry. Therefore, Carrie’s tensions with practitioner inquiry may have influenced her understanding of inquiry. Rather than seeing inquiry as a means to support her own development as an educator, Carrie felt that inquiry was an assignment that simply got in the way.

The way Carrie described the pressure and time constraints placed around her inquiry resonated with other teacher candidates’ experiences outside of the study. Levin and Rock (2003) noted that preservice teachers were frustrated with the time constraints of their program. Furthermore, Donnell and Harper (2005) also found that preservice teachers struggled to recognize how inquiry could help address practical concerns. Similarly, Carrie did not see inquiry as a way to improve and learn from her internship experience.

These assertions specifically relate to the research questions presented at the beginning of this study. Assertions 1, 2, 4, and 5 address the first research question: What is the influence of conducting classroom inquiry on teacher candidates’ beliefs about teaching and learning? These assertions describe how practitioner inquiry supported the authenticity, complexity, empowerment, and transferability of beliefs. Assertion 3 begins to address the second research question: What aspects of inquiry, if any, were most influential in changing beliefs? As interns collected data, they made changes to their instructional practice and enacted their beliefs about teaching and learning.

To clearly address the second research question, it is necessary to review the inquiry cycle (Figure 3-1). There are five phases of the inquiry cycle: 1) Develop a wondering (2) Collect data (3) Analyze data (4) Take action (5) Share with others. As interns moved through
these five phases, they supported the affirmation, complexity, enactment, transferability, and empowerment of their beliefs about teaching and learning.

Interns started their inquiry journeys by developing a wondering based on a problem of practice or passion related to teaching. Selecting a wondering based on their teaching passions, interests, and felt-tensions helped interns develop authentic wonderings about their practice. By selecting their own topics, interns were intrinsically motivated and invested in learning more about their students and practice.

Interns started to systematically and intentionally study their practice, by collecting data about their students. They conducted student surveys, individual student interviews, and pre-assessments to learn more about how students were currently learning and understanding concepts in the classroom. They analyzed their baseline data to take action in their classrooms through interventions and other classroom activities. While they took action, interns continued to collect and analyze data from their instruction. The data collected based on their inquiry wonderings allowed interns to make more informed instructional decisions. The data also supported their belief development, by providing evidence to support the enactment and complexity of beliefs about teaching and learning. Inquiry offered a space for interns to enact their beliefs and realize the multiple dimensions of their beliefs.

Interns shared their understandings about their practice, students, and beliefs with other educators at the PDS Spring Inquiry Conference. This culminating experience provided interns an opportunity to show their work and find their voice in a larger educational community. They expressed how their understandings based on their inquiries were shifting to other subject areas and parts of the day. Their beliefs about teaching and learning were transferring to other elements of their practice. Interns also felt empowered after presenting at the inquiry conference.
They realized that data gave them stake in educational conversations and other professional settings. Their inquiry data empowered their beliefs by providing them with evidence to support their ideas.

After systematically and intentionally studying their practice, interns were confident in their ability to make informed decisions based on data and able to affirm their beliefs about teaching and learning based on student data and new understandings. Inquiry also encouraged interns to develop multiple dimensions of their beliefs based on the data collection and analysis. As interns tried new classroom activities and interventions, they enacted their beliefs and transferred them to other elements of their instructional practice. Finally, as interns reflected on their experiences with inquiry, they felt confident in their role as educators and ended their teacher education program with a set of empowered beliefs about teaching and learning.

It is clear that each phase of the inquiry cycle influenced the interns’ beliefs about teaching and learning. However, analyzing data to support instructional decisions along with taking action in the classroom through interventions were the elements of the inquiry cycle that interns mentioned repeatedly throughout their interviews, final inquiry reports, and teaching platforms. By systematically and intentionally studying their practice, interns had data based on their students and practice, which influenced the development of their beliefs. They were able to affirm their initial beliefs, enhance the complexity of their prior beliefs, enact their espoused beliefs, transfer beliefs to other elements of their practice, and empower their beliefs with classroom data based on their inquiries.

**Conclusion**

This chapter presented evidence to support the five assertions uncovered by this study. Assertions were organized according to the following research questions: 1) What is the
influence of conducting classroom inquiry on teacher candidates’ beliefs about teaching and learning? 2) What aspects of inquiry, if any, were most influential in changing beliefs? Data from individual semi-structured interviews, teaching platforms, inquiry reports, and researcher analytic memos revealed the research participants’ perceptions of their experiences of engaging in practitioner inquiry. Consistent with phenomenological methodology, voices of the participants were included to illustrate each assertion. By using participants’ own words, I aimed to build the confidence of readers by accurately representing the reality of the teacher candidates and their engagement with practitioner inquiry.

**The first assertion:** *Inquiry is a means for self-investment in preservice teacher learning to support the authenticity of beliefs.* There appeared to be a strong connection between interns’ formal inquiry questions and a specific passion they had for an aspect of teaching. Interns elaborated on this initial noticing from my data analysis. Engaging in classroom inquiry offered an opportunity for interns to explore an aspect of teaching that they already had an interest in based on their own classroom experiences and coursework.

**The second assertion:** *Inquiry is a means for deepening and expanding preservice teachers’ understandings of what is happening in their classrooms to support the complexity of beliefs.* Practitioner inquiry provided interns an opportunity to explore their own beliefs about teaching and learning. Many interns’ initial beliefs were based on their experiences as PK-12 students and observations of their mentor’s teaching practices. Throughout their internship, interns were able to explore these initial beliefs to confirm or change their beliefs about teaching and learning. Interns expressed how practitioner inquiry deepened and expanded their beliefs about teaching and learning.
The third assertion: Inquiry is a means for learning about students in order to implement student-centered practice to support the enactment of beliefs. In interns’ initial teaching beliefs, they used teacher-centered language. However, throughout their engagement in the inquiry cycle, there was a clear shift to more student-centered language used in the interns’ revised beliefs about teaching and learning. Interns described how practitioner inquiry encouraged them to think more deeply about their students’ learning styles and needs. Their reflections were carried out into their instructional decision making and beliefs from the end of their internship. Interns expressed how practitioner inquiry encouraged new ways to see their students and promoted responsive teaching.

The fourth assertion: Inquiry is a means for developing professionalism to support the empowerment of beliefs. The inquiry conference offered interns a chance to share their inquiries with other educators in the PDS community. Many interns had to reach outside of their comfort zones to formally present their findings. Yet, this professional experience and engagement with practitioner inquiry supported the development of the interns’ professional identify and their connection to the larger community of educators throughout the school district. Interns felt that practitioner inquiry developed their professionalism and empowered their beliefs.

The fifth assertion: Inquiry is a means for influencing preservice teachers’ teaching stance to support the transferability of beliefs. Instead of viewing their inquiries as a separate event, four out of five interns expressed that they viewed inquiry as a cyclical process and that it was starting to become embedded into their daily instruction. These four interns shared examples of how they were continuing their inquiries after the inquiry conference and how inquiry was spreading to different aspects of their instruction. However, the reality of time constraints and a
different viewpoint about the purpose of inquiry caused one intern, Carrie, to conceptualize inquiry as disruptive.
CHAPTER 5

IMPLICATIONS

So far in this dissertation, I have introduced and shared the significance of this study (Chapter 1), reviewed the literature on preservice teacher belief development and practitioner inquiry in teacher education (Chapter 2), explained the methodological approach used to gain insights into the research questions that framed this study (Chapter 3), and shared assertions that emerged from my analysis of data (Chapter 4). Consistent with phenomenological research, my assertions represented the participants’ experiences with practitioner inquiry, the phenomenon under study, and how inquiry influenced their beliefs about teaching and learning.

Therefore, the final chapter of this dissertation serves to share new understandings that emerged from this qualitative study. To establish a foundation for the presentation of study’s implications, I begin this chapter with a succinct summary of each prior chapter before presenting the new understandings that emerged from this study.

Dissertation Summary

Prominent across the research on teacher education is the importance of reflection and examining preservice teachers’ initial beliefs (i.e. Pilitsis & Duncan, 2012; Sillman & Dana, 2001; Yerrick & Hoving, 2003). However, little research on preservice teacher beliefs clearly addresses how their beliefs develop through their teacher preparation programs (Löfstrom & Poom-Valickis, 2013). As discussed in Chapter 1, further research is needed to examine the relationship between instructional activities in teacher education programs and influence on preservice teachers’ beliefs about teaching and learning (Pilitsis & Duncan, 2012). In particular, there is a need for additional research on the use of practitioner inquiry in teacher education programs as a way to support the development of preservice teachers’ beliefs.
The purpose of this research, therefore, was to study the influence of engaging in practitioner inquiry had on preservice teachers’ beliefs about teaching and learning. The research questions that guided this study were: 1) What is the influence of conducting classroom inquiry on teacher candidates’ beliefs about teaching? 2) What aspects of inquiry, if any, are most influential in changing beliefs?

As preservice teacher belief development and practitioner inquiry were the central constructs of this study, Chapter 2 reviewed the relevant literature of these two areas in the field of teacher education. This study defined practitioner inquiry as the systematic, intentional study by educators of their own practice (Cochran-Smith & Lytle, 1993; 2009). Chapter 2 discusses how beliefs develop, factors that influence beliefs, and the history of the practitioner inquiry movement in teacher education. Despite some tensions that emerge when preservice teachers engage in the inquiry process, the literature reveals inquiry to be a promising means to support preservice teacher development. For this reason, the use of practitioner inquiry in a teacher education program and its potential influence on preservice belief development became the focus of this study.

This dissertation study of preservice teacher belief development and the influence of practitioner inquiry is theoretically oriented in phenomenology. Hence, Chapter 3 explained phenomenology as a methodology for grasping the meaning of an experience and analyzing the structures that make up one’s experience (Moustakes, 1994; Van Manen, 1990). Applying a phenomenological lens to the practitioner inquiries of five teacher candidates, interns, completing a full-year internship in a Professional Development School enabled a new understanding of the influence of inquiry on preservice teachers’ beliefs about teaching and learning. Also included in Chapter 3 was an explanation of how practitioner inquiry was
embedded in this specific PDS, the context of the study. By providing an explanation of how practitioner inquiry was introduced and scaffolded for the interns, a general sense of how interns engaged in a practitioner inquiry during the final semester of their internship was presented. Chapter 4 also presented a more detailed description of the research methodology including the participants (background information on the five interns and selection process), data collection (artifacts from their internship year, semi-structured interviews with the participants, and analytic researcher memos), and data analysis (a process of coding, analyzing, and organizing the data phenomenologically using Braun and Clarke’s (2006) thematic analysis approach).

Chapter 4 reported the assertions of this study. The chapter revealed the ways in which practitioner inquiry influenced the study participants’ beliefs about teaching and learning. The chapter began with stating the five assertions and then continued by providing evidence to support these five assertions uncovered by the study. Discussed in detail in Chapter 4, these assertions include: 1) Inquiry is a means for self-investment in preservice teacher learning to support the authenticity of beliefs, 2) Inquiry is a means for deepening and expanding preservice teachers’ understandings of what is happening in their classrooms to support the complexity of beliefs, 3) Inquiry is a means for learning about students in order to implement student-centered practices to support the enactment of beliefs, 4) Inquiry is a means for developing professionalism to support the empowerment of beliefs, and 5) Inquiry is a means for influencing preservice teachers’ teaching stance to support the transferability of beliefs.

**Study Limitations**

Prior to considering the study’s implications, it is important to consider the limitations of this study. First, this study explored the ways in which practitioner inquiry influenced the beliefs of five teacher candidates. As qualitative research, this study is not meant to be generalized, but
transferable (Maxwell & Chmiel, 2014). Unlike generalizability, transferability invites researchers to make associations between this research and their own experiences. The rich, thick descriptions provided by the participants’ voices (Moustakes, 1994; Van Manen, 1990) may resonate with other researchers and contribute to the study’s implications. However, the small participant size limits the transferability of this study’s findings. Further research needs to expand the number of participants to learn more holistically about preservice teacher belief development.

Secondly, this study followed interns during the final semester of their internship year. Data were collected from the beginning of their internship experience, but the majority of the data collection, consisting of two rounds of interviews, teaching platforms, inquiry reports, and researcher memos, occurred during the spring semester. Without speaking to the participants in the fall semester and prior to their internship experience, it is difficult to determine how practitioner inquiry influenced the development of their beliefs about teaching and learning. Future research should consider longitudinal research that follows teacher candidates throughout their teacher education programs with several interview conversations periodically scheduled to gain in-the-moment insights from teacher candidates.

Chapter 5 will now discuss the study’s limitations and then continue with implications based on the assertions that emerged from this study. Despite its limitations, the study’s assertions create implications for the field of teacher education, the specific PDS which was the context of this study, and for myself as a teacher educator. The implications of these assertions are intended to strengthen the current understanding of how teacher candidates’ beliefs develop through engagement with practitioner inquiry. The chapter will conclude with recommendations for future research connected to this work.
Implications for the Field

Preservice teachers’ initial beliefs are formed through an apprenticeship of observation (Lortie, 1975) as students in the PreK-12 school system. As teacher candidates complete their teacher education programs, their initial espoused beliefs are often disrupted by classroom observations and coursework (Richardson, 2005). Current research in teacher education has placed emphasis on studying preservice teacher belief development (Fives & Buehl, 2012; Richardson, 2005). This study contributes to the field by examining the extent to which engaging in practitioner inquiry may influence one’s beliefs about teaching and learning.

Along with belief development, this study responds to the National Council for Accreditation of Teacher Education (NCATE) call for developing teacher candidates who exhibit the characteristics of problem-solving and inquiry. In order to develop critical problem solvers and inquiring beginning teachers, the field must understand how one’s beliefs about teaching and learning develop. This study’s interaction between practitioner inquiry and belief development responds to NCATE by providing insights into how teacher candidates’ beliefs develop through integrated coursework and field experiences. As participants engaged in practitioner inquiry, they applied knowledge from their methods classes, personal experiences, and classroom experiences which influenced their beliefs on teaching and learning.

The field of teacher education recognizes that more time in the classroom does not automatically transfer to stronger connections between coursework and field experiences (Allsopp, DeMarie, Mchattton, & Doone, 2006; Korthagen, Loughran, & Russell, 2006). The quality of the field experiences is at the forefront of teacher education research as defining quality is unclear (Zeichner, 2010). Gelfuso and Dennis (2014) argue that what teacher educators and other curriculum developers plan matters for preservice teacher preparation. Therefore, this
study highlighted how practitioner inquiry can provide quality experiences for teacher candidates as they re-examine their beliefs about teaching and learning.

The complexities of learning to teach are just, if not more, challenging as developing a definition of quality clinical experience (Darling-Hammond, Hammerness, Grossman, Rust & Shulman, 2005). As teacher education programs shift to more clinical experience, this means that preservice teachers will inherently experience more tensions between theoretical knowledge presented in their coursework, personal experiences as students, and observations in the field. This tension between existing beliefs about teaching and learning can create cognitive dissonance as teacher candidates prepare to enter the field (Pajares, 1992). These moments of dissonance create opportunities for meaningful preservice teacher professional development as they shape themselves as educators. Often teacher candidates’ prior simplistic conceptions of teaching are based on initial beliefs established during one’s experiences as a student (Lortie, 1975). It is the role of teacher education to support teacher candidates as they navigate these tensions between their prior beliefs and new-found understandings developed through their teacher preparation programs.

**Practitioner Inquiry**

A powerful vehicle for educational reform, practitioner inquiry, has been a part of the educational landscape for decades (Hyland & Noffke, 2005; Loughran, 2007; Zeichner, 2010). The research on the use of practitioner inquiry significantly varies based on the means and aims of the research (Parker et al., 2016). This study was specifically interested in how practitioner inquiry influenced preservice teachers’ beliefs about teaching and learning. There was a strong emphasis on how inquiry was used in a teacher education setting.
The fields of teaching and teacher education view inquiry as an approach to reform and enrich the profession of teaching (Dana & Yendol-Hoppey, 2009; Darling-Hammond & Bransford, 2005). Specifically, in teacher education, practitioner inquiry can strengthen the bridge between theoretical coursework and practical experiences in the field. In turn, the connection between teacher education and professional practice is reinforced. The NCATE Blue Ribbon Panel Report (2010) identified inquiry as a goal for the development of teacher preparation since it “gives teacher candidates opportunities to get their sea legs by helping them to develop and study their practice and the practice of their mentors and more experienced colleagues” (p. 3). Efforts to incorporate practitioner inquiry into clinical teacher preparation experiences may produce novice teachers who envision research as a “part of their daily work” rather than separate from their practice (Dana, Gilbert, & Silva, 2001, p. 55). Furthermore, practitioner inquiry is focused on teachers’ questions and problems of practice, rather than the goals set by outside researchers, which allows teachers to engage in “professional positioning” through a cyclical process of research, implementation, and reflection (Dana & Yendol-Hoppey, 2009; Samaras & Gismondi, 1998, p. 718).

**Inquiry as a Means for Belief Development**

Several studies have focused on the experiences of teacher candidates engaged in practitioner inquiry, which support the continual use of inquiry in teacher education. Darling-Hammond and Snyder (2000) argue that inquiry provides a space for teacher candidates to ask questions through intentional research while struggling through the uncertainties of learning to teach. Parker et al. (2016) found that teacher inquiry can serve as a means to support teacher candidates’ development through systematic and critical examination of the tensions encountered during classroom experiences.
Furthermore, the study’s assertions support that practitioner inquiry may be used as a powerful opportunity to support preservice teachers’ belief development. Interns reconsidered previously held beliefs by enacting their beliefs through classroom inquiry. As interns engaged in interventions and other classroom activities related to their inquiry topics, their prior beliefs were challenged, affirmed, and strengthened.

**Teaching Platforms.** A teacher’s espoused platform reveals a teacher’s philosophy about teaching and learning (Nolan and Hoover, 2011), which makes the teaching platform a space for preservice teachers to consider and reflect on what they believe about teaching and learning. One’s personal history, formal education, and teaching experiences influence the development of an espoused platform (Sergiovanni & Starratt, 2007). Therefore, one’s personal experiences influence teacher candidates’ initial beliefs about teaching and learning.

Writing down one’s beliefs can encourage reflection and help teacher candidates develop new understandings through their field experiences. Nolan and Hoover (2011) argue that “without consciously articulating and probing into the assumptions underlying their philosophies, teachers have little hope of sustained change in perspective or teaching practice” (p. 27). Using their teaching platforms as a tool, interns in this particular PDS uncovered their espoused and enacted beliefs about teaching and learning. Specifically, interns created four versions of their teaching platforms throughout their PDS internship. Developing four versions allowed interns to visually see changes in their beliefs over time and promoted theory-to-practice connections.

How the PDS used teaching platforms as a tool to develop and refine teacher candidates’ beliefs about teaching and learning offers insights for other teacher education programs. The curriculum design was not by accident, rather it was intentionally created to support preservice
teacher belief development. The espoused platforms also give mentors and supervisors a starting place in understanding interns’ beliefs. When espoused platforms are compared to enacted practices, contradictions between beliefs and practices often surface. Requiring multiple versions of one’s teaching platform throughout an intensive field experience encouraged interns to examine their own beliefs about teaching and learning. If the goal of teacher education is to create new teachers that are confident in a set of beliefs and have strategies for constantly evaluating their beliefs, then implementing the use of teaching platforms as a pedagogical tool for belief development should be considered by other teacher education curriculum developers.

Writing espoused platforms and practicing inquiry are complementary in that they both record and potentially call into question what teachers believe. In this study, it was difficult to untangle the influence of practitioner inquiry with the impact of writing a platform of beliefs. I struggled to determine if changes in belief occurred without aid of evidence from the interns’ teaching platforms. These two activities were complementary as interns completed their PDS internship and highlight the importance of connecting preservice teachers’ coursework to their classroom experiences. Engaging preservice teachers in activities such as practitioner inquiry while creating a teaching platform may have a stronger influence on preservice teachers’ belief development than engaging in one without the other.

**Future Research**

Despite the obvious benefits of practitioner inquiry, the literature highlights some concerns with engaging preservice teachers in practitioner inquiry that need further examination. Gore and Zeichner (1991) caution that deliberative action and reflection guided through the inquiry cycle does not guarantee that teacher candidates will gain benefits from engaging in practitioner inquiry. Since inquiry is a cyclical process, teacher education’s current focus on task
completion is problematic (Dana & Yendol-Hoppey, 2009). Introducing inquiry to preservice teachers without the assignment component is challenging and presents concerns about the authenticity of preservice teachers’ inquiries. Phillips and Carr (2009) attempt to address this issue by highlighting four criteria that must be present in teacher candidates’ inquiries: 1) collection of data with meaningful results, 2) evidence of self-reflexivity, 3) evidence of emerging teacher identity, and 4) evidence of applying multiple perspectives to one’s topic. I believe the PDS in which this study is situated attempts to address the many tensions that occur with practitioner inquiry in teacher education settings. However, these concerns with the quality of preservice teachers’ practitioner inquiries highlight the need for further research on practitioner inquiry in teacher education.

This study responded to this need by exploring teacher candidates’ experiences with inquiry during their internship year in a PDS setting. By studying the ways in which participants engaged in inquiry, the study develops new understandings for the field of teacher education as it adds to the growing body of literature around the influence of practitioner inquiry on preservice teacher beliefs.

**Implications for PDS Partnerships**

Along with the field of teacher education, this study may have several implications for Professional Development Schools. The study investigated the experiences of elementary teacher candidates (interns) in a year-long Professional Development School (PDS). Engaging in inquiry was a theme that ran throughout the PDS curriculum from the first day of the internship. Inquiry was embedded through fall methods coursework and continued with the interns’ final practitioner inquiries in the spring semester.
This study emphasized the need to explore the role that Professional Development Schools might play in identifying preservice teacher espoused beliefs, countering problematic beliefs, and supporting overall belief development. Educational researchers argue that there have not been many credible and systematic assessments of PDS’ impacts (Clift & Brady, 2005; Fullan, 1995; Teitel, 2000). Teitel (2000) suggests that “credible, systematic documentation of the impacts of professional development schools is critical to the growth and sustenance of the partnerships themselves and the PDS movement” (p.1). This study addresses the need for more research on PDS impact by providing new insight into the use of practitioner inquiry in a PDS context.

There are clear implications for the PDS in which this research was conducted. Specifically, the assertions from this study provide insights for the teacher educators and mentor teachers guiding interns throughout their internship year. It is necessary to consider teacher candidates’ developing autonomy and triad relationships. Furthermore, there are additional implications for how practitioner inquiry is presented to interns completing this PDS internship. The use of the Teaching Platform assignment as a tool originally intended for belief development may also offer support for the interns’ practitioner inquiries.

**Teacher Candidate Autonomy**

The varying degree of autonomy present in the participants’ descriptions of engaging in inquiry emphasizes the importance of recognizing the need for engaging preservice teachers in scaffolded and meaningful experiences with inquiry. While this particular PDS attempted to do this in their program, the study’s assertions indicate that more attention to fostering a stronger understanding about the use inquiry with interns is needed. As a PDA team, the level of pedagogical development of our teacher candidates should be more closely examined as interns
may need differentiated support. Additionally, the interns’ understandings of the inquiry cycle were also likely to contribute to the autonomy and authenticity of their inquiries. For instance, interns that saw inquiry as embedded and cyclical (Assertion 5) were more likely to feel ownership over their classroom inquiries. A goal of this PDS used to be fostering an inquiry stance toward teaching. While often goals are difficult to measure, that should not prevent program designers from gathering evidence as to meeting their goals.

Each year, the PDS makes changes based on intern, mentor, and PDA feedback from the prior year. As a PDA team, supervisors reflect on how they guide interns in developing their practices and beliefs about teaching. Specifically, the PDA team discusses how the teaching platform is used as a tool for belief development and connects to classroom inquiry. An inquiry conference committee and inquiry seminar team also reflect on the inquiry process. These reflection measures support the continued growth of the PDS program and the improvement of their work with interns.

There is still a great deal we do not know as to whether debriefing between teacher educators has led to improvements in this PDS. Have the interns’ inquiry questions changed throughout the years? If they have changed, could we credit PDAs? If interns’ questions have not changed, we could ask questions about the extent to which the PDS has improved. Furthermore, if interns’ inquiry questions remained the same, it could just be because at this stage of their development, interns have similar question. Future research should include a systematic investigation of interns’ inquiry questions to learn how program changes are supporting or limiting interns’ belief development.

As teacher educators, the PDS must also be cognizant of the balancing the development of inquiring educators with the temptation to solely increase inquiry assignments. Gelfuso and
Dennis (2014) found that more inquiry experiences are not necessarily a solution. Developing an inquiring mindset takes time, intentional and thoughtful reflection, and support from all stakeholders including supervisors, mentors, and colleagues. The current challenge ahead of teacher education programs and this particular PDS lies in scaffolding the development of more sophisticated interactions with inquiry for all teacher candidates. Instead of creating more assignments, the PDA team should consider how to restructure the use of inquiry to promote deeper reflection about beliefs and autonomy to support interns in creating more authentic inquiries about their practice.

**Triad Relationships**

Another implication for this PDS was highlighted through Carrie’s inquiry experiences and triad relationships. Ideally, supervisors already have the necessary methods to guide preservice teachers in developing beliefs about teaching that truly represent one’s practice. However, it is challenging to describe how this work within teacher education should be done when researchers consider what causes tension between supervisors and student teachers (i.e. Borko & Mayfield, 1995; Knudson & Turley, 2000; Slick, 1998; Stanulis & Russell, 2000). Specifically, teacher candidates are not in a position of power and often feel trapped by the constraints of evaluation seen in teacher education programs (Atkinson, 2012).

While Carrie was the only participant who spoke negatively about her interactions with her mentor and PDA, one can assume that she was not the only intern in that position. The way her teaching platform and inquiry were influenced by her mentor and PDA call for open and honest communication between triads. Each triad member should feel that his or her ideas are valuable and respected. In this particular situation, Carrie did not feel that her beliefs about teaching were considered worthy of writing in her platform. This may have been due to the grade
attached to the platform, which was solely determined by her PDA. In that case, providing all supervising PDAs with more professional development on how to scaffold support while interns are constructing their beliefs about teaching may be necessary. While there are beliefs that seem fundamental to teaching such as all students can learn, teacher candidates should not be directed to have the exact beliefs of their supervisor or mentor. The true spirit of inquiry is carried out when the intern is supported and guided in surfacing a question they feel some passion toward. To rob them of the opportunity to arrive at their own wondering preempts the purpose of nurturing an inquiry approach to teaching.

**Teaching Platforms for Practitioner Inquiry**

As mentioned in Chapter 3, the teaching platform was used as a tool for preservice teacher learning. This assignment was central to conversations that supervising PDAs had with their interns about the interns’ classroom teaching experiences. As interns inquired into their own practice, they used the teaching platform as an outlet to address changes in their beliefs and to highlight areas of importance. The teaching platform gave interns a space to share both their espoused and enacted beliefs about teaching and learning. Sharing four versions of this document throughout their internship year encouraged interns to reflect on their belief development.

As interns were engaged in practitioner inquiry in the spring semester, they were asked to provide justification and artifacts to support their beliefs in their teaching platforms. Hence, it was noticeable during data analysis of the interns’ teaching platforms that they used evidence from their practitioner inquiries to support their beliefs about teaching and learning. As seen through the participants’ teaching platforms, the overlap between the interns’ teaching platforms and inquiries may have encouraged interns to investigate more specifically into beliefs that connected with their own inquiries and teaching passions. Study participants highlighted
examples from their practitioner inquiries that connected to their individual beliefs about teaching and learning in their teaching platforms.

**Implications for My Role as a Teacher Educator**

As a novice teacher educator, this study taught me more about my role as a supervisor of preservice teachers. My previous and current understandings of supervision connect with Glickman, Gordon, and Ross-Gordon’s (2014) differentiated model of supervision. Prior to the study, I took on a more collaborative approach when working with interns. I found myself problem solving and negotiating roles with both mentors and interns. After analyzing the data, I saw value in taking a more non-directive approach which may be more helpful as interns develop their beliefs about teaching. Engaging in reflection and listening to the needs of my interns may be more beneficial for their belief development and practitioner inquiry experiences. With my newfound knowledge of preservice teacher belief development and practitioner inquiry, I found that my own beliefs about teacher education, specifically how to support preservice belief development in teacher education changed.

Carrie’s internship experience provided a clear instance of how taking on a more non-directive approach may have allowed her to more authentically represent her own beliefs about teaching and learning through her internship. Specifically, Carrie expressed concerns about feeling pressured by her PDA to write her beliefs on her teaching platform in a certain way. When sharing about her experiences with inquiry, Carrie shared that her actual beliefs did not always match the espoused beliefs written on paper and at times her enacted beliefs were limited by the classroom structure established by her mentor teacher. Carrie knew her PDA was trying to be helpful, but her PDA’s supervision style was hindering her own voice. Carrie’s experience emphasizes that a collaborative approach may pressure interns to develop an espoused platform
that does not authentically represent their own beliefs about teaching. Keeping each intern’s voice in mind will continue to be crucial as I cultivate conversations with preservice teachers about their espoused beliefs about teaching and learning throughout my career as a teacher educator. My own beliefs about teaching and learning could bias teacher candidates as they create their own.

Wanting to match the beliefs of university supervisors in order to comply is a common issue in teacher education (Atkinson, 2012). Therefore, interns facing similar situations may struggle when asked to enact beliefs in his or her practice. As a former university supervisor in this PDS context and my future role in other teacher education programs, I need to consider how to appropriately guide preservice teachers to develop practices that authentically represent their beliefs about teaching and learning. Teacher candidate should feel empowered to try new teaching practices in their field placements, rather than merely adopt the practices and beliefs of their mentors, supervisors, and university faculty.

Assessing Beliefs

The assessment of the teaching platforms does blur the boundaries between public and private spaces for teacher candidates to explore their beliefs. Teacher candidates may feel the need to demonstrate professionally acceptable thinking about a range of topics. At the same time, preservice teachers need room to reflect in a more confessional atmosphere. Predominately, reflective assignments like the teaching platform are used as evaluation of one’s reflective thinking and practice. The evaluative nature of these documents encouraged the development of a standardized understanding of what an ideal practitioner believes such as the importance of cultural diversity and the belief that all children can learn. While these two specific examples are often supported by the majority of educators, teacher candidates need to develop their own
understandings about their beliefs on teaching and learning. If the goal of teacher education is to develop teachers that are critical thinkers and engage in reflective thinking than teacher educators need to support the personal narratives of teacher candidates through the development of teaching platforms and other belief development assignments.

One way this PDS strived to support the authenticity of teacher candidates’ beliefs and fight against this evaluative tension was to not attach a grade to the first three versions of the teaching platform. Not having a grade attached to the draft versions encouraged interns to explore what they truly believed about teaching and learning. Throughout the year, PDAs offered suggestions for how to expand upon a belief and/or show evidence to support their belief in practice. Despite the tendency to craft beliefs that align with one’s university supervisor, most interns did articulate that their initial beliefs came from their prior experiences as a PreK-12 student and methods coursework. However, study participants shared that over the course of the year they were able to establish a set of beliefs that more authentically represented what they believed about teaching and learning.

As I work with teacher candidates, it is my role to encourage teacher candidates to share openly about their field experiences and connections to their beliefs. Knudson and Turley (2000) wrote that student teachers often enter teaching with an idea of what it should look like and are unwilling to change; they are “rigid and inflexible” (p.183) in their approach to teaching. Listening and possibly holding back from sharing my own beliefs may be necessary to promote the personal level of reflection necessary for teacher candidates to reveal their true thoughts and reexamine prior beliefs.

Despite my intentions to support preservice teacher belief development, I need to consider the amount of impact I may or may not have. Borko and Mayfield (1995) suggest that
both cooperating teachers and supervisors have a limited impact on interns’ development. The intern must take responsibility because he or she is ultimately responsible for his or her own growth as an educator. Knoblauch and Woolfolk (2008) found that cooperating teachers are more influential than supervisors on student teachers’ beliefs and behaviors. Through daily conversations and interactions, cooperating teachers often share their personal beliefs about teaching and learning. Therefore, I must consider my own limitations within my role as a university supervisor and teacher educator. In my current role, I cannot be present in the classroom as much as a mentor teacher.

**Conclusion**

In this final chapter, I discussed this study’s implications for the field of teacher education, Professional Development School contexts, and myself as a teacher educator. For the field, embedding practitioner inquiry into field experiences appears to support preservice teacher belief development. Inquiry can be used as a scaffolding mechanism to connect theory and practice. By inquiring into one’s practice, teacher candidates can make connections between theoretical concepts and classroom practices. These connections invite preservice teachers to consider how their espoused beliefs merge with their enacted practices in the classroom. Teacher candidates may find themselves strengthening or shifting initial beliefs about teaching and learning.

Furthermore, the use of espoused teacher platform assignment can offer additional support as preservice teachers develop their own beliefs about teaching and learning. The teaching platform assignment offers a space for teacher candidates to articulate what they believe about teaching and learning. At first, their initial set of beliefs may be based on one’s apprenticeship of observation (Lortie, 1975), coursework, and mentor teachers’ practice.
However, submitting multiple versions over an extended field placement encourages teacher candidates to continuously re-examine their beliefs.

Engaging preservice teachers in practitioner inquiry while completing a teaching platform provides a unique opportunity for teacher candidates to explore their passions. While systematically and intentionally studying one’s practice, new understandings about students, pedagogy, and school contexts may develop. The teaching platform also offers a space for teacher candidates to highlight the various ways they are studying their own practice through practitioner inquiry.

For the PDS community, the level of support in this commonly longer and more intensive program creates opportunities to embed multiple rounds of inquiry. Through these inquiry experiences, teacher candidates can see how their espoused teaching platforms are connected with their enacted beliefs about daily practice. Interns in this particular PDS context engaged in three separate rounds of inquiry about an individual student, a classroom management strategy, and an individual passion of their own. In support of this approach, Cochran-Smith, et al. (2009) confirm that one round of inquiry may not be enough for teacher candidates to see inquiry beyond a required assignment and as part of their ongoing practice.

For my role as a teacher educator, I realize the ways in which I provide feedback and support can influence preservice teachers’ beliefs about teaching. As teacher candidates engage in practitioner inquiry experiences, I can help interns reveal authentic understandings about teaching and learning. Yet, my approach can limit teacher candidates’ authenticity in their reflective work (Atkinson, 2012). Negotiating a position that invites teacher candidates to feel supported as they share their honest ideas and understandings about teaching is critical as they learn to re-examine their prior beliefs about teaching and learning.
Future Work

This study’s assertions and implications leave several lingering questions that I intend to consider for future research. First, I want to further explore how practitioner inquiry deepens and expands teacher candidates’ understandings of concepts. Participants in this study enacted their initial beliefs about teaching through classroom experiences specifically related to their inquiries. The inquiry process encouraged interns to re-examine their beliefs about teaching and learning. However, this study heavily focused on the interns’ final inquiry cycle. They engaged in two small inquiries in the fall semester of their internship year, which was outside of this study’s scope.

The influence of engaging in multiple inquiry cycles on interns’ beliefs about teaching and learning is a possible area to explore. Tracking the interns’ experiences and belief development from the beginning of the internship year may provide more insight into how practitioner inquiry depends and expands preservice teachers’ beliefs. Analyzing evidence from all four teaching platforms and multiple interviews throughout the internship experience could provide a more in depth understanding of preservice teacher belief development and the role practitioner inquiry in their development.

Outside of this PDS context, longitudinal studies that follow preservice teachers into their first year of classroom teaching experience could shed light on their beliefs. Are teacher candidates’ beliefs affirmed and/or challenged while taking on the role and responsibilities of a novice classroom teacher? How does one’s induction program influence teacher candidates’ beliefs? These questions and others on how preservice teacher beliefs transfer from their teacher education programs to the classroom should be examined in future work.
Furthermore, the interns’ sense of confidence including self-efficacy and autonomy is another area of research for further exploration. Interns felt that presenting the results of their comprehensive inquiries at an inquiry conference validated their teaching practices and increased their self-confidence as professionals. I felt this self-reporting could have been strengthened with additional evidence such as filming the participants’ presentations. This data source could be used during follow-up interviews to help interns reflect on their inquiry conference experience. Additionally, interns reported that the interactions with their mentor teachers and PDAs influenced their classroom practices and beliefs. Therefore, I would be curious to see the feedback provided to each intern on earlier versions of their teaching platforms. This data source might reveal authenticity issues among the interns’ teaching platforms and if this tool meets the requirements of its intended use; helping teacher candidates to re-examine their espoused beliefs.

This study demonstrates the ways in which teacher education can use practitioner inquiry as a means to support the belief development of preservice teachers as they prepare for and engage in classroom experiences. The study’s implications challenge the field of teacher education to further examine the ways in which we can support preservice teachers as they conceptualize beliefs, inquire into their beliefs, and enact their understandings through daily teaching practices. A goal of teacher education should be to develop teacher candidates that enter the classroom with a strong set of beliefs and ways to continue to critically examine those beliefs. This study provides new understandings for how practitioner inquiry can be integrated into teacher education programs to support preservice teachers’ belief development (i.e. Hyland & Noffke, 2005; Levin & Rock, 2003; Parker et al., 2016; Rock & Levin, 2002).

Yet this study indicates that teacher educators’ work needs to address concerns with authenticity, autonomy, and evaluation practices. Otherwise, there will be unintended and
troubling outcomes for teacher candidates, classroom practitioners, and teacher education. As a field, our work in teacher education needs to continue unmasking the role of evaluation and learn to redirect our attention to ways that we can “foster intellectual growth, collaborative inquiry, and sustained interrogation of the meaning and reality of reflection as a collective and shared experience among educators” (Atkinson, 2012, p. 84).

Future studies should focus on how practitioner inquiry influences preservice teacher beliefs throughout their teacher preparation programs and continue to monitor teachers’ beliefs as they enter the classroom. Through this research, we may come to new understandings how preservice teachers’ beliefs develop through their teacher preparation programs, be better able to facilitate the use of practitioner inquiry in teacher education, and expand on the relationship between preservice teacher belief development and practitioner inquiry.
References


**Appendix**

**THEMATICAL MAP OF ANALYSIS FROM ROUND 1 INTERVIEWS**

<table>
<thead>
<tr>
<th>Intern 1</th>
<th>Theme 1</th>
<th>Theme 2</th>
<th>Theme 3</th>
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<td></td>
<td>1) “My belief about learning in general. So this is one that I added on. I have that &quot;I believe that learning should be student driven around experiences.&quot; So my inquiry is a lot about being student driven and then students going through their own student inquiry. So I feel like I have been developing that as I am going through my inquiry as well the lessons I have been doing in my classroom.” 2) “So I am doing a Genius Hour with my students for my inquiry. So a lot of it is about student choice too. So instead of just student-driven thinking about student choice being important as well.”</td>
<td>1) So a lot of my beliefs have to do with what we talked about in our classroom or in our classes especially in the fall. So thinking about what we were learning and how I could then incorporate that into my classroom” 2) “I would say it was a mix between what I was seeing in my classroom as well as what we were doing in our methods class.&quot;</td>
<td>1) “I think my inquiry, in general, has really keyed into my beliefs because I also believe in a lot of integration and Genius Hour does a lot of integrating social studies, reading, and writing. So there is a lot of integration going on. My students are doing their own inquiry at the same time. So, it's definitely leading my beliefs that way.” 2) “So they are just representing their learning in some sort of way that makes sense to them. And I think giving that choice is beneficial for them because motivates them and they are also getting what they need out of the learning.”</td>
<td>“I think going through the inquiry process has been very beneficial for me to see. I have actually been following it very closely for my students as well and making tweaks grade level tweaks that make sense. It is very helpful to go through this process because I am really thinking about what I am doing as a teacher and that is translating into other areas as well not just in my inquiry.”</td>
<td>“Then as I have been observing my own students and seeing what they are doing, I have really seen how beneficial it is to them, how engaging it is to them, how much they are actually learning and retaining. And it's reaching ALL of my students no matter where they are in the classroom and what levels they are at and what behaviors they have. It's reaching everyone.”</td>
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<td>Intern 2</td>
<td>1) Well I think in the fall we have some like it was one of my beliefs, it wasn't necessarily on a specific topic of subject like curricular subject, but it was one of my personal beliefs that I wanted to incorporate leadership into the classroom and it's not as easily done without some research put into it. So I think inquiry helped me track that progress and kind of get some pre-assessment data and being able record data on field notes of how students have applied the knowledge I was teaching them during my inquiry. Seeing positive language and actions at recess, workshop time, hearing compliments from parents at home, etc. That I wouldn't necessarily have had if I just taught a unit on it, rather than you know actually tracking the data, doing my 1) Like there were certain things in my practice, beliefs in the fall that I didn't necessarily have concrete evidence of but I think whenever I was able to use my inquiry, I was able to find evidence. And I was able to research it that much more to find out whether or not to see how that would visibly look in my classroom. So I think being able to use the inquiry gave me some answers that maybe I wouldn't have been able to do. 2) I think that after participating in my actual inquiry, whenever I look back at this, there is a lot that is strengthened, just confirmed by what I found. But the one piece I would probably add there is that in addition to just having them bring their natural personality, natural traits that they normally have been getting, it has just given me so much more like it makes the research visible. I think it's really useful for me to track that progress and being able to experience that with people that do it on a daily, weekly, yearly basis. 2) I found some great information for my inquiry that I am planning on taking in the future with my beliefs. 3) I think whenever you are able to use that inquiry to gain more information about your students or different interventions you can use. I think that as far as putting it into my teaching beliefs, I think that it is so important, one of my beliefs is being very responsive to my class. And I think inquiry makes it so easy</td>
<td>1) I think the inquiry has just given me so much more like it makes the research visible. I think it's really useful for me to track that progress and being able to experience that with people that do it on a daily, weekly, yearly basis. 2) I found some great information for my inquiry that I am planning on taking in the future with my beliefs. 3) I think whenever you are able to use that inquiry to gain more information about your students or different interventions you can use. I think that as far as putting it into my teaching beliefs, I think that it is so important, one of my beliefs is being very responsive to my class. And I think inquiry makes it so easy</td>
<td>1) Well I think it's definitely something that now that I have more experience in that I can definitely do it on my own, in my own classroom. I will still probably need a little bit more guidance on different subjects that I might want to tackle. But I think I feel a lot more comfortable knowing the process and seeing how it works and what kind of impact it can make it my own classroom. I think it's something that I would definitely use on a yearly basis if not more often during my classroom, whenever I have my own room. 2) It's been really cool actually. I love my inquiry. I've seen Yeah, student work, artifacts, field notes. I did a lot of field notes for mine, but being able to compare that and make claims from my data really helped me, especially now when I am writing my paper, but being able to interpret the information I was getting and seeing all of their visual work, I think has really helped with my beliefs.</td>
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research that I did to find credible sources, to try and find as much information as I could about my personal inquiry. Just in general being able to see the data in front of me and it helped me inform how I can go and to it in my future classroom as well. 2) I didn't have to tweak it too much. That belief really informed me in what direction I wanted to go for my inquiry whenever I was looking into it. Because I had that belief from outside the classroom from my personal experiences in extracurriculars whether it be band or hockey. But I wanted to be able to try and foster that curiosity and interest in being a leader and kind of embrace that with all of my students. Because I feel like everyone has the opportunity with their skill set to be leaders in their own right. And so whenever I was trying to put together my inquiry, I didn’t actually look at this, but I did have it in mind. That I had kind of a vision of what I wanted to do, but I had to do a lot of research as far as what were some practices, what were some resources that I could use to prove what I was trying to find with my leadership, track data, and make it visual so that when it came around to the inquiry conference, I could actually prove what I found.

bring to the classroom and using that to perform their leadership traits, but some of the things that I found were that opportunity is key. So I think providing opportunities to those students is another area that I would like to add into my belief that providing opportunities to work in groups, but also have those positions where they kind of have to step up. You know it’s kind of sink or swim, but it's able to give them that opportunity that not necessarily they would have or would take advantage of if we didn't give them that opportunity. So I think the opportunity in itself and just giving them the chance to go and be in a leadership position in the classroom where they feel safe amongst some peers was the other big change that I would make to that belief statement. 3) inquiry has been very important in informing me whether my beliefs are valid in practice. Some beliefs might sound great, but when you are actually in the classroom they don't work as well. However, with inquiry, I'm able to use my data to confirm my beliefs and make adjustments based on what reactions students have to my teaching beliefs.

to go and be responsive and really track that data that they are giving you and being able to put into, you know, some kind of intervention into effect so you can respond to your classes' needs based on your inquiry. 4) I think inquiry just gives you that data and helps you confirm any other beliefs you might have and it just gives you that much more confidence when you are going and making decisions on how you want to run your classroom. I think if anything it just gave me affirmation in what I wanted to do and gave me more data if it was something that I thought would work and if it doesn't then it gives me that much more information as well. So that can inform my practices in the future. If it turns out that it wasn't working out, I would plan. It gives me that information to determine a different direction.

a lot of great results from it. I think it's something that's not necessarily, it's not as visible in classrooms. I feel that it's something that is not emphasized enough. And I think that if I can go and bring it into the classroom whether it be in my classroom or spread it around the school, I think it would be something that would be very valuable for other teachers to use as well.
| Intern 3 | I think literacy, I changed that one too. I kind of left it very open, it wasn't really a belief. I talked about now about how I think about allowing the students time to reflect on their growth as a reader is really important and I just talked about how literacy is the foundation of all education, which is I mean true especially in State College. They really stress reading and writing. So yeah that one has definitely changed now that I had more experience with it and you know based on what my kids needed. So I allowed them to use reading journals just to sit there and write like what did I read today. And just to see the amount of growth they have made from the beginning of the year until now because I know for some of my students they were feeling frustrated. They weren't able to read the long chapter books yet the other kids have been able to read, but they were able to take a step back and realize like look where I was at the beginning of the year compared to now. So allowing them to have that time to reflect, I think is so important. | 1) So yeah that one has definitely changed now that I had more experience with it and you know based on what my kids needed. 2) When I first did this, it was more, I talked to my PDA about this. It was more I wasn't putting the students in them. It was more just kind of focused on like what I do during planning and instruction and when teaching literacy and math and all that. So I guess it was more just like, it was very self-centered. 3) think, also, looking at my beliefs again now that my beliefs in the past only had one dimension to them. Since I have had the chance to reflect and grow as a teacher I have realized that your beliefs don't have to just be an end all be all “I believe that reading should be taught by...” but I’ve realized that your beliefs can be multi-dimensional. When I wrote my first two drafts of my teaching platform I looked at it as there would be one thing that really stands out to me as my belief under all aspects of teaching. Now I have come to realize that as a teacher there are multiple things that play into my beliefs about teaching math, language arts, science, etc. 4) I think, too because when I first started teaching I was so worried about how I was doing. Not that I wasn’t focused on my students, but when I would plan and write lessons I was so worried about what I was going to say because I had never done much teaching before. The same with my beliefs, I was only thinking about how my beliefs would affect myself as a teacher and I wasn’t really thinking about what they would do while we did mini inquiries in the fall with our ILI and classroom management I didn’t have as much of an opportunity to really look for something that I wanted to change or enhance in my classroom and go through the whole inquiry process with it. I’ve had more time now to spend as an inquirer and I can affirm my belief that being a teacher inquiry is such a vital part of being a teacher. While it isn’t something you may be able to see from the outside, all teachers do it and it is what allows us to continue to grow and continue to push our students and our classroom pedagogy to be their best. 2) I would say probably social studies and science too. Just more on the student side, I guess. More on letting them kind of do inquiry on the end really because I think they really need to be curious about what they are learning. I think for me I was never interested growing up in social studies or science. (Laughs) whatsoever so I kind of need to give these students a purpose. What do they want to get out of it? So letting them kind of think of that wondering and then go off and do research about it. And really kind of make, or get whatever they want to get out of the unit that we are learning. So I think more on the student side for that one, letting them be inquiries as well in the classroom. 1) Inquiry as well | 1) I never knew about inquiry before and now I find myself even doing mini-inquiries about pretty much everything with like recently with writing workshop. The kids were very dependent on myself and my mentor and always coming up to us for an idea. And I began to wonder well how can I help these kids become more independent during writing workshop? And not having those interruptions when you are trying to confer or work one-on-one with a student. So yeah this is like a mini inquiry. (Laughs). So yeah, inquiry, has definitely I mean been a big part of all this and all of the teaching so far. 2) I think just like I said just about how you can do it. I mean you can kind of do just a weekly inquiry like just a small thing. Realizing that it doesn’t have to be, I know we are doing are huge one now, that's been a whole semester, but it can just be a mini one. And I think that’s really important to realize as a teacher. Because I know we were talking among other interns. You know how is this realistic? How can we do this next year when we are running our own classrooms? But you can do mini-inquiries. 3) I would say maybe in between collecting and analyzing data because I wondered there were other small sub wonderings. |
for my students or how they would make my classroom look. 5) I think more now that I have been taking on more in the classroom. Really actually having that time to teach and reflect on it has really helped more than really trying to imagine. Because I think at first it was more my mentor's beliefs before I actually had the chance to teach myself to think about it and reflect on it and then I was able to think okay these are actually my beliefs and what my students need and what I can do for them. So yeah I think just more teaching has helped with furthering my beliefs. 6) Yeah, with math especially, I mean it still is a part of my belief about kind of letting the students have that productive struggle and letting them figure things out of their own. But that was really the way that she structured her math workshop and I mean that has helped me because otherwise, I didn't know how to teach math. (Laughs). But that was really I mean that seems like her belief. So that was kind of then, I was like oh that must be my belief too. Like because I didn't have that chance to actually experience it yet. And then kind of the same thing with science, I talked about CER framework that we used in class and I haven't used that since, (Laughs) since class. Like I have used like a KLEW chart before but that's I mean that's in my third draft. I changed it so that's not in my belief really at all. But that's just what I had known but to that point, so that's what I used.
1) It's about how to handle situations. (Inquiry topic) 2) I really want my students to be the center and I really want emotions to be a topic within my classroom. 3) Well, so my community building. I think it goes even deeper than this. Because this I say, I need a strong community, but how? So I think because there is like surface level community building, we do a share box every Thursday, but it's I don't think it's enough at all. But I tried having the scenarios or whatever and I think it's helping more than a share box or just having everyone say their thoughts and feelings. Which is important but I don't think is enough. So there is different types of community building and I think I could definitely go in more detail about this and then it's about my inquiry. Just about, we are a family. Like this community, we need to treat each other like with respect. So it just goes kind of together I guess.

1) Maybe because I was more involved. 2) Well, surprisingly I thought I would come into it and see something and think immediately this is what, like that is exactly how I want to do it. But I am more so looking at is as things like that I wouldn't want to do, not that she is doing things wrong. But just like going through and seeing what I wouldn't want. Instead of what I would want, which I do still do that. Which I don't know, it's confusing. But I look at it differently and I think that kind of reflects my beliefs how I really want my students to be the center and I really want emotions to be a topic within my classroom. And not that it's not, but just I just realize what I want and what I don't want a lot too. 3) They definitely changed. Yeah. (Laughs). It changes all the time I feel like the more I'm in this, the more I change probably like a daily thing. 4) Yeah, I guess I had the same overall beliefs. They are just so much strong. It's like a muscle... You build it. (Laughs). But they stay the same. 5) Probably more examples, so for science. I teach so much science now so I have a lot more examples of things that I tried with them for discovery and exploration. I really like that for science because I really want them to create questions and be the scientists in the class because I think that's fun. Let them be kids. Right, yeah that's like a big motto too. 6) Well this I say something about how I just want them to know technology and how to be up to date with what's out there and yeah I think that's important. But I

1) I feel like they don't go together. (Beliefs about instruction & beliefs about inquiry) 2) Well I have a half hour every Thursday. So that's and that's even hard to squeeze things in. So we just make it work. And I try to not to over think it and not make, get upset about it because there is nothing I can really do. But that's the only time I have and to be honest, I love figuring out and helping them with social skills. But also want to do all the spelling and grammar that I use to do. So it's very conflicting. I just feel like I don't have enough time or anything to even fit it in. 3) Um. They almost made it hard for me to do an inquiry because it is like I don't find much wrong with them. I honestly think they are a great class.

1) Definitely weary with instruction. 2) It kind of makes me worried how I am going to fit anything in. 3) Because I find it important but I don't know. It's not actually important to people. You know like it's not in standards, it's not, well it could be if you go through social studies and communication and stuff like that. 4) It's so hard to find time for. 5) And I feel like that makes me worried to continue or do things like that for instruction. 6) Pushes against my timeline (instructor) I want them to be student-centered and that gradual release model. I'm more talking about content. I'm not talking about any of community and inquiry and all of that stuff.

1) I've definitely seen some change in them with inquiry and what I am doing. I wouldn't really call it an "aha" moment, but a "yay" moment. 2) So my kids are changing. They are more open to talking about their problems. Yeah, I find that really interesting. I was expecting it more to handle the problems better, but they just are more talkative about the problem, which is still good. Yeah, they are so much more open. They will come to me if they have a problem. Not even necessarily with school, they will say a problem they just have. Like when one time they, one kid asked me a problem like what if this happened. 3) Yeah, they are just constantly thinking like well what if this problem happened? What would I do? So I try to let them figure it out but sometimes it's hard because I want to say what feels right. 4) But yeah so I have a lot of "aha" moments in the progression of seeing them grow with my inquiry. I don't have. I think this is what you are asking. I don't have "aha" moments with inquiry. 5) During data collection... Like a few weeks ago. So probably right before spring break. You know, so not that long ago.
I think it's more important to have them problem solve within technology and have them figure out. Like researching, have them figure out best ways to do that or maybe even explore through it too. Because I feel like every time I get a new technology, it's not about someone telling me. It's about me figuring it out. You know, so I want to help them understand that how to even figure it out. To be honest you just have to play around. 7) Yeah it's fun looking at these like what was I thinking?

1) I am doing my inquiry on um how student originality and creativity affects motivation. I am researching how the incorporation of the multiple intelligences into classroom assignments can affect the motivation of my students. So I think that just that topic, has made me really think about how I am as a teacher and how I can make my um teaching, my lessons a lot more student-centered because I am thinking about what they like to do and I am thinking about how they will be motivated, and I am thinking about um how I can um help them create original work that's their own that they are excited about. 2) I try my best as the PDS tries to do, um, to teach them in a very conceptual way, to teach them in a way where that is very student-centered, to teach them in a way where they are the ones that are learning how not long to do things but to think through things and like kind of create, um how to be, how to learn, you know.

1) I reworded it to make it a little bit more observable, but um so it's my key belief about instruction and I guess just now, this was in October when I didn't have as much experience actually instructing. And I still think this is still my belief definitely. 2) we were talking about my geometry unit and it was all very like hands-on like they made like polygon flipbooks and they made drawings of the many polygons we talked about and they um, you know categorizing quadrilaterals based upon their attributes and all that kind of stuff. They were always like working and involving themselves. I, we did have a lot of um whole group instruction, but it was math talk instruction. It was them telling me, me guiding their thinking. So I think especially just because it's on my mind right now and this past two week experience with teaching math for the first time and being so, being the only one in charge of it. Has kind of just highlighted that importance a little bit and just kind of like when I

1) I think that the act of taking data and having evidence has kind of helped me learn how to honestly assess, which I think has helped which is not something I expected from this. Um and like learn how to assess a student in ways that aren't just an assignment or like written work or a test or something like that. We can also assess by behavioral observation and systematic data. 2) I think that it has taught me how it's taught me the importance of assessment and kind of. How to think more about your students in your lessons than yourself. 3) What I have learned from inquiry is the importance of taking data and looking into the questions you have as a teacher and researching them. We can always learn more about our students and our teaching.

1) There is so much we can learn as teachers that it was hard for me to choose one inquiry. So I don't want there to be more than one inquiry, but I almost kind of like I have so many interests that I think that I am still doing inquiry for. I'm just not having an organized inquiry about it. So I think it's important so I am more just reflecting upon it and trying a new thing. 2) Also I have noticed that every once in a while I will have a thought like oh like maybe I should have done this for inquiry. Not that I don't like what I have done, but like that's interesting. Like oh maybe I can try this sometime where I am not at this point, just with all the work I have, I can't put another inquiry on the table. But I can still kind of do my own little research and kind of still take some data and some assessment and see even if it is not a full-

1) I think with the inquiry I am doing now with the creativity and it kind of turned into there is a lot of art integration in it. Which doesn't make it an art, it's not only art integration, um but that there is so much more you can do with some curriculum that you are given or some subjects you have to teach then you think. So I don't normally think of math as being an art integration. Like I don't, you don't see them together. And granted I am doing geometry, which is a little bit easier to think of that. But today since I have them today. I came um I actually planned it and then my partner classroom intern and I swapped. So she taught it. So I was in first grade this morning and she was in third grade teaching my lesson. And I came back and I was kind of just expecting it to be a bunch of shapes on the paper, but they went like they created these art pieces that I was just blown away. Like I have this smile on my face I was just so excited. I wasn't expecting them to
wrote this I got to see it happening. 3) So I guess I am saying that it highlighted that belief and I was able to more experience the belief than just watch the belief which kind of ties into what I said about involving myself and how I know kind of really understand how it's working instead of just observing that it's working. 4) Watching my mentor and then also just um I do have like experiences, like before PDS and just knowing that that is important from like my classes and being told that that's important. For four years. And then seeing my mentor do it and recognizing it. But then when I was finally able to take some units upon myself and incorporate things that were that way and try my best to make it that way, I think it was, it kind of was a little bit more pronounced. 5) the seeds are still there (ideas from the platform versions 1 & 2), I did completely change some just because I, like for my one of planning. It says that they should take their own values and passions into consideration when planning lessons. I still believe that, but that was kind of hard for me to measure to prove, to have my evidence in my platform. So I did change that one to um the use of hooks in a lesson. Kind of incorporating my passion into the hooks which then kind of enthralls the students. 6) I don't think anything as really changed. It's just kind of been like I have more experience to kind of um explain them and kind of like, they are experiences that are more involved and not as of observed and not scale inquiry. Like I can still do inquiry as a teacher based on multiple things and kind of learn new ways of teaching that I am passionate about and I feel are important and see are important. 3) I think that it's important to change it up every once in a while and let yourself see what your group of students can offer and kind of based your teaching upon that instead of like oh I do this every year, I am doing this and this and this whereas some students might not be as artsy as others and they might enjoy building something instead of drawing something. Just because you have done that all those years, does that mean you have to do it this year, that kind of thing is what I think of often. That's what I thought of when you asked that question. Um and like I am still learning so I want like I think I have all those questions because I don't yet know the answers so I think and I don't know if anyone is ever going to know all the answers. Like they probably won't, even the most seasoned teacher won't, but I think the fact that I am learning so much and I do have that idea of like oh my own classroom is coming soon. And I will have a little bit more freedom in the way, kind of thinking like oh maybe this is something I'd want to feel that creativity that I think that they really felt. Which was really exciting, I think I exceeded in that. Now, this wasn't for my inquiry because the students I am focusing on in my inquiry like they are not in my math class because we do switch for math. However, even though I am not assessing those students I was able to see the importance of what I am doing with those students with other students 2) I could see like um I think that was an aha moment like I never thought math that they would feel so creative and original about and I would get all these beautiful masterpieces. And I think that was kind of an “aha” moment today because I was kind of expecting them to just make a little bit of abstract art with like a bunch of shapes and sort them. But they, I got a student who made a beehive and a bunch of bumble bees around it. I had a student who made his favorite StarWars scene. So that was kind of, that was an aha moment I had today. I don't know if it was my greatest one but it was one where I was like where I thought wow I never thought math could be so original and creative and everything. And I would like to see if I can figure something out like that with fractions coming up next or with multiplication.
as. Because like when I was in methods, they would say like how important citizenship is and I would so believe it and be like on my gosh that's so important but I didn't have as much experience seeing it in my students and how it is affected who they are as people. If that makes sense. 7) And I could see how that could possibly work but didn't have experience, because by October I did have a good amount of experience but I didn't have the proof to myself where I know. It was just like I believe this because I can see that works. 8) These are not experiences that can be taught in a college classroom, but things such as flexibility and the value of teacher inquiry in the classroom, that are developed by practice. 

I have yet to try anything out. I've been in classes that I have tried but I didn't do or let's try it out now and see if it's maybe something I'd want to do or oh maybe next time I will try this because I think a better outcome might become of it and then I can implement that throughout my career. Like I am at this point in it where I am kind of still establishing my teacher self.
VITA
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EDUCATION

2014 – 2017
The Pennsylvania State University
Ph.D. Curriculum and Instruction, Emphasis in Supervision
Interests in Practitioner Inquiry, Supervision, Professional Development
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2013 – 2014
Francis Marion University
M.Ed. Instructional Accommodations

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Messiah College
B.S. Elementary Education, Pennsylvania (K-6) Teaching Certification

PROFESSIONAL EXPERIENCES
Professional Development Associate, Elementary Professional Development School (2015-2017), The Pennsylvania State University, University Park, PA
Graduate Assistant- Philadelphia Urban Seminar (2015), The Pennsylvania State University, University Park, PA
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RESEARCH AND SCHOLARSHIP (Selected)
Publications and Technical Reports (Selected)
Higgins, M., Morton, M. & Wolkenhauer, R. (2018). (Re)conceptualizing preservice teacher supervision through duoethnography: Reflecting, supporting, and collaborating with and for each other. Teaching and Teacher Education, 69, 75-84.


Presentations (Selected)


AWARDS AND RECOGNITION (Selected)
Arthur Blumberg and Edward Pajak Scholar. Given by the Council of Professors of Instructional Supervision (2017)
American Education Research Association Division K: Graduate Student Pre-Conference Seminar Travel Grant (2017)
Graduate Student Travel Grant (2015, 2016, 2017), The Pennsylvania State University

PROFESSIONAL SOCIETIES (Selected)
American Education Research Association (2016-Present)
National Association for Professional Development Schools (2015-Present)