# EXPLORING THE PROCESSES, OUTCOMES, AND FACTORS OF STUDENT TEACHERS' INQUIRY

by

JONG WON JUNG

(Under the Direction of Michael J. Hannafin)

## ABSTRACT

This study examines the influence of collaborative inquiry and sociocultural influences on student teacher development. Two research questions guided this study: 1) How does the collaborative inquiry project affect student teachers' understandings and practices related to active student engagement? and 2) To what extent does an activity theory framework support the identification and analysis of student teachers' individual and collective understanding and practices during a collaborative inquiry project? A qualitative case study was conducted with eight student teachers. Based on interviews, observations, and document evidence, data were analyzed both inductively and deductively. The findings indicated that collaborative inquiry supported student teachers' development by providing systematic opportunities and methods to guide inquiry and reflection. Student teachers who participated in the study reported attaining improved understanding of student teaching practices, as well as increased competency in their practices. Through activity system analysis, changes in student teachers' transitional perceptions and practices as well as the influence of external factors were documented. The results of this study also yield several suggestions for the future implementation of collaborative inquiry in teacher education and the application of activity systems analysis as a research methodology.

INDEX WORDS: Student teaching, Student teacher, Collaborative inquiry, Activity theory, Activity system analysis

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A Dissertation Submitted to the Graduate Faculty of The University of Georgia in Partial Fulfillment of the Requirements for the Degree

DOCTOR OF PHILOSOPHY

ATHENS, GEORGIA

2009

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# DEDICATION

This work is dedicated to my parents, Pyungsoo Jung and Youngsuk Lee. I love you.

# ACKNOWLEDGEMENTS

I would like to acknowledge the immense contribution of my major professor, Dr. Mike Hannafin, to the development of this study. Dr. Hannafin not only spent countless hours reading my drafts and giving thoughtful feedback, but more importantly, he generously shared me with his wisdom on writing, research, and discipline in academia to help support my own professional development.

I would also like to thank my other committee members: Dr. Tom Reeves, who encouraged me throughout the doctoral program; Dr. Art Recesso, who helped me to understand the culture and educational system of the United States during the GTSM project; and Dr. Todd Dinkelman, who provided helpful guidance on the issue of teacher education and also helped me find and implement an arena for my research.

I could not have completed this work without my kind and supportive friends here in Athens. Dr. Lamont Antieau read my writing from the start of this dissertation and helped me improve my writing skills. Dr. Craig Shepherd, who graduated last summer, allowed me to use tutorial materials that he developed in my own study and provided me with vivid narratives on his own research. Rick West also sacrificed valuable time in providing thoughtful comments about my writing.

Although I cannot mention all their names in this limited space, I had many loving Korean friends in Athens. First of all, I would like to thank the members of Athens Korean Presbyterian Church. Pastor Choonki Kim and the many brothers and sisters of the church supported me with their prayer.

I would like to extend my appreciation to many people in Korea. Dr. Innwoo Park, who was my advisor in Korea, introduced me to the field of instructional technology and supported my work from a distance. Other faculty members in the Department of Education at Korea University also deserve my gratitude and appreciation, as my college experiences with them shaped my interest in education and led me here.

Finally, I would like to thank my family members. My parents have never missed a morning prayer for me. Without their love and support, I could not have finished my study in the states. My lovely younger sisters, Eunsung and Eunhye, also supported me with their love. This moment also reminds me of my close friend Hyunsik Yeom, who passed away in 2006. He was like a brother to me, and I will never forget his friendship.

For all these blessings, I thank God for giving these opportunities to me and inspiring me with His great love.

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# CHAPTER 1

# INTRODUCTION

## Background

Student teaching experiences affect preservice teachers' development of expertise (Koskela & Ganser, 1998; Weasmer & Woods, 2003) and their perceptions of current school systems and educational practices (Wadlington, Slaton, & Partridge, 1999), interpersonal relationships with mentor teachers and supervisors (Cole & Knowles, 1995), and future job satisfaction and retention rates (Cegelka & Alvarado, 2000; Cohen, Peters, & Willis, 1976; Oh, Ankers, Llamas, & Tomyoy, 2005; Richardson-Koehler, 1988). Plourde (2002) underscored the importance of student teaching: "the genesis of deep change in the educational system is the individual teacher and … a teacher's behaviors, values, beliefs, and ambition to act may be cultivated or inhibited during his/her early experience as a student teacher" (p.249). In other words, student teaching experiences influence the identity of teachers and their practice as a teacher and the whole educational system.

However, teacher educators have struggled to provide experiences that facilitate student teachers' transitions (Putnam & Borko, 2000). Although diverse endeavors have been advanced, such as curriculum reform (Prushiek, McCarty, & McIntyre, 2000), integrating current technology (Hough, Smithey, & Evertson, 2004; Levin, He, & Robbins, 2006), and introducing new instructional strategies (Cunningham & Benedetto, 2003; Dinkelman, 2000), the problematic and complex nature of student teaching requires closer study. First, student teachers bring their own ideas, beliefs, experiences, attitudes to the classroom. Life experiences, derived

mostly in their time as students, influence their perceived role as teachers (Plourde, 2002). These previous attitudes and beliefs about teaching are deeply rooted and not easily altered (Plourde, 2002). Next, the complex nature of student teaching requires systemic consideration and support. Student teachers must address numerous challenges during classroom teaching and while interacting with stakeholders (i.e., students, cooperating teachers, school administrators, and parents); often, they are not prepared to address these challenges during their initial preparation. Everyday classroom situations and contexts provide "a powerful environment for shaping and constraining how practicing teachers think and act. Many of their patterns of thought and action have become automatic – resistant to reflection or change" (Putnam & Borko, 2000, p. 6). Thus, to influence future teachers' perceptions, values, skills, and knowledge, meaningful and relevant experiences are needed to support student teachers in their transition to the teaching profession.

Collaborative learning has been widely studied and implemented across a range of fields and contexts (Oxford, 1997; Strijbos & Martens, 2001). These fields include mathematics (Cobb, Boufi, McClain, & Whitenack, 1997), language education (Oxford, 1997), higher education (Chang, Sung, & Lee, 2003), teacher education (Peel & Shortland, 2004; Pierson & McNeil, 2000), and professional development (Glazer & Hannafin, 2006; Tillema & van der Westhuizen, 2006). Dillenbourg (1999) characterized collaborative learning as sharing several ideas and defined it as "a *situation* in which *two or more* people *learn* or attempt to learn something *together*" (p. 1).

The use of the term *collaborative learning* varies across academic fields. Many researchers have focused on concepts and practices in collaborative learning environments. For example, the concepts and applications of collaborative reflection (Cobb et al., 1997; Peel & Shortland, 2004), collaborative problem-solving (Kurtts, Hibbard, & Levin, 2005), and

collaborative inquiry (Tillema & van der Westhuizen, 2006) have been explored. In addition, a growing number of researchers have investigated the role of technology tools to enhance the process and outcomes of collaborative learning (Beers, Boshuizen, Kirschner, & Gijselaers, 2005; Bryan & Recesso, 2006; Garcia & Rose, 2007; Hough et al., 2004; Ikpeze, 2007; Reeves, Herrington, & Oliver, 2004).

Social constructivists have advanced important epistemological and theoretical perspectives for collaborative learning (Cooner, 2005; Dillenbourg, 1999; Farr-Darling, 2001; Oxford, 1997). Social constructivists emphasize the role of interaction with other people in socially, historically, and culturally situated contexts (Brown, Collins, & Duguid, 1989; Lave & Wenger, 1991; Vygotsky, 1978). Lave and Wenger (1991) noted, "there is no activity that is not situated … the world carries its own structure so that specificity always implies generality: that is why stories can be so powerful in conveying ideas, often more so than an articulation of the idea itself" (p.33-34). Collaborative learning advocates have asserted that the "most effective type of instruction would occur when students are placed in situations where they are provided with opportunities to collaborate" (Marsh, 2002, p. 463). The meaning of learning in collaborative environments is not limited to acquiring new knowledge or skills, but rather, it serves as a transition in becoming a member of a community of knowledge and practice. Oxford (1997) interpreted this transition as: "[a] student [becoming] acculturated, enculturated, or reacculaturated" (p.448) in a collaborative learning environment. These interactions provide "an arena for conversation and to sustain us while we learn the language, mores, and values of the community we are trying to join… peers whom we can rely on as we go through the risky process of becoming new members of the knowledge communities we are trying to join" (Bruffee, 1999, p. 8).

Collaborative inquiry has been identified as an important means for improving the professional growth of teachers (Tillema & van der Westhuizen, 2006). Collaborative inquiry practice, for example, may address criticisms related to breakdowns between theory and practice, poor curriculum organization, and the absence of reflection (Farr-Darling, 2001). For student teachers, learning to teach begins by "learning to examine existing practices and promising alternatives" (Farr-Darling, 2001, p. 8). Thus, collaborative inquiry may enable student teachers to explore issues as they construct new knowledge and practices (Tillema & van der Westhuizen, 2006). In addition, communication inherent in collaborative inquiry may provide opportunities for adopting the values of a professional community, such as honesty, integrity, and respect for others (Farr-Darling, 2001; Tillema & van der Westhuizen, 2006). At the same time, through collaborative inquiry student teachers encounter authentic challenges and problems that can be jointly shared and addressed. Current and emerging technologies (e.g., Web-based communication tools, video technologies) can facilitate collaborative inquiry and promote collective knowledge construction (Chang et al., 2003; Farr-Darling, 2001).

However, recent studies suggest a chasm between the theoretical ideals and pragmatics of collaborative inquiry. Comparing three groups of educational practitioners, Tillema and van der Westhuizen (2006) reported that many learners identified benefits of collaborative inquiry through the process (e.g., having the opportunity to understand different perspectives and context, sharing information, building rapport with one another). However, learners also reported their frustration in trying to create new knowledge or improving practice and evaluated the outcomes of collaborative inquiry as inefficient and nonproductive (Tillema & van der Westhuizen, 2006). Similarly, Farr-Darling's (2001) Collaborative Inquiry for Teacher Education (CITE) approach to the progress of university faculty, student teachers, and inservice

teachers found that a “compassionate community that supports individual flourishing may produce kinder, gentler individuals, but not necessarily better teachers” (p. 20).

The limited results of collaborative inquiry during implementation may stem from difficulties in existing perceptions and values as well as insufficient time for achieving enduring change. Thus, collaborative inquiry processes may fail to evolve sufficiently to promote the emergence and construction of new, shared knowledge; flawed and/or incomplete approaches or guidance, such as limited familiarity with tools to organize, share, and represent constructed knowledge (i.e., concept map tools) hinder collaborative inquiry processes due to the confounding effects of the tools themselves (Chang et al., 2003).

Many researchers have examined the effect of collaborative learning on a certain factor of learning (Strijbos & Martens, 2001). These studies may reveal relationships and/or benefits of collaborative learning broadly defined, but they have been criticized for their limitations in accounting for the diversity of interactions and contexts. Studies that examine collaborative learning as a “black box” seem unlikely to reveal meaningful understanding of the underlying mechanisms and complexity of collaborative learning (Dillenbourg, 1999; Strijbos & Martens, 2001). What becomes meaningful is not simply a function of the community itself, but rather it is also how learners interact and alter their disposition and knowledge (Farr-Darling, 2001).

## Research Purposes and Questions

In this study, I examine the processes and outcomes, as well as the sociocultural components that hinder or facilitate student teachers’ collaborative learning. By exploring the dynamics of student teachers’ collaborative inquiry, including such facets as individual interdependence, varying discourse patterns, the degree of involvement and contribution, power

relationships, and division of labor, this study could identify implications for designing and implementing meaningful collaborative inquiry programs in teacher education.

I focused on the following research questions:

1. How does the collaborative inquiry project affect student teachers' understandings and practices related to active student engagement?
2. To what extent does an activity theory framework support identification and analysis of student teachers' individual and collective understandings and practices during a collaborative inquiry project?

# CHAPTER 2

# REVIEW OF RESEARCH

## Introduction

Regardless of its broad appeal, the diverse aspects of collaborative learning have not been concretely conceptualized. Furthermore, student teaching is a capstone experience of most teacher preparation programs requiring greater empirical investigation in order to achieve its primary objective: a smooth transition for student teachers in their development from students to teachers. The purpose of this chapter is to explore theoretical and empirical issues related to collaborative learning and student teaching practice, to interpret student teaching experiences through activity theory, and to present a framework of activity system analysis to examine the development of student teachers grounded in the sociocultural environment of student teaching.

Among the different perspectives that could be adopted, social constructivism might be the best for revealing a connection between the collaborative learning and contextualized experience of student teaching. An understanding of social constructivism underlies the proposed research framework, as the study featured activity system analysis.

## Collaborative Learning in Teacher Education

### *Collaborative or Cooperative?*

Since the 1970s, there has been a growing interest in group-based learning activities. Through the 1970s and ’80s the term ‘cooperative learning’ was often used generically to describe group-based learning activity (Strijbos & Martens, 2001). Wide application of cooperative learning across the subject domain and grade levels has produced hundreds of studies reporting positive impacts on student learning and achievement, a phenomenon that

Slavin (1996) calls “one of the greatest success stories in the history of educational research” (p. 43).

As depicted in Table 2.1, researchers began to distinguish collaborative learning from cooperative learning in the 1990s (Lehtinen, Hakkarainen, Lipponen, Rahikainen, & Muukkonen, 1998; Matthews, Cooper, Davidson, & Hawkes, 1995; Oxford, 1997; Slavin, 1997).

Table 2.1

*Conceptual Comparison between Collaborative Learning and Cooperative Learning*

| Aspects | Collaborative learning | Cooperative learning |
|---|---|---|
| Purpose | Acculturates learners into knowledge communities (Oxford, 1997) | Enhances cognitive and social skills via a set of known techniques (Oxford, 1997) |
| Degree of structure | Variable (Oxford, 1997) | High (Oxford, 1997)<br>Systemic, task specified (Rose, 2004) |
| Domain of knowledge | Ill-structured knowledge domain (Slavin, 1997) | Well-structured domain knowledge (Slavin, 1997) |
| Relationships | Learner engages with more capable learners, who provide assistance and guidance (Oxford, 1997)<br>Democratic (Rose, 2004) | Individual is accountable to the group and vice versa; teacher facilitates, but group is primary (Oxford, 1997)<br>Division of labor (Rose, 2004) |
| Prescriptiveness of activities | Low (Oxford, 1997) | High (Oxford, 1997) |
| Appropriate population | Post secondary, adult learners (Matthews et al, 1995) | K-12 students (Matthews et al, 1995) |
| Key terms | Zone of proximal development, cognitive apprenticeship, acculturation, scaffolding, situated cognition, reflective inquiry, epistemology (Oxford, 1997) | Positive interdependence, accountability, teamwork, roles, cooperative learning, structure (Oxford, 1997) |

For example, Slavin (1997) differentiated cooperative learning dealing with a well-structured knowledge domain from collaborative learning in an ill-structured knowledge domain. Lehtinen et al (1998) differentiated collaborative learning and cooperative learning based on the roles and types of participation by individuals. Based on this distinction, cooperative learning is characterized by a division of labor, in which individual participants are responsible for a portion of learning processes and outcomes, while collaborative learning grounds “the mutual engagement of participants in a coordinated effort” for learning (p. 1). According to the above

arguments, several characteristics of cooperative learning and collaborative learning are reasonably distinctive. Presumably, therefore, instructors, teachers, and instructional designers should readily determine how either collaborative or cooperative learning can be applied to support classroom learning (Oxford, 1997; Strijbos & Martens, 2001).

Not everyone, however, supports these distinctions (Strijbos & Martens, 2001). Several distinctions between collaborative and cooperative learning (e.g., criteria for defining a well- or ill-structured knowledge domain) are not understood, applied, or endorsed. Furthermore, these terms are still commonly used interchangeably in the literature, leading to confusion among both researchers and practitioners. While a number of studies have examined the effects of collaborative learning environments or methods on diverse cognitive aspects, Dillenbourg (1999, p. 1) argued that "it is nonsense to talk about the cognitive effects ('learning') of 'collaborative' situations if any situation can be labeled 'collaborative'."

The confusion surrounding collaborative learning and cooperative learning and their applications originates from their sharing several important assumptions. Both terms focus on group-based learning activities. Groups of two or more people can produce different learning processes and outcomes from individual learning. For example, the concept of interdependence between group members emerges as an important consideration in a group-based learning environment. Next, both collaborative learning and cooperative learning require a shift in the role of the teacher. In both learning environments, students presumably attain greater autonomy than they would in a traditional teacher-centered learning environment; thus, the teacher's role as coach, moderator, and facilitator is emphasized in both. Finally, group characteristics and dynamics exert crucial influences on student learning. Specific characteristics such as group cohesion and a sense of group belonging influence an individual group member's patterns of

interaction with others, his or her involvement in group activities, and overall group performance.

*Definition of Collaborative Learning*

Collaborative learning has been broadly defined as "a *situation* in which *two or more* people *learn* or attempt to learn something *together*" (Dillenbourg, 1999, p. 1). A "situation" refers to a specific time and space that provides unique contexts and situated information. The term "collaboration" refers to the involvement and participation of at least two people, so that the collaborative learning unit could be a small group, a class, a community, or a large society. Learning, the ultimate objective of collaboration, can be interpreted as solving problems, sharing knowledge and perspectives, and constructing new meaning or understanding according to the context and goal of the collaborative learning environment. Collaborative learning cannot be initiated, sustained, and accomplished by the mere emergence of a group of people in a certain context. In other words, a group of people is a necessary condition for collaborative learning; however, it does not guarantee meaningful collaborative learning. Rather, participants must engage in joint efforts that are represented as diverse forms of interaction such as face-to-face, technology-mediated discourse, and distribution of tasks.

*Diverse Applications of Collaborative Learning in Teacher Education*

A collaborative learning environment has been regarded as one of the more important tools for facilitating professional development of inservice as well as preservice teachers. For example, diverse models of collaborative learning that include collaborative reflection (Peel & Shortland, 2004), collaborative problem-solving (Kurtts et al., 2005), collaborative apprenticeship (Glazer & Hannafin, 2006), and collaborative inquiry (Farr-Darling, 2001; Tillema & van der Westhuizen, 2006) have been the focus of research and have been

implemented in the field of teacher education. Peel and Shortland (2004) documented their collaboratively organized reflective experiences during their student teaching, which required systemic classroom observations in higher educational settings. Through spoken and written exchanges about their classroom observation experiences, they acquired knowledge and information about systemic and theoretical classroom observation that helped them to improve actual observation practices. Furthermore, reciprocal feedback and reflective comments about their experiences deepened their understanding of differences in concerns, experiences, and interpretations in discussing the same event in observed classrooms. This mutual understanding helped to improve rapport among the student teachers.

Collaborative inquiry has been adopted from collaborative learning in teacher education. A number of works have stressed the important role of preservice teachers as inquirer for the renewal of educational practice in public schools and the teacher education program (Cochran-Smith, 1991; Cochran-Smith & Lytle, 1999). These authors argue that collaborative and systemic inquiries about teaching, learning, and schooling among preservice teachers, cooperating teachers, and university faculty members has the power to "reinvent teaching and schooling" (Cochran-Smith, 1991, p. 110). Thus, student teaching experiences should focus on providing unique opportunities to learn from collaboratively implemented inquiries related to teaching and learning. For instance, Mule (2006) documented the experiences of five student teachers with inquiry projects during their student teaching. During a one-year long internship at the Professional Development School (PDS), student teachers were required to implement individual or collaborative inquiry projects based on their interests. Through these experiences, student teachers "become more aware of themselves as teachers and more deliberative in their practice"

(Mule, 2006, p. 209). Furthermore, inquiry projects helped student teachers escalate their awareness of students and implement more innovative teaching practices.

*Technological Advancement and Collaborative Learning*

As technology has transformed our life in many respects, educational systems and practices have also changed to take advantage of the potential classroom benefits of technology. In particular, the rapid development of current communication technology enables researchers and practitioners to explore the potential benefits of technology for improving collaborative learning environments (Beers et al., 2005; Bryan & Recesso, 2006; Garcia & Rose, 2007; Hough et al., 2004; Ikpeze, 2007; Reeves et al., 2004). The benefits of current technological advancement include extending the time and space of interaction and collaboration (e.g., asynchronous discussion board), delivering more authentic learning tasks (e.g., video-based cases), providing access to a vast amount of information (e.g., web searching and digital library), and creating new support tools for collaboration (e.g., a graphic representation tool for representing and comparing different perspectives). These advantages have both improved the outcomes of learning and reshaped the nature of learning.

Numerous studies have described the advantages of implementing technology-embedded collaborative learning in teacher education. For example, several researchers have reported on the diverse effects of Web-based communication on collaborative practices of preservice teachers (Ikpeze, 2007; Levin et al., 2006; Lim & Cheah, 2003; Maher & Jacob, 2006). Barnett (2006) reported the use of a Web-based professional learning environment for facilitating interaction between inservice teachers and preservice teachers. Preservice teachers were allowed to watch video vignettes of inservice teachers reflecting on reform-based (inquiry-based) science and math teaching practices. According to Barnett, the video vignettes encouraged participants to

develop joint discussion topics so that preservice teachers and inservice teachers could actively engage in online discussion. Watching video-recorded teaching practices and participating in online discussions with inservice teachers enabled preservice teachers to refine their understanding of inquiry-based teaching and to facilitate extended conversation with peer preservice teachers. Furthermore, the participating inservice teachers were able to examine and reflect on their own teaching practices.

Video technology has also emerged as a prominent vehicle for promoting collaborative work in teacher preparation programs (Cunningham & Benedetto, 2003; Harris, Pinnegar, & Teemant, 2005; Sherin & van ES, 2005). Bryan and Recesso (2006) implemented a Web-based video analysis tool (VAT) for promoting student teachers' reflective practices. During an 11-week field experience, student teachers were required to record their teaching practices using digital video and to share, examine, and reflect on their recorded practices with peer student teachers and instructors during the student teaching seminar. As a result, using web-based video tools facilitated student teachers' recognition of the positive tensions between theory and practice to support collaborative reflection concerning beliefs, perception, and practice (Bryan & Recesso, 2006).

Clearly, further study is warranted to examine uses of technology to facilitate and foster collaborative learning in teacher education. Depending on the format of Web-based communication (synchronous or asynchronous), the role of instructors (active participant, facilitator, observer) and the task structure (well- or ill-structured problems), the process and outcome of collaborative learning can be varied (Levin et al., 2006).

In summary, the advocates for collaborative learning in teacher education argue that providing diverse collaborative learning opportunities can improve the effectiveness of the

teacher education program itself as well as nurture preservice teachers' skills, knowledge and attitudes toward the collaborative learning considered crucial for their future professional development. Additionally, technology-embedded tools and collaborative learning environments can support student teachers grounded in authentic contexts and can enable them to apply their experience to their learning (Levin et al., 2006).

*Practical and Theoretical Issues of Collaborative Learning in Teacher Education*

Despite apparent benefits, several studies have also reported practical barriers that prevent learners from attaining meaningful outcomes and gaining valuable experience in collaborative learning environments. Tillema and van der Westhuizen (2006) investigated the effects of collaborative inquiry projects on knowledge productivity using three criteria: a) improvement of knowledge and understanding, b) change in individual perspective, c) commitment to outcome in professional activities. Three educational practitioner groups adopted collaborative inquiry projects to solve relevant problems for three to seven weeks. Based on results from questionnaires, observations, and outcome artifacts, researchers report that many learners identified benefits of collaborative inquiry from the process, such as having the chance to understand different perspectives and contexts, sharing information, and building rapport with others, However, learners also reported experiencing frustration in their attempts to establish new knowledge or improving practice, and they evaluated the outcomes of collaborative inquiry as inefficient and nonproductive (Tillema & van der Westhuizen, 2006). Additionally, Farr-Darling's (2001) study of the Collaborative Inquiry for Teacher Education (CITE) approach found that a "compassionate community that supports individual flourishing may produce kinder, gentler individuals, but not necessarily better teachers" (p. 20).

Several barriers may influence whether the ultimate goals of collaborative learning, such as a construction of new meaning and knowledge, are attained. For instance, difficulties associated with changing current perceptions and values are underestimated, and insufficient time is often allotted to achieve enduring collaborative learning improvements (Wubbels, 1992). Although collaborative inquiry participants are required to reflect their own values, knowledge, perceptions by interacting with others, resistance to changing established beliefs tends to limit the open exchange of ideas and collaborative knowledge construction (Tillema & van der Westhuizen, 2006). In addition, the complexity of the tools themselves, providing flawed and/or inadequate guidance and support for the methods needed to organize, share, and represent constructed knowledge (e.g., concept map tools), may hinder collaborative inquiry (Chang et al., 2003).

Thus, lacking adequate consideration of dynamic collaborative activities, collaborative learning processes may fail to evolve sufficiently to support the construction of new, shared knowledge. This may prove especially problematic during design, implementation, and evaluation collaborative processes that support and facilitate situated knowledge and practices among student teachers. In the following section, I examine several aspects of student teaching that influence student teachers' collaborative learning processes and outcomes.

## Student Teaching and Collaborative Learning

Student teaching experience has been identified as crucial to developing preservice teachers' expertise (Koskela & Ganser, 1998; Weasmer & Woods, 2003), perceptions about current school systems and educational practices (Wadlington et al., 1999), and future job satisfaction and retention rates (Cegelka & Alvarado, 2000; Cohen et al., 1976; Oh et al., 2005; Richardson-Koehler, 1988). The student teaching period requires simultaneous engagement of

preservice teachers in teaching and learning (Peel & Shortland, 2004). At the same time, student teaching is a very challenging experience for preservice teachers (Plourde, 2002; Wadlington et al., 1999).

*Challenges during Student Teaching*

During the field teaching experience, student teachers interact with others (e.g., inservice teachers, students, school administrators, university faculties, and peer student teachers) related to their teaching practices as they attempt to develop and refine their teaching philosophy, knowledge, and disposition. In some cases, unrealistic expectations about themselves, their teaching contexts, and their relationships with cooperating teachers exacerbate the challenges of student teaching (Wadlington et al., 1999). For instance, student teaching requires a large amount of work, including the preparation of detailed lesson plans, concrete learning activities, and student/classroom management tasks—taking considerably more time and effort than often assumed. In addition, cooperating teachers may provide limited collaboration and assistance due to a variety of legitimate reasons. Student teachers may judge the support of cooperating teachers harshly, which may inhibit subsequent collaboration and mentoring. These challenges may increase stress related to affective domains (e.g., developing appropriate relationships with pupils, cooperating teachers, and parents) as well as instructional domains (e.g., utilizing instructional strategies effectively) (Wadlington et al., 1999).

When student teachers encounter discrepancies between theory and practice, they may experience ‘cognitive dissonance’ (Festinger, 1962; cited from Elliot & Devine, 1994) or disequilibrium (Elliot & Devine, 1994; Wilson & Berne, 1999). In the perspective of learning and professional development, student teachers’ dissonant perceptions and experiences provide opportunities for authentic learning and development. These dissonant situations evoke the

natural human instinct of inquiry. In other words, human nature tries to solve the reasons for dissonant situations in order to regain equilibrant status. Consequently, student teachers' inquiry is not only an essential catalyst for the development of professional understanding, practice, and knowledge as a teacher but a life skill that should be obtained and refined in real context.

In attempts to address these discrepancies, student teachers may attempt to modify their current perception and behavior to reconcile disequilibrium. However, existing attitudes and beliefs about both themselves and teaching practices are often highly resilient, deeply rooted and not easily altered (Plourde, 2002). Like all teachers, student teachers bring their individual ideas, beliefs, experiences, and attitudes to their classrooms. Life experiences, derived mostly from their time as students, influence not only their perceived role as teachers but also what they learned through student teaching experiences.

*Student Teaching as Authentic Context for Collaborative Learning*

The student teaching experience provides a potentially powerful collaborative learning opportunity for reflecting on perceptions and practices. Collaborative learning activities can provide emotional support while student teachers share narratives concerning the challenging situations they face (Wadlington et al., 1999). While stressful experiences often diminish student teachers in their confidence in themselves as professionals (Plourde, 2002; Wadlington et al., 1999), sharing experiences and concerns collaboratively with peer student teachers can provide a mutually supportive learning environment. Collaborative learning can also provide opportunities for developing new knowledge and understanding as student teachers share perspectives and knowledge about issues, problems and challenges. Thus, collaborative interaction among peer student teachers can enable them to construct new ways of thinking and practices that they can use in a real classroom context.

*Student Teachers' Collaborative Inquiry: Goals and Challenges*

The everyday practice of student teachers in their field practicum may bring to light numerous issues and challenges to student teachers. Some issues and challenges can provide ideas of how learned theories and techniques can be applied in real classroom contexts. Other issues may not be easily approachable due to their complicated nature. Collaborative inquiry in the teacher education field has emphasized the importance of the connection between theory and practice. The participants of inquiry-based learning opportunities are expected to raise or find problems in their practices and then investigate the nature of problems for generating applicable solutions.

If we agree that the ultimate goal of learning for teaching is not just limited to providing new knowledge and skills in teaching and learning, improving career-long learning capacity would be one of the goals of the professional development of teachers. Thus, providing preservice teachers ways to improve their self-directed, autonomous learning capacity should be integrated in the current teacher education curriculum. The student teaching period could be an essential experience in which student teachers are actually observed and challenged by diverse problems in real circumstances. Consequently, if student teachers have opportunities for investigating and solving the challenges they face in authentic situations, inquiry experiences could sustain them and lead to future professional development and teacher learning.

A study conducted by Hamre and Oyler (2004) reported several important benefits of collaborative inquiry focusing on inclusive education (i.e., inclusion of general education and special education). In order to investigate the diverse issues of inclusive education, several student teachers and teacher educators constructed a study group. During a collaborative inquiry meeting, the researcher found that student teachers' diverse cultural and philosophical

backgrounds and perspectives contributed to the critical reflection and collective thinking of other participating student teachers. The fresh and unexpected ideas that were generated by such inquiry facilitated not only the development of student teachers but also teacher educators who had taken several issues for granted.

## Social Constructivism and Collaborative Learning: A Brief Overview

Some researchers suggest that collaborative learning is grounded in social constructivists' epistemology (Cooner, 2005; Dillenbourg, 1999; Farr-Darling, 2001; Oxford, 1997). Social constructivism places importance on the role of social, cultural influences on human activities, including learning. From this perspective, learning is a meaning-making process rather than strictly the acquisition or transmission of knowledge. Furthermore, meaning-making involves social negotiation among participants. Individual and collective meaning-making processes (i.e., learning processes) are facilitated, mediated, and guided by the values and beliefs of corresponding communities. In the current research context, the development of student teachers in their knowledge and practice was interpreted as a cultural transition from a community of students to a community of professional teachers through culturally mediated interaction with inservice teachers. As a frame for examining the dynamic nature of collaborative activity, I briefly review social constructivist perspectives that are of particular relevance to student teachers' collaborative learning.

### *Vygotsky's 'Zone of Proximal Development' (ZPD) and Scaffolding*

For Vygotsky, learning is achieved via social interactions involving others in the surrounding social and cultural environments. Vygotsky conceptualizes ZPD as "the realm of potential learning that each learner could reach within a given developmental span under optimal circumstances and with the best possible support from the teacher and other in the environments"

(Oxford, 1997, p. 448). Recently, researchers have applied ZPD at an individual level, often "discounting the broader social phenomenon of growth as a cohesive thought collective" (Nyikos & Hashimoto, 1997, p. 507). In collaborative learning environments, collaborative activities support individual as well as collective growth by facilitating diverse social mediations such as group discussion, reflection on multiple points of views, and creative representation. The assistance provided by others and the use of cultural artifacts help learners develop independence and autonomy as ownership and responsibility for one's learning. During student teaching, the instructor, cooperating teachers, or peer student teachers often scaffold each other's learning. By offering suggestions, praise, practical teaching strategies, and technical assistance, capable peers can help student teachers develop the situated knowledge and professionalism necessary for becoming a competent teacher.

*Community of Practice*

The concept of community embodies several important themes such as interdependence, interaction, participation, meaningful relationships, and shared interests/goals (Parr & Ward, 2006). Learning involves a shift of participation between communities (e.g., a shift from a preservice teacher community to an inservice teacher community), which involve both changes in action and transformation of identity (Brown et al., 1989; Gallucci, 2003). As applied to teacher education, transforming inservice or preservice teachers' communities to professional learning communities can be a key professional challenge (Little, 1993; Louis, Marks, & Kruse, 1996). Several researchers have found that teacher communities influence an individual teacher's sense-making process as well as their collective practices related to diverse educational reforms (Coburn, 2001; Little, 1993; Louis et al., 1996). In that sense, field teaching experience and collaborative activities can facilitate the student teacher's transition into the inservice teachers'

community of practice. As student teachers interact with inservice teachers in everyday school/classroom contexts, they learn of shared values and norms as well as the language of the inservice teacher community. Since both the cultural and organizational characteristics of inservice communities can vary considerably (e.g., whether the school is located in a rural or urban setting, different school leadership styles), the cultural accommodation of student teachers to a community of inservice teachers can also vary widely. Through the exchange and sharing of different transitional experiences, student teachers may become better able to expand their understanding of diversity in inservice teacher communities.

*Situated and Distributed Cognition*

Both situated cognition and distributed cognition emphasize the natural, complex, and social contexts involved in human cognition (Bell & Winn, 2000; Brown et al., 1989; Perkins & Salomon, 1989). Brown et al (1989) argue that "knowledge is situated, being in part a product of the activity, context, and culture in which it is developed and used" (p. 32). The authors criticize schooling practices that focus on transferring abstract, decontextualized formal concepts over applying what has been learned in school to real life contexts. In order to bridge the chasm between inert knowledge and practical knowledge in schooling practices, they emphasize learning as an enculturation in authentic activities and social interactions through cognitive apprenticeship and collaborative learning (Brown et al., 1989).

Advocates of distributed cognition also note that "knowledge is socially constructed, through collaborative efforts toward shared objectives or by dialogues and challenges brought about by differences in person's perspective" (Pea, 1993, p. 48). Specifically, distributed cognition highlights the mediating role of artifacts in human activities. Artifacts, including physical tools (e.g., computers, specific software) and symbolic representations (e.g., text, graph,

diagrams), may help to organize or constrain human activities. Observation checklists have been widely applied to evaluate student teachers' teaching practices in the classroom. This artifact (observation checklist) allows an evaluator to focus on specific aspects of teaching among numerous events in the classroom. At the same time, the observation checklist provides student teachers with the expected goal of teaching practices. Student teachers may rehearse their teaching practice by focusing on the items in the checklist, suggesting that the same artifact (observation checklist) facilitates a different organization of cognition and activities in the same environment according to the perceived object of an artifact.

In summary, social constructivists acknowledge the complexity of human cognition, learning, and activity involved in cultural, social, and contextual components. From a social constructivist perspective, student teaching is an authentic learning opportunity during which student teachers can develop practical and situated knowledge and understanding as well as transform their identity to the professional community of inservice teachers. In addition, collaborative interaction between and among student teachers, cooperating teachers, teacher educators, and even available artifacts provides important support for the professional development and transition of student teachers into the community of practicing teaching.

## Analyzing Student Teachers' Collaborative Development

Previously, collaborative learning studies have emphasized the effectiveness of embedded collaborative instructional strategies on specific learning activities and outcomes. While these quality-oriented studies have reinforced the value of collaborative learning, they offer only limited insights into the interactions considered integral to collaborative learning. Furthermore, participant's engagement and development in collaborative learning environments are influenced by the cultural and social components of the learning context. Thus, in order to

design effective collaborative learning environments as well as to guide student teachers effectively in their professional developments, it is important to analyze the involved sociocultural factors and their dynamic nature in collaborative learning activities. As an analytic lens, activity system analysis can be used to study the influence of broader sociocultural factors on human activities, including learning.

*Activity System Analysis as an Analytic Lens*

Current activity theories are rooted in at least three main historical works (Kutti, 1996). Nineteenth-century classical German philosophy is reflected in the works of Hegel and Kant, who highlighted developmental and historical ideas as well as the active and constructive role of humans. Marx and Hegel (Center for Activity Theory and Developmental Work Research, 2003) formulated the idea of object-oriented human activity as a revolutionary practice to overcome separation between idealism (focused on the individual) and materialism (focused on society). Soviet cultural-historical psychology, the third source of activity theory, is represented by the works of Vygotsky, Leont'ev, and Luria (Kutti, 1996). Vygotsky claimed human activity is mediated by cultural, historical signs and tools; that is, interaction with the environment and collaboration with others form human activity. Leont'ev and Luria developed Vygotsky's ideas into a systemic model and applied it to the field of human sciences.

Guided by historical tradition and developments related to conceptualizations of human activity and sociocultural connections, Engeström (1987) proposed the human activity system shown in Figure 2.1, which comprises six components and illustrates their dynamic interactions with each other.

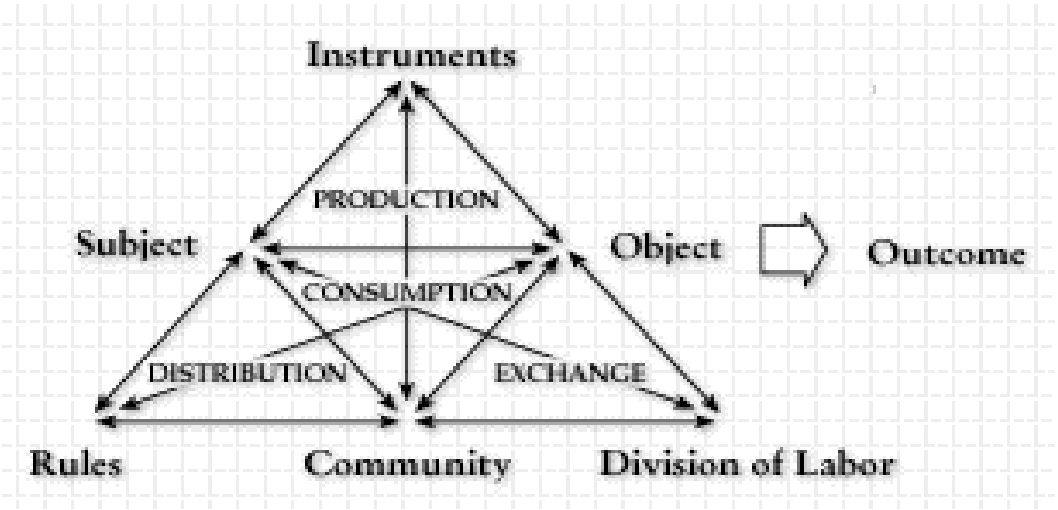


*Figure 2.1.* The basic structure of human activity (Engeström, 1996)

*Components of Human Activity*

The first three facets of the activity system are the subject, the object and the instrument. The subject of the activity system is the individual or group of actors engaged in the activity (Jonassen & Rohrer-Murphy, 1999). In the context of student teaching, the subject is either the individual or group of student teachers, and the activity system will be perceived differently according to individual differences among these participants, such as prior experiences, belief systems, personal values, and perspectives (Jonassen, 2000). For example, differing conceptions of what constitute a good teacher influence student teachers' perceptions in other components of the activity system as well as in the actual implementation of student teaching (Jung, 2007).

The object refers to the raw material or problem space at which the activity is directed and which is molded or transformed into outcomes (Engeström, 1996). Objects of the activity system can be physical material things but can also include mental artifacts, such as plans and ideas. The general object of student teaching, for example, could be as simple as completing the requirements for graduation and teacher certification, or could be as refined as pursuing

experiences deemed important to becoming a good teacher in the subject areas. Thus, in order to achieve the ultimate object of student teaching, student teachers must achieve a range of tasks that can be interpreted as temporary or procedural objects in the activity system, such as developing effective lesson plans, creating effective instructional materials, and cultivating constructive relationship with cooperating teachers.

To attain the object in an activity system, the subject(s) use tools or instruments, including both external artifacts (e.g., computer technology and language) and internal representations (e.g., mental models) (Engeström, 1999b). The process of using the instruments is reciprocal in that "an internal representation becomes externalized through speech, gesture, writing, and manipulation of the material environment and vice versa, external processes become internalized" (Engeström, 1999b, p. 381). Thus, the instrument is culturally-historically restricted or contextualized in a specific activity system. For instance, teachers began using PowerPoint and computers to present learning content in many classroom teaching contexts and in doing so replaced much of the use of the Over Head Projector (OHP). This transition of presentation tools from OHP to PowerPoint illustrates how a tool or instrument is culturally and historically restricted. The instrument can facilitate the transformation of the object into the outcome with historically-collected experiences and skills, but it can also constrain the interaction between subject and object in a fixed or conventional way.

The remaining components of the activity system include the community, rules, and division of labor. The community comprises multiple individuals and/or subgroups that share the same general object (Engeström, 1996), and it is vital to the activity system because as human activity becomes increasingly complex, fewer meaningful activities are accomplished individually (Jonassen, 2000). In effect, the community distributes cognitive responsibility

among the subjects (Engeström, 1996). In the student teaching context, student teachers could be involved in multiple communities: the student teachers' community comprising those in the same student teaching placement, the preservice teacher community in the seminar class, and the inservice teachers' community in the field experience school. These communities afford sharable objects and information collectively generated by members in each community. Members of the preservice teacher community composed of peer student teachers, for example, could share certain perceptions such as designating effective instructional methods for improving students' active engagement as their object. Meanwhile, student teachers would find that a different object (e.g., managing the classroom strictly and/or increasing students test scores) was shared by the inservice teacher community. The rules of the activity system refer to explicit and implicit regulations, norms, conventions, and social relations that constrain the subjects' actions and interactions within the community (Engeström, 1996; Kutti, 1996). Rules inherently govern acceptable actions or interactions within a community and mediate relationships between the subject and the community. In a field experience school, for example, implicit and explicit rules, regulations, and norms can be provided via feedback from cooperating teachers or school administrators. For instance, instructional feedback from a cooperating teacher, such as 'do not use PowerPoint slides too much,' may be perceived as a tacit regulation for student teachers and shape their teaching practices (Jung, 2007). Similarly, implicit rules that are shared in the teaching profession, such as using proper words and wearing appropriate attire, also affect student teachers' actions and interactions.

Division of labor refers to both the horizontal division of tasks among the community members and to the vertical division of power and status (Engeström, 1996), that is, implicit or explicit organization in the community that transform objects into outcomes (Kutti, 1996). While

student teachers implement collaborative inquiry projects, for example, they allocate labor to improve the group performance by assigning specific roles to each member, such as discussion leader and note taker. The division of labor between the student teacher and the cooperating teacher has also been examined. Santoro (1999) analyzed discourse between student teachers and their cooperating teachers during the field teaching practicum in Australia and reported that the perspective of the cooperating teacher toward student teachers (e.g., outsider, incompetent novice) influenced both the cooperating teachers' expectations (i.e., shared vs. centralized) and affected student teachers' perceptions of the meaningfulness of student teaching.

*Research Framework*

Grounded in the epistemological and theoretical assumptions of activity theory and activity system analysis, a research framework was developed for this study. As Figure 2.2 illustrates, the framework assumed the development of student teachers as being an ongoing process as they accept, modify, and even resist surrounding sociocultural influences. The research framework can be used to support the identification and representation of the dynamic process and the effect of experience on student teachers.

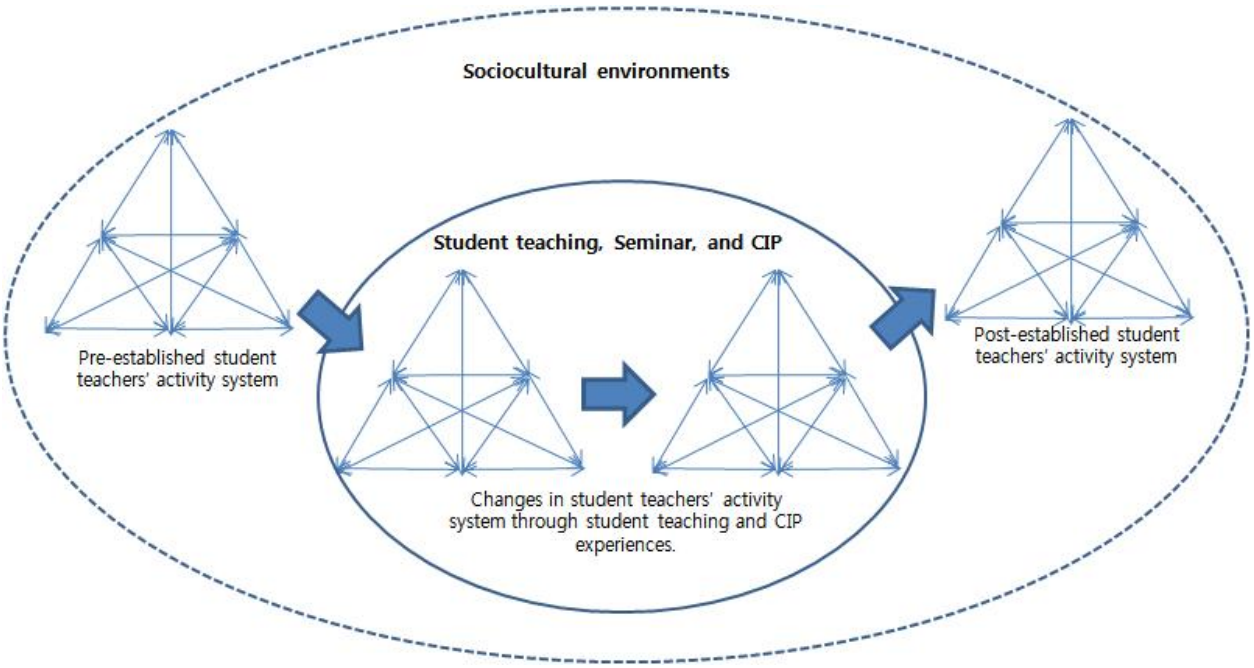


*Figure 2.2*. Research framework using activity system analysis

*Preconception analysis*. Individual student teachers bring their own knowledge, beliefs, and attitudes to their student teaching practice and the student teaching seminar (Plourde, 2002; Wubbels, 1992). Student teachers' preconceptions, typically derived from their life experiences as students, require modification in order for student teachers to fulfill their role as teachers during their field practicum. However, previously developed perceptions, attitudes, and knowledge are not only resilient but are also resistant to change (Plourde, 2002; Putnam & Borko, 2000). In order to support and facilitate transitions in perception and practice, diverse attempts to reform curriculum (Prushiek et al., 2000), integrate technology (Hough et al., 2004; Levin et al., 2006), and develop new instructional strategies (Cunningham & Benedetto, 2003; Dinkelman, 2000) have been reported.

Still, teacher education programs have been criticized for failing to support student teacher transitions, principally due to the lack of attention given to preconceptions prior to the field practicum. The importance of understanding preservice teachers' preconceptions is not

limited to the issue of the field practicum. Calderhead (1991) points out that differences among preservice teachers' perspectives and expectations (i.e., preconceptions) concerning teacher education programs affect how they seek to structure and make sense of experiences in the program. The shift of teachers' preconceptions requires perceptual change as well as changes in the components of the activity system that shape perceptions (Wubbles, 1992). The framework acknowledges the importance and complexity of student teachers' preconceptions. This is represented as an activity system, an analytic lens used to examine both the preconceptions and the sociocultural factors affecting those preconceptions. Understanding student teachers' different pre-established activity systems and the sociocultural factors involved in their interactions can help to design more meaningful and supportive teacher education programs as well as field practicum experiences.

*Changes in the activity system*. Knowledge reconstruction is fundamental to effective student teacher transition. Reflective practices, critical thinking, and inquiry-based practices are commonly used in teacher education to construct new knowledge and improve practices. In the present context, the collaborative inquiry project and other designed collaborative classroom activities (e.g., class discussion, the development of the e-portfolio, peer observation, and interaction with cooperating teachers and university faculty) provide student teachers with opportunities for formal and informal interactions.

Individual differences among student teachers influence the nature and the extent of their involvement in group-based collaborations. At the same time, however, collaborative inquiry may help student teachers to develop new understandings and knowledge and to reconstruct their own individual activity systems. Student teachers' changes in their activity systems during collaborative activities are mutually connected. Thus, analysis of multilayered factors is needed

to reveal the underlying mechanisms and complexity of collaborative learning. For instance, several studies acknowledge that the selection of topics and structures by instructors influences the processes and outcomes of students engaged in collaborative learning (Gilbert, 2005; Levin, 2006). In particular, a topic that is widely accepted among student teachers who share a similar context may not facilitate dynamic knowledge construction as much as debating controversial issues (e.g., teaching intelligent design theory in a science classroom). At the same time, the analysis of the activity system can explain how collaborative learning reciprocally influences changes in the participants' activity systems.

Student teaching experiences are also shaped by multilayered factors involving individual, organizational, and social components. Student teachers experience different degrees of support from their peers and cooperating teachers; similarly, different cultures and school-classroom systems also affect student teachers' experiences. Current educational reform efforts (e.g., standards-based education, teacher accountability) may also influence student teachers' concerns and practices. During student teaching, which involves complicated dynamics among diverse factors, student teachers need to develop situated understandings, practical knowledge and skills of teaching and learning, and cultural understandings of the inservice teacher community. These expected activities require deep changes in student teachers' perceptions, knowledge, attitudes and behaviors, which involve forming a new or adapting an existing activity system to accommodate variations in circumstances.

Student teachers are expected to develop new activity systems as they transition to teaching careers. This transition is characterized by disturbance, interruption, and innovations in the concrete mode of the activity (Engeström, 1996, 1999; Center for Activity Theory and Developmental Work Research, 2006). Inner contradictions in an activity system can be caused

by factors such as the dual nature of activity system components, changes in the interconnectedness of the activity system, and the introduction of new components (Engeström, 1996; Center for Activity Theory and Developmental Work Research, 2006). Student teachers may encounter internal contradictions as they negotiate shared understanding and knowledge during collaborative inquiry, such as interpreting teaching practices based on specific standards. Activity theory considers these contradictions as a moving force that eventually leads to change, development, and innovation of the system (Engeström, 1996).

*Transformed activity system through experience.* Analysis of the initial activity systems of individual student teachers provides a benchmark for examining student teachers' collective development of new meaning and understanding. In contrast, analysis of the end of semester activity system reflects newly constructed beliefs, values, knowledge, and perceptions about student teaching practices as well as future practices. Student teachers' newly constructed beliefs, perceptions, and knowledge are internalized and serve as a new framework for mediating internal and external interactions on discussion in collaborative learning activities. This analysis provides yet another baseline for examining collective understanding as student teachers make the transition to induction and progressive professional development as practicing inservice teachers. Thus, comparison of student teachers' activity systems at the beginning and at the end of the semester can reveal the influence of collaborative inquiry on the expected transitions of student teachers. Furthermore, the activity system representing student teaching experience may also be a benchmark for supporting induction and professional development (cf. Ploude, 2002).

*Implications and Limitations*

The proposed framework can be used as an analytical tool for examining changes as teachers transit through important phases of their careers. For student teachers, the framework

can be applied to examine claims related to changes in perception, meaning, knowledge, and understanding of teaching practices associated with social and environmental forces and interactions with others. The processes through which student teachers co-construct understanding of teaching practices are collective in nature and involve diverse, complex socio-cultural components and relationships. Thus, using an analytical lens grounded in activity theory, these complex processes can be more closely and fully scrutinized and understood. In turn, our understanding can help us to enhance current student teaching programs and to improve student teacher performance.

Although activity theory and activity system analysis hold potential for exploring the complicated nature and dynamics of human activities (e.g., student teaching experiences and the developmental changes of student teachers), several researchers have argued that activity theory provides only limited contributions regarding several theoretical and methodological issues. First, critics point out that activity theory treats human beings as simple and passive operators of a given plan that includes regulations and standards imposed from outside (Lektorsky, 1999). In other words, the theory underestimates the creative and active human nature evident as individuals interpret and internalize diverse sociocultural influences. Sociocultural mediation and its influences on human activities has been criticized for lacking clarity regarding the relationships between human activity and psychological processes such as perception, memory, thinking, and feeling—often regarded as influential factors on human activity (Davydov, 1999). Activity theory, in contrast, emphasizes external influences on human activity, tending to marginalize individual and collective psychological processes. Critics also argue that activity theory pays insufficient attention to the relationship between and among collective and

individual activity, although some theorists acknowledge individual internalization processes grounded in collective activity.

Differences exist in the structure and function of individual and collective activity, but little has been advanced to clarify the inter-relationship. Several important questions remain unanswered. Davydov (1999) asked, “What characteristics can help to distinguish collective and individual subjects? What must be the essential features of a group of persons who carry out the joint activity? What can be defined as the personal level of realizing individual activity?” (p. 44). Such questions require empirical study across diverse fields. Consequently, the results of this study could validate the value and/or reveal other limitations of a framework based on activity theory.

# CHAPTER 3

# METHODOLOGY

## Introduction

This study examines the experiences of student teachers engaged in Collaborative Inquiry Projects (CIP) during their field practicum and the effect these experiences have on the professional development of student teachers in terms of their knowledge, skills, and attitudes. As part of this study, I apply activity system analysis in order to identify sociocultural components that may have an influence on student teachers engaged in CIP activities. Two research questions embody the conceptualized research purpose of this empirical study: 1) How does the collaborative inquiry project affect student teachers' understandings and practices related to active student engagement? and 2) To what extent does an activity theory framework support the identification and analysis of student teachers' individual and collective understandings and practices during a collaborative inquiry project? This chapter illustrates the methodology for the study and clarifies the rationale embedded in the research decision according to the given research context.

## Design of Study

Since the essential components of the methodology emerged during implementation, the following section details the iterative research design and implementation process applied in this study. The research questions and study context involve complex and natural human activity in a specific sociocultural environment. I describe how the methodology emerged to address the research questions.

*Case Study Rationale*

A qualitative case study design was employed to investigate the complicated nature of educational changes in real-life settings (e.g. changes in perceptions and practices of student teachers, the influence of numerous school/classroom differences on the professional development of student teachers). Stake (1995) defines *case study* as "the study of the particularity and complexity of a single case, coming to understand its activity within important circumstances" (p. xi). More specifically, a qualitative case study allows the researcher to conduct descriptive, particular, and heuristic research (Merriam, 1998).

A qualitative case study approach is considered appropriate for examining processes rather than quantifiable outcomes (Merriam, 1998). While quantitative researchers examining relationships or effects among certain personal, organizational, and systemic factors on preservice teachers' professional development have shed light on the nature of preservice teachers' professional development and effective teacher education programs, the processes of change among preservice teachers in complex and authentic circumstances have not been adequately investigated (Wilson, Floden, & Ferrini-Mundy, 2002). Recently, several studies have established that student teachers' understanding and knowledge do not develop adequately without appropriate support (Barnett, 2006; Darling-Hammond, 2000; National Commission on Teaching & America's Future, 1996). Thus, understanding change in student teachers' perceptions and knowledge can help us to design and implement more effective means of support (i.e., the teacher education program, the inquiry project, and the student teaching seminar).

Successful qualitative research can also support limited causal explanations of specific phenomena by exploring the effects of interventions on certain results (Merriam, 1998). The CIP completed during the student teaching seminar is designed to improve student teachers' situated,

real school/classroom knowledge and skills through reflection, collaboration, and problem solving. Consequently, the successful implementation of CIP could facilitate meaningful changes in student teachers in becoming better prepared teachers. This qualitative case study could yield tentative causal explanations by eliciting important factors involved in successful implementation of CIP.

Additionally, qualitative methods are useful in exploring the complexity of a single case (Merriam, 1998). This is important in accounting for the multitude of factors of potential relevance in the present study, including the development of knowledge in the student teaching seminar among student teachers (e.g., perceptual changes through diverse interaction with peer student teachers) and the influence of institutional and sociocultural components (e.g., the organizational culture of the practicing school, perceived support from cooperating teachers and university faculty, and local school and district policy).

Finally, while case studies have been criticized for limited generalizability, several researchers (e.g., Merriam, 1998; Stake, 1995) have highlighted the virtue of particularity and the ability of readers to draw inferences from case studies and apply them to similar situations. Specific descriptions of the background, context, problems, intervention, and results provide important contextual ‘heuristics’ for interpreting the case study. Using heuristics, the reader can assess the applicability of a specific case to their own experience or situation. Thus, specific exploration into the experiences of student teachers in the context of their student teaching and concurrent seminar course including sufficient details could provide for applicability in similar situations.

## Research Context

The student teaching phase of a professional teacher's career is a busy and often life-changing period involving diverse experiences that include formal and informal interactions with cooperating teachers, peer student teachers, university faculty, and students. These interactions can facilitate reflection on student teachers' previous beliefs, knowledge, and practices as they modify, fortify, refine, and/or develop new beliefs, knowledge, and practices. As a complement to concurrent field experience, seminar courses support these reflection and development (Mule, 2006). In addition, collaborative learning has been applied to support and foster student teachers' collective problem solving, reflection, inquiry, and knowledge construction. In particular, collaborative inquiry has proven to be an important tool for facilitating perceptual change and constructing new understandings among students (Moran, 2007).

### *Student Teaching Seminar*

In the Social Studies Education Program (SSEP) at the University of Georgia (UGA), student teaching (ESOC 5460/7460) and a student teaching seminar (ESOC 5560/7560) are taken concurrently by preservice teachers. The student teaching seminar aims to support the development of professional identity and practices among student teachers as they teach in everyday, authentic classroom contexts. Seven objectives are presented to student teachers enrolled in these courses:

- To apply arguments of foundational scholarship in the field of social studies to craft student teachers' own rationales of practices.
- To carefully reflect on student teaching experiences based on the developed standards-based framework.

- To develop collaborative skills in working with other professionals (e.g., peer student teachers, university faculty, cooperating teachers, and school administrators) to frame, analyze, and find solutions to problems of professional practices.
- To use technologies appropriately to support their work as social studies educators
- To develop a professional portfolio that shows mastery of objectives in the social studies education program.
- To demonstrate a strong understanding of the mechanism in which diverse forms of cultural diversity affect teaching and learning contexts in social studies education.
- To demonstrate an understanding of curriculum and instruction reflecting a vision of teaching social studies that educates students for democratic citizenship.

Through the seminar, student teachers are encouraged to develop: a) a strong understanding of a vision and rationale of social studies education; b) ways for fulfilling the perceived vision and rationale in the real school/classroom context; c) acknowledgement of realistic obstacles and challenges preventing successful fulfillment; and d) ways of seeking potential solutions to overcome obstacles. These goals are supported via individual and collaborative activities to facilitate student teachers' instructional decision-making and teaching practices.

*Instructional Activities*

*Classroom discussion*. Throughout the seminar, student teachers are encouraged to reflect on and share challenges, dissatisfactions, questions, and critiques of their ongoing student teaching experiences. Most of the courses that support student teachers' field experiences, including the ESOC 5560/7560 sections, assume that collaborations between student teachers and cooperating teachers, field instructors, and faculty can facilitate student teachers'

professional development and aid in making appropriate transitions (Farr-Darling, 2001; Moran, 2007). Accordingly, meaningful communicative interaction among participants involved in student teaching and the seminar is essential to collaborative learning, which has been implemented via face-to-face and Web-mediated discussion sessions in previous ESOC 5560/7560 offerings.

During the student teaching seminar class, classroom discussions covered two broad areas of issues. The first type of classroom discussion, “What time is it?”, was designed to stimulate open discussion opportunities. During the first 30 to 60 minutes of the seminar class, student teachers were encouraged to share their successes, failures, and concerns related to their week of student teaching experiences. The issues discussed ranged from classroom management skills, instructional methods and techniques, interaction with cooperating teachers and inservice teachers to school policy and current social issues (e.g., the upcoming presidential election, the economic recession). Peer student teachers supported each other by sharing similar experiences and suggesting ideas for overcoming challenges that others faced.

The second classroom discussion sessions were organized according to the Social Studies Education Preservice Framework for Accomplished Teaching (PFAT), a framework aligned to the National Council of Social Studies (NCSS) and based on the Georgia Systemic Teacher Education Program (GSTEP). The PFAT includes six domains: Content and curriculum of social studies, knowledge and understanding of student learning, learning environments, assessment, planning and instruction, and professionalism. Each PFAT domain lasted about two weeks and included a relevant assignment (e.g., a reflection paper) that was given to the student teachers. The framework grounded classroom discussion as well as the development of student teachers’

e-portfolios, providing an analytic lens through which student teachers could examine their own perceptions and practices. Appendix A provides the outline and contents of the framework.

In addition to face to face discussion during seminar meetings, online discussion was employed in both seminar classes. WebCT is used in ESOC 5560/7560 to allow student teachers to extend classroom discussions into asynchronous online discussions by posing questions, sharing information and ideas, providing feedback to other students, and revising understanding through the Web-mediated interactions involving peer student teachers and the course instructor.

*Collaborative inquiry project (CIP).* Some researchers have argued that both inservice and preservice teachers should be trained as inquirers who actively participate in professional development and lead classroom and school changes (Cochran-Smith & Lytle, 1999; Mule, 2006; Schulz & Mandzuk, 2005). Thus, collaborative inquiry projects have emerged as important student teaching experiences (Mule, 2006). In the current research context, all ESOC 5560/7560 student teachers were required to conduct collaborative inquiry projects during the 12-week field experience; each inquiry round was designed to last roughly four weeks. Thus, three rounds of the CIP implementation were initially planned.

Diverse aspects of active student engagement were presented as a topic area of CIP during the semester. The concept of ASE was discussed during the first several weeks of the seminar class through writing assignments, and on-line and off-line discussion. In order to facilitate the development of student teachers with respect to their integrated ideas of ASE, relevant conceptual and practical issues related to worthwhile learning and good teaching were also discussed. Additionally, a detailed description of the diverse aspects of ASE (see Appendix B) was provided to student teachers before the beginning of CIP implementation in order to help them select and focus on more specific inquiry subjects.

A CIP round was composed of three procedures: plan, implementation, and analysis. During the planning stage, student teachers articulated the challenges they perceived in creating ASE in their classroom. Student teachers developed a specific inquiry focus as well as an implementation plan of inquiry. The inquiry plan included designing specific instructional methods to solve their perceived challenges, identifying appropriate types and means for evidence collection, and predicting expected results from their inquiry practices. Then, student teachers applied their planned instruction in real classroom contexts while observing, collecting, and evaluating their students' active engagement in learning. Student teachers evaluated and reflected on their practices by analyzing collected data (e.g., lesson plans, student work samples, video clips), and they reported on their CIP implementation by responding to the open-ended CIP guiding questions that were provided to them (see Appendix C for CIP guiding questions).

Table 3.1

*Inquiry Stages and Student Teacher Activities*

| Inquiry stage | Inquiry activities |
|---|---|
| Plan | - Select the topic of inquiry (a specific method/technique of student engagement)<br>- Set up the boundary and focus of the inquiry<br>- Plan method/technique of implementation in classroom teaching context<br>- Acknowledge challenges or barriers of implementation and seek possible solutions<br>- Plan to collect relevant evidence (e.g., student work samples, lesson plans, video recordings, as well as feedback from cooperating teachers, peer student teachers, and field instructors) |
| Implementation | - Implement planned course of action<br>- Explain context of implementation and evidence collection<br>- Collect pre-identified and/or emerged evidence (records) |
| Analysis | - Analyze collected evidence to rationalize the impact of practice<br>- Develop findings from inquiry<br>- Conduct self- and collaborative evaluation of current inquiry cycle<br>- Evaluate values or limitations of group collaboration during inquiry<br>- Develop focus of next inquiry cycle based on the current analysis |

In contrast to the inquiry practices of the student teaching seminar courses conducted previously, a collaborative feature was incorporated into the inquiry project this semester. During

previous semesters, seminar instructors had expected student teachers to work collaboratively with cooperating teachers, peer student teachers, and faculty during their inquiries. According to the instructors' reflection on the overall implementation of inquiry projects in the previous student teaching seminar, some student teachers had utilized the inquiry project assignment to develop collaborative work skills and rigorous projects outcomes by sharing their experiences and reflecting on them with peer student teachers and cooperating teachers. However, other student teachers had regarded and implemented inquiry projects as individual assignments. Although individually implemented inquiry projects do have value in improving skills, knowledge, and practices for many student teachers, collaboration opportunities among peer student teachers are believed to enhance ownership of the inquiry project and produce more applicable and sustainable solutions (Huffman & Kalnin, 2003).

Thus, in each section of the seminar class, student teachers were divided into small groups for the purpose of collaboration. In the graduate section, student teachers formed their groups according to their teaching subjects (e.g., history, economics) and teaching school level (i.e., middle school), whereas undergraduate student teachers were divided into groups according to their assigned field instructors. While student teachers planned and implemented their own inquiry projects, group discussion sessions were provided as an arena for sharing experiences and concerns, exchanging information and ideas, and developing new understanding of issues related to the inquiry project. In addition, several technology-advanced tools such as VAT supported student teachers' collaborative inquiry projects.

*Video Analysis Tool (VAT).* VAT is a Web-based application designed to support inservice and preservice teachers' evidence-based instructional decision-making, reflective practices, and collaborative professional development. VAT allows users to store video-recorded

teaching episodes and to analyze them within a specific framework (e.g., PFAT in the current study and course). During the ESOC 5560/7560 seminar class, student teachers were required to collect at least one video vignette to serve as independent evidence for each inquiry cycle. During the workshop session of the seminar, student teachers created individual VAT accounts; during inquiry projects, student teachers recorded their own teaching practices, converted video files into an appropriate format, and uploaded files to the VAT system (http://vat2.uga.edu). Using VAT, student teachers were able to select the specific segments of their recorded teaching to share, analyze, and reflect on their practices.

However, due to variations in practicum site policies concerning classroom video recording and issues with obtaining consent from students and parents for such activity in the classroom, several student teachers were not able to record their practices. In addition, occasional technology challenges hampered use of VAT during CIP implementation.

*LiveText™ and e-portfolio*. LiveText™ (http://livetext.com), an Internet-based application, provides student teachers an online workspace for developing a data-driven e-portfolio, as well as a place for storing classroom assignments, lesson plans, rubrics, and relevant artifacts collected during the student teaching seminar. All student teachers enrolled in ESOC 5560/7560 course were required to obtain a LiveText™ account to complete seminar assignments. Student teachers who did not yet have LiveText™ accounts or could not recall their existing account information overcame these problems with assistance from the technology support personnel. For the inquiry project, the course instructors provided guiding questions via LiveText™ so that student teachers could construct their CIP reports while reflecting on and documenting their plans, experiences, analyses, and reflections. The LiveText™ CIP report template also allowed for student teachers to attach collected evidence of inquiry in a variety of

forms such as document, photo, and short video clips, so that authorized personnel (i.e., the assigned field instructors and the researcher) could review student teachers' CIP reports as well as other relevant evidence.

E-portfolios were also developed using LiveText™ and were designed to serve as representations of what beginning social studies teachers believe about teaching, and what they are able to do in the classroom, at the final stage of the program. As the capstone project of the seminar, all student teachers were required to construct and present their e-portfolio, which comprised introductory narratives of individual rationale for teaching social studies, a current resume, and PFAT standards describing current developments and criteria for supporting evidence of accomplishment. LiveText™ allowed student teachers to connect their practices to the concept of standards by including seminar assignments (e.g., reflective journals, observation reports, lesson plans) and CIP evidence as supporting evidence for their e-portfolios.

## Implementation Procedures

### *Case and Participant Selection*

In qualitative case study research, two levels of sampling procedures are usually employed (Hays, 2004; Yin, 2003). The first sampling procedure involves the unit of analysis, and the second involves participant selection within the case. In order to identify the unit of analysis and participant selection, a convenience sampling strategy was implemented based on time, location, and availability of research sites (Merriam, 1998).

The unit of analysis for this study included two sections (undergraduate and graduate) of ESOC 5560/7560 'Student Teaching Seminar' in the Social Studies Education Program at UGA, both of which emphasized critical and reflective practices in a collaborative learning environment. While searching for a research opportunity, I contacted Dr. Miller (pseudonym),

one of the instructors of the student teaching seminar as well as a program coordinator for Social Studies Education at UGA, and we discussed the feasibility of using the current student teaching seminar class as a possible research case. Through several discussions with Dr. Miller, I reached a conclusion that the current student teaching seminar and its reflective, collaborative learning environment could provide me with a valuable research opportunity. Furthermore, the ESOC 5560/7560 environment comprised both graduate and undergraduate preservice teachers and was taught by different instructors, which allowed me to investigate another important aspect of teacher education. Accumulated empirical evidence indicates that "teachers who have had more preparation for teaching are more confident and successful with students than those who have had little or none" (Darling-Hammond, 2000, p 166). Regardless of the differences between the four-year undergraduate and two-year graduate teacher education program (e.g., curriculum) and differences in the social factors of their members (e.g., age group, previous teaching or career experience), few studies have investigated the differences and similarities between undergraduate and graduate student teachers' experiences. In addition, although the role and responsibility of teacher educators for preparing qualified teachers are getting more important issues in diverse teacher education settings, few inquiries have been conducted on the subject (Cochran-Smith, 2003). Teacher educators (i.e., instructors of student teaching seminars) affect the learning and practice of student teachers by presenting their own perspectives and assumptions while student teachers construct perception on diverse educational issues. In addition, the different styles of teacher educators with respect to organizing, guiding, and supporting student teacher learning also influence student teachers in their motivation and their involvement in learning activities. Consequently, the ESOC 5560/7560 context offers a place for exploring these issues in current teacher education practice.

Because this study needed two level of participation, participant recruitment and selection procedures were divided into two stages. The first level of participation was expected to allow me to observe student teachers' activities in seminar class and give me access to their work. In order to employ the first level of participant recruitment, I introduced myself to the student teachers enrolled in the seminar and presented the research purpose, the participation procedure, and the expected benefits and risks of my study as stipulated by and in my approved IRB application at the first class meeting of each section of the seminar. Both instructors, as well as myself, encouraged student teachers to participate in the research, the consent form was distributed to all the student teachers in both classes, and all student teachers enrolled in ESOC5560/7560 gave their consent for me to observe the seminar activities and to access their CIP reports through LiveText™, WebCT discussions, and VAT video clips. The second level of participation was provided to conduct individual interviews and observe collaborative interactions during CIP group discussion sessions. This level of participant selection processes was conducted during the first several weeks in both seminar classes.

*Setup and Preparation*

Prior to the start of the semester-long study implementation, I met and corresponded with both ESOC 5560/7560 instructors to discuss and plan the collaborative inquiry project. As a result, group discussion sessions were included during seminar meetings to facilitate collaboration during student teachers' inquiries. Although forming inquiry groups and incorporating group discussion sessions as part of the instructional activities in the seminar class were initiated, specific approaches (e.g., using guiding questions for group interaction) to facilitate group discussion session were determined by each instructor according to varied aspects of each classroom context.

Since the seminar class required student teachers to use technology for e-portfolio development, online classroom discussion (e.g., LiveText™, WebCT) and the CIP (e.g., VAT, video recording), I arranged a technical support workshop and developed tutorial materials with a graduate student assistant from the technical support office in the College of Education . The peer graduate student was familiar with the technical support requirements in the context of the ESOC student teaching seminar from previous research experience in the seminar class. A 90-minute workshop was presented to each section during the second week of the semester. The workshop provided an introduction to technology for recording classroom teaching practices and hands-on experience with digital video camcorders, converting and uploading recorded video files, using VAT to analyze video vignettes, and using LiveText™ to construct the CIP reports and e-portfolios. In addition to managing the technology workshop, I supported logistic needs related to technology, such as providing video camcorders for student teachers. To minimize technical challenges resulting from varieties of video formats and their technical requirements, a standard set of digital video camcorders and tripods were used. Thus, each seminar section had access to five sets of camcorders and tripods throughout the study.

As student teachers prepared their initial collaborative inquiry, both seminar instructors and I jointly implemented the selection process of a group of student teachers for individual interviews from each section. In addition to individual interviews, the students' CIP groups were observed during their group interactions. In both seminar sections, I clarified the purposes and procedures of individual interviews, and the instructors formed student teacher CIP groups. In the graduate student section, five inquiry groups were formed according to their teaching subjects (i.e., U.S. history, world history, economics, and government) and the level of their practicing school (middle school). Since all five groups agreed to volunteer for interview

participation, the instructor chose the group by lot. The middle school student teachers' group consisted of five graduate student teachers who were eventually selected to be interview participants. In the undergraduate section, the instructor formed inquiry project groups by assigning student teachers who had the same field instructor. One group of student teachers tentatively agreed to participate but withdrew due to conflicting schedules during the field practicum. Despite repeated efforts by the instructor and researcher, no groups volunteered. I then approached several student teachers who showed an interest in participating in interviews; three student teachers from different inquiry groups agreed to participate in interviews and formed an independent inquiry group.

*Data Collection*

I collected data during the full period of the spring semester of 2008. Three data collection methods were coordinated and implemented during seminar sessions and CIP implementation rounds: an interview, an observation, and artifact collection. I employed a semi-structured interview using guiding questions based on a specific research focus related to this study since they had proven beneficial in studies that had two circumstances in common with this study: 1) the interview involved a second language user, and 2) flexible validation and clarification of meaning was important (Barriball & While, 1994). As a non-native English speaker, I used prepared interview questions to increase the likelihood of meaningful interactions with interviewees. In addition, ensuring flexibility as well as continuity was an important issue in conducting the interview due to its long implementation span throughout the semester. Using semi-structured guiding questions helped me keep track of continual changes in individual student teachers. In this sense, the semi-structured interview was used to facilitate management of the interview process as well as to yield relevant, meaningful data.

As a result, three rounds of semi-structured interviews were conducted with participating student teachers (see Appendix D for interview questions in each round of interviews); semi-structured interviews were also held with the seminar instructors at the end of semester. Individualized probe questions were also posed based on an analysis of previous interview transcripts and student teachers' CIP reports.

I observed both section of the seminar class as an onlooker with minimal participation in the research setting (Patton, 2002) in order to gain first-hand experience in the seminar class and to gain an understanding of what student teachers thought, expressed, and experienced during their field practicum. Observation of both seminar sections enabled me to note diverse differences in the instructors' styles, classroom policies, and student teachers' opinions concerning standards. Field notes were taken during the observation to record specific contextual, incidental, verbal and non-verbal information during classroom interactions. These notes were recorded using predefined observation protocols documenting observation site, time, activities, and researcher's notes (see Appendix E). Field notes, especially related to the participating student teachers' involvement in classroom activities or discussion, were also used to refine interview questions.

In addition to classroom observation, participating student teachers' CIP group discussions scheduled during the seminar were video recorded for further analysis. These discussions, required of all CIP groups, were designed to facilitate collaboration among student teachers as they planned, implemented, analyzed, and reflected on their CIP. Video recorded group interaction enabled me to closely examine student teachers' communication in order to evaluate the extent to which they benefited from the CIP activity.

Artifacts related to the seminar classes (e.g., course syllabus, class assignments, and evaluation rubrics) and the student teachers' CIP (e.g., LiveText™ CIP report, instructors' written feedback, and video clips) were also collected. Since the e-portfolio documented the development of professional knowledge and practice through student teaching and its relationship with the CIP, it was also collected and analyzed.

*First inquiry round*. Table 3.2 summarizes the activities observed and data collected during the first round of CIP implementation. The CIP began during the second week of the seminar. As the instructors introduced overall class purposes, procedures, and assignments, the CIP purpose and expected procedures were explained. Additional CIP information and documents, such as the inquiry guiding questions, description of ASE, the consent form for video recording, and technological tutorials were available through LiveText™, course syllabus, and WebCT. In addition, through the classroom discussion sessions, both instructors were able to respond to student teachers' questions related to the CIP. Initially, the due date of the first inquiry was planned for the second week of February. However, student teachers requested an extension for the first inquiry round due to practical concerns including delays in getting permission from their practicing schools and technological challenges posed by the use of video camcorders and the VAT system. As a result, the undergraduate student teachers were allowed an extension of their first CIP implementation amounting to an extra week while the graduate student teachers adhered to the initial due date.

Table 3.2

*Seminar Class Activities and Data Collection during the First CIP*

| Date | Undergraduate | Graduate | Data collection |
|---|---|---|---|
| Jan. 9th/10th | Seminar introduction | Seminar introduction | Observation<br>Documentary data collection (course syllabus, workshop materials, seminar class instruction materials) |
| Jan.16th/17th | CIP introduction, Tech workshop,<br>1st CIP group discussion session | CIP introduction,<br>Tech workshop | Observation |
| Jan.23th/24th | Classroom discussion (ASE, worthwhile learning, good teaching) | Open classroom discussion,<br>1st CIP group discussion session | Observation / video recording (graduate section of CIP group discussion)<br>1st round of individual interviews (1 graduate student) |
| Jan.30th/31th | Open classroom discussion, instructor-led CIP elaboration | Open classroom discussion,<br>University invited lecturing (racism) | Observation<br>1st round of individual interviews (4 graduate students) |
| Feb.6th/7th | Reflective class discussion on 1st CIP,<br>Classroom discussion | Reflective classroom discussion on racism,<br>2nd CIP group interaction session | Observation<br>Documentary data collection (CIP report, WebCT, seminar class instructional materials) |

The first round of interviews attempted to establish student teachers' preconceptions and early experiences with student teaching and the CIP. Thus, interviews focused on identifying the participating student teachers' personal and educational background and their prior experience in order to assess the influence of student teachers' preconceptions on the field practicum, seminar class, and the CIP. Based on the pre-designed guiding interview questions, I conducted individual interviews that generally lasted from 40 to 50 minutes. The first interviews with the participants from the graduate section were conducted during the 3rd and 4th week of the semester. However, interviews with participants from the undergraduate section were delayed due to unexpected challenges in finding voluntary interview participants; these interviews were not conducted until the 7th and 8th weeks of the semester. Consequently, graduate student teachers

were in the planning stages of their first CIP round, whereas undergraduate student teachers had completed their first CIP at the time of interview. Graduate student teachers' experiences with and reflections on their first CIP were included as part of the second round of individual interviews.

During the individual interviews, several challenges emerged. First, the limited availability of student teachers complicated the interview schedule. For example, student teachers usually left their practicing school between 4:00 and 5:00 and prepared for their next class during the remainder of the day. Additionally, several student teachers had to drive to visit the interview site at UGA after their student teaching at the practicing school. In the given situation, most participating student teachers preferred to schedule interviews on the day of the student teaching seminar class. To minimize undue stress and to provide a comfortable interview environment, refreshments were prepared for the participants. Furthermore, in an effort to establish personal rapport with participants, I assisted student teachers in addressing the technological challenges of the CIP. Classroom observation in the beginning period of the seminar class helped me to become familiar with the overall seminar contexts. Through the observation, I recognized initial challenges student teachers faced in their classroom teaching and inquiry practices. In addition, I became increasingly aware of the different classroom activity structures and the level of student teacher involvement.

Along with seminar classroom observation, student teachers' CIP group discussions were observed and video recorded. The graduate student seminar held two sessions of group discussion for their initial CIP planning and reflection. Undergraduate student teachers also held two discussion sessions. However, the first CIP group interaction at the undergraduate section was not video recorded because it was held before the undergraduate student participants were

officially recruited. The first CIP LiveText™ reports of all eight participating student teachers were collected. During the first interview, I informed each individual participant how to share their CIP reports with me. Participants who video-recorded and uploaded their teaching example to the VAT system also shared their video clips. Participants who experienced technical difficulties, received additional support including how to convert, upload, and analyze video clips.

*Second inquiry round*. Table 3.3 summarizes seminar activities and data collection activities during the second implementation phase of the CIP. The time required for the second inquiry cycle varied according to the challenges and situations each seminar section faced and the guidance of their instructors. In the graduate section, student teachers completed their second CIP by the second week of March, which reflected an extension of three days from the initial due date. Undergraduate student teachers, however, experienced logistical problems in carrying out their inquiry projects. During the seminar sessions, undergraduate student teachers expressed their frustration and confusion with the CIP and requested an extension of their due date; the instructor agreed to delay the due date for two weeks, which eventually influenced the instructor to cancel the final CIP round. Thus, undergraduate student teachers participated in only two rounds of the CIP.

Table 3.3

*Seminar Class Activities and Data Collection during the Second CIP*

| Date | Undergraduate | Graduate | Data collection |
|---|---|---|---|
| Feb.13th/14th | <Substitute instructor><br>Open classroom discussion<br>2nd CIP group interaction session | Reflective discussion on the 1st CIP,<br>PFAT standard 1 | Observation,<br>Video recording (undergraduate section CIP group interaction) |
| Feb.20th/21th | PFAT standard 1,<br>Extended group discussion about the emerged issues on WebCT board | Open classroom discussion,<br>PFAT standard 2 | Observation,<br>1st round of individual interviews (1 undergraduate student teacher) |
| Feb.27th/28th | Open classroom discussion<br>PFAT standard 2 | Open classroom discussion,<br>PFAT standard 2,<br>3rd CIP group interaction session | Observation,<br>Video recording (graduate section CIP group interaction),<br>1st round of individual interviews (2 undergraduate student teacher) |
| Mar.5th/6th | Open classroom discussion<br>PFAT standard 3 | Open classroom discussion,<br>PFAT standard 3 | Observation<br>Documentary data collection (CIP report, WebCT, Seminar class instructional materials) |
| Mar.12th/13th | Spring break | | |

During this phase of the study, I conducted the initial individual interviews with undergraduate participants. Undergraduate student teachers had already completed their first round of the CIP at the time of the first interview, so the interview focused on their preconception about student teaching, initial experiences with the first round of CIP and their plans for the second CIP. Interviews with graduate participants were scheduled after spring break, although they completed the second round of CIP implementation. I reviewed the first and second round of the graduate students' CIP reports to understand their experiences and generate interview questions.

As the CIP implementation progressed from the first to the second round, both instructors provided CIP group discussion sessions in order to facilitate collaborative group work for sharing experiences, ideas, and reflections, as well as for planning their next CIP. Each CIP

group session was observed and video recorded for further analysis. In general, both instructors did not distribute specific discussion agendas for group discussion sessions; however, a second CIP group session in the undergraduate section used a pre-developed discussion agenda. Due to an emergency in the instructor's family, the group discussion session was facilitated by a substitute instructor and the seminar instructor provided pre-developed discussion agendas to each CIP group in order to support the activity. Seminar class observation and field note taking also continued. Observation of the undergraduate section provided a sense of what actually happened in the classroom compared to the original class schedule.

My rapport with participating student teachers improved throughout the semester, and individual interviews with undergraduate students provided us opportunities for understanding one another. Although I did not conduct individual interviews with graduate students during this phase, my informal interactions increased when I provided technical support for their second CIP.

Diverse documentary data were collected. The graduate participants' second CIP reports, which included their reflections, analyses, and supporting artifacts, were collected. I also regularly checked and stored student teachers' online discussion and information sharing through WebCT.

*Third inquiry round*. Table 3.4 summarizes the seminar activities and data collection activities during the third inquiry cycle. The third CIP round was implemented only in the graduate section from the second week of March to the second week of April. Most of the student teachers completed their student teaching at the practicing school on or near the end of March or the first week of April. Accordingly, the graduate student teachers were required to initialize their implementation plan and data collection procedures before leaving their practicing schools. After the final implementation of the CIP, both sections of the seminar class devoted

much time and many activities to support student teachers' preparation of their e-portfolios. Both instructors elaborated on the purpose and procedures of the e-portfolio by utilizing open class discussions, Q&A sessions, WebCT postings, emails, and group interaction sessions.

The second round of individual interviews with student teachers from both sections focused on changes in perceptions and knowledge as student teachers gained field experience and progressed in their inquiry projects. Several questions were added to clarify, probe or follow-up on information gained from the first interviews. The second round of interviews lasted 30 to 40 minutes. In addition to individual interviews, I continued classroom observation, missing only one classroom meeting throughout the semester due to a conference I attended in April. According to the initial classroom schedule, the class was not expected to meet this particular week due to conference participation by both instructors. However, due to the unexpected cancellation of a class, the instructor of the undergraduate section of the seminar decided to hold class that week.

The final round of individual interviews with graduate student teachers explored several issues such as their experiences, perceptions, and reflections concerning the final CIP implementation, seminar class, e-portfolio, and overall perspectives of field practicum experiences. Of the five graduate student teachers who participated in the study, one did not participate in the final round of interviews due to personal circumstances. I attempted several times to conduct a final interview with him after semester end; however, he did not appear at the scheduled interview site. Interviews with undergraduate student teachers also dealt with similar issues, except for the components of the CIP. Hour-long individual interviews with both seminar instructors were performed the first week of May when the seminar classes ended. Interviews with instructors mainly focused and documented the instructors' overall perceptions and

evaluations of student teachers' CIP implementation, seminar class progress, and student teachers' seminar experiences.

Table 3.4

*Seminar Class Activities and Data Collection during the Final CIP*

| Date | Undergraduate | Graduate | Data collection |
|---|---|---|---|
| Mar. 19th/20th | Class canceled (instructor had a family emergency) | Classroom discussion, PFAT standard 4, 4th CIP group interaction session | Observation, Video recording (graduate CIP group discussion session), 2nd round of individual interviews (2 graduate student teachers) |
| Mar. 26th/27th | Classroom discussion PFAT standard 4 | Class canceled (conference participation by the instructor) | 2nd round of individual interviews (1 graduate student teacher), Conference participation |
| Apr.2nd/3rd | Classroom discussion, PFAT standard 4 & 5, Group discussion about PFAT standard 4 | Classroom discussion, Group discussion about PFAT standard 5 | Observation, 2nd round of individual interview (2 graduate student teachers and 1 undergraduate student teacher) |
| Apr. 9th | COE invited panel discussion (multicultural issues in education) | | Observation, 2nd round of individual interview (2 undergraduate student teachers) |
| Apr. 16th/17th | Classroom discussion, PFAT standard 5, e-portfolio group interaction | Classroom discussion, PFAT standard 6, e-portfolio group interaction | Observation, Documentary data collection (CIP report, WebCT, seminar class instructional materials) |
| Apr. 23rd/24th | e-portfolio class discussion, class evaluation | e-portfolio class discussion, class evaluation | Observation Documentary data collection (e-portfolio) |
| Apr. 30th/May 1st | E-portfolio presentation / Class end | | Observation, Final interviews with 7 student teachers |
| May 8th | | | Interviews with both instructors |

I also gathered additional documentary data available via WebCT and LiveText™ to assess the progress of student teachers' online discussion and the CIP report. Compared to previous WebCT postings, the postings in this phase were composed of student teachers'

assignment submission. From time to time, I sent an email or talked to participating student teachers to check their progress in the CIP implementation and to obtain their videos through the VAT system.

*Data Analysis*

Collected data were analyzed iteratively using inductive and deductive approaches. Inductive (or thematic) analysis allows researchers to identify research findings from frequent, dominant, or significant themes in raw data (Ezzy, 2002). Inductive analysis approaches often involve three iterative processes of data analysis: reduction, connection, and representation. During data reduction, raw data are condensed via approaches such as labeling or coding sections of data. The researcher then investigates potential relationships between and among initial and emergent codes (i.e., network, hierarchy, and casual sequence). In addition, investigating connections between emerged themes allows the researcher to refine and elaborate codes categories in order develop systemic and defensible explanations underlying the structure of experiences.

Deductive analysis (or theory-driven data analysis) was a key to the activity system analysis. Activity system analysis has been used to examine collective human activity (Barab, Schatz, & Scheckler, 2004; Barab, Evans, & Baek, 1999; Engeström, 1999b). Activity system structures guide macro-level analysis by focusing on individual, institutional, and sociocultural components, relationships, and dynamics that affect student teachers' perceptions and actions during student teaching and the CIP. The theoretically grounded elements of the student teacher's activity system applied in this study are shown in Table 3.5.

Table 3.5

*Student Teachers' Activity System Components and Factors*

| Activity system components | | Theory-based factors |
|---|---|---|
| Subject | Individual | Belief and value about teaching, teaching as a career goal, prior schooling experience, self-confidence about content knowledge and skills, perceived value of group collaboration, |
| | Institutional | Prior experiences of teacher education program, perceived culture and organizational structure of practice school, perceived support from school and university, |
| | Socio-cultural | Perception about current educational reform, perceived goal of teaching social studies |
| Object | Individual | Evaluating self for teaching career, completion of requirement for graduation and certificate, implementing personal teaching philosophy in real context, obtaining deeper understanding about teaching career, developing situated knowledge and skills |
| | Institutional | Sharing diverse experiences and perspectives with peer student teachers, cooperating teachers and university faculty, developing membership of inservice teacher community, |
| | Socio-cultural | Experiencing effects of current educational reforms, evaluating teaching career in broader social context, |
| Tools | Individual | Internet, interaction and feedback from students, peers, cooperating teachers, and university faculty, seminar course assignments |
| | Institutional | Teacher education programs at UGA, student teaching seminar |
| | Socio-cultural | Regional culture, discourse patterns and tones |
| Rules | Individual | Classroom guidelines (syllabus, instructor's feedback), general/specific guideline for group collaboration, generated rules from group activities |
| | Institutional | Practicing school's guideline, cooperating teachers' feedback |
| | Socio-cultural | Generally expected rules for student teachers |
| Community | Individual | Student teaching seminar class, peer group for collaborative inquiry project |
| | Institutional | Peer student teacher group in practice school, inservice teacher community in practice school |
| | Socio-cultural | Preservice teacher community, college students, Georgia residents |
| Division of labor | Individual | Perceived contribution to classroom activities and group collaboration, distributed or specified role during group collaboration, power relationship among group participants |
| | Institutional | Collaboration with cooperating teachers |
| | Socio-cultural | Overall task and power distribution system to student teachers |

*Data organization, analysis & reduction*. Individual cases were analyzed following each CIP cycle, and cross-case analysis was conducted to examine patterns and themes within and across seminar sections. Individual interview transcripts were initially analyzed inductively.

After each round of individual interviews was executed, I wrote down brief self-reflective notes regarding perceived interview processes, atmosphere, and ideas for better interview implementation. All individual interviews were audio recorded using a tape recorder and a digital recorder to avoid the possibility of losing any data due to mechanical malfunctions. I hired a professional transcriber for assistance in interview transcription. Since I am a second language user in English, I wanted to avoid misinterpreting or losing important data due to incorrect or incomplete transcription. In addition, due to my extensive observation and interview schedule throughout the semester, I focused on capturing activities and events as they unfolded during research implementation. Normally, two to four interviews were given to the transcriber and were transcribed within a week. I verified initial transcriptions while listening to the original audio recorded interviews.

Using open-coding methods, I printed out individual transcripts and read them while recording emergent codes or labels in the margin of the transcript. The relevant units of text with themes were highlighted. When the interviewees' responses were unclear or mixed with conflicting points of view, I developed probing interview questions to be asked in the next round of interviews.

*Individual case analysis*. Following initial open coding, I created individual spreadsheets containing themes and relevant quotes for each round of interviews. Initial codes were refined using my research questions. The first research question focused on student teachers' CIP experiences during their field experience: 1) what were the individual student teachers' perceptions and experiences of the CIP and 2) how their CIP experiences were changed through the progress of CIP rounds. The second research question examined relationships among components of an activity system to elicit sociocultural influences on student teachers CIP

experiences. Using open-coding, I conceptualized individual students' activity system components revealed in their interview transcripts. For example, an excerpt from an interview transcript like "I had some really good teachers, really good male teachers when I was a kid." was initially labeled as 'met a good teacher' and categorized under 'subject' because such statement represents the individual experience of a participant. The emergent themes relevant to activity system components were compared with the themes and categories produced by theory-driven deductive analysis. These analysis procedures were repeated in all three rounds of interview transcripts. While summarizing individual student teachers' CIP experiences, I also examined potential relationships between documentary data (e.g., the CIP reports, WebCT discussion, observation field notes, and e-portfolio) to support or reject each summary.

*Cross case analysis*. Themes that were individually examined and refined through inductive and deductive approaches were reinvestigated to elicit similarities and differences at individual and group levels (i.e., the undergraduate section and the graduate section). For instance, I found that several other participants also showed their perception or experience that could be labeled as 'met a good teacher', and it became evident that their experience with teachers can be located in a broader code of 'influence of student teachers' schooling experience' that also included other labels such as 'met a bad teacher', 'discipline', and 'good student'. During this stage, I focused on student teachers' responses to interview questions that were given to all participants. Although interview responses were not always rich enough to make clear distinctions, it was helpful for me to consider a broad level of sociocultural factors connected with their responses. Time was considered as an important factor in the cross-case analysis phase. I divided student teachers' perceptions and behaviors into three time phases: 1) before student teaching, 2) during student teaching and CIP implementation, and 3) after student teaching. I

then investigated how student teachers' activity systems were changed during these time phases in response to different sociocultural influences and their dynamics. At the end of the cross-case analysis stage, two codebooks (Appendix, G and H), an analysis of CIP and the other of activity system analysis, were developed as an initial result of analysis. Each codebook contained the elicited themes, attributes, and sources of evidence; however, the codebook of the activity system analysis included three separate sub-codebooks according to the conceptualized time frame of analysis (i.e., before, during, and after student teaching). Figure 3.1 illustrates the iterative and dual implementations of inductive and deductive data analysis.

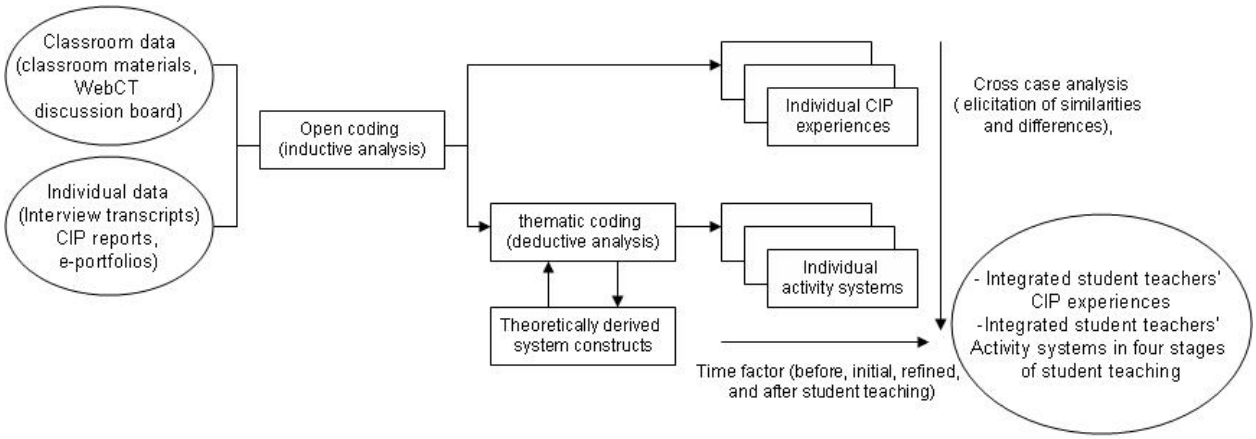


*Figure 3.1.* Iterative inductive and deductive data analysis

Class and individual data were initially analyzed inductively by employing open-coding methods. Inductive data analysis focused on student teachers' CIP experiences and their progress produced individual CIP profiles. For the activity system analysis, inductively elicited codes were compared with theoretically driven constructs of activity system components (see Table 3.5). Through comparative and ongoing analysis, both inductively elicited codes and pre-developed constructs were modified and refined. Next, I investigated individually constructed CIP profiles and activity systems in order to elicit commonalities and differences among

participants. In addition, I considered the sequence order of the CIP (i.e., first, second, and final round) and the student teaching period (i.e., before, initial, progressed, and after student teaching) to track student teachers' developmental and sociocultural changes. As a result, integrated themes and activity systems of student teachers were developed as reported in the next chapter.

## Credibility, Limitations, and Ethical Considerations

The credibility and validity of qualitative research has been a highly debated topic and important concern for researchers (Creswell, 2002). The issue of credibility and validity in qualitative study is influenced by study procedures and data collection and analysis as well as by researcher perspectives. The following section addresses the issue of credibility and validity in this study by clarifying researcher perspectives, assumptions, limitations, strategies to ensure credibility, and ethical considerations.

### *Researcher Perspectives*

The theoretical framework of this study is rooted in social constructivism, which recognizes the importance of socio-historical factors and the interactions with human beings in the process of construction of knowledge and self-identity (Jonassen & Rohrer-Murphy, 1999; Koszalka & Wu, 2004; Vygotsky, 1978). In this study, I assume that the experiences of student teachers in their field practicum, CIP implementation, and professional development during the student teaching period will be influenced by diverse sociocultural components (e.g., federal or state policy, the culture of the practicing school, interaction with other educational practitioners, and collective norms or belief system).

My own student teaching experience contributed to my interest in sociocultural influences on the development and implementation of educational practices. My student teaching

was conducted at a middle school in Korea, where I taught civics. Although my student teaching experience was very brief – lasting about four weeks – I observed and noticed how diverse sociocultural factors shape and guide inservice and student teachers' perceptions and practices. For instance, my cooperating teacher was an elderly male who had graduated from the same department at the same university where I had completed my undergraduate degree. In my case, this relationship helped me build a stronger personal connection than I might have otherwise, but it also restricted my practice because of the high degree of respect I had for my teacher as a result of this relationship. When my CT provided me with somewhat negative feedback on my attempts to apply technology into the classroom, I decided to follow his traditional way of teaching in order to avoid conflict. This personal anecdote may reveal one of many sociocultural factors of student teaching that can have powerful effects on student teachers' professional development. Consequently, in order to develop effective strategies to support the professional development of student teachers, it is necessary to understand the nature of student teachers' developmental processes and the sociocultural factors in authentic school/classroom settings.

I also believe in the importance of student teaching experience to improve educational system and practice. I believe the student teaching experience is a critical learning period and should be strengthened in order to allow student teachers to reflect on their previous beliefs, perceptions, and practices as well as to develop understanding and practice as a professional teacher. Student teachers' perspectives will influence their future practices and other aspects of the educational system. In addition, student teachers' involvement with innovative learning activities (e.g., CIP, VAT, and e-portfolio development) could influence their future engagement in professional development in the inservice teacher learning community. Thus, the student

teaching experience should be an opportunity to not only learn specific teaching methods or skills but to develop a professional perspective on a range of social educational issues.

*Researcher Limitations*

As a native Korean, my framework for viewing the educational systems and its culture in the United States of America including the teacher education program, school policy, and structure of field practicum is grounded by my experiences in Korea. Although I had student teaching experience in Korea, I have had limited experience in the diverse educational practices of the United States. In addition, I also have a limited understanding of and experience with teaching social studies. Although this study does not focus on the knowledge of teaching a particular subject, deeper understanding of the challenges in teaching social studies could inform my interaction with participating student teachers and their teaching practices. This background poses certain limitations to understanding the educational system in the United States; however, it can also provide perspectives that have not been previously revealed or may have been taken for granted.

I addressed these limitations in several ways. First of all, I implemented a previous study (Jung, 2007) that included a similar research focus with Korean student teachers. This provided me with a valuable opportunity for understanding student teachers' overall perceptions and experiences. Throughout my previous research experiences, I sought to articulate the similarities and differences in student teachers experiences between the United States and Korea.

Additionally, I had several informal meetings with a Korean student who recently completed her doctoral program in social studies education. She had field instructor experience, which enabled me to learn from her experiences and opinions regarding interactions with

inservice and student teachers, teaching social studies at various school levels, and issues that she had with teacher education in the field of social studies education.

*Limitations and Cautions of Study*

This study adopted the qualitative case study as a methodological framework to design and implement the research. While well-suited for the research questions I studied, qualitative methods have inherent limitations in generalizability and predictability of results. However, rich information grounded in a specific research context provides readers with insights that could hold in similar situations.

I used convenience sampling for recruiting individual interview participants and their CIP group, so the student teachers who participated in this study are not necessarily representative of the whole body of student teachers. Thus, the findings of this study should not be regarded as the evaluation of all student teachers' practices enrolled in the ESOC 5560/7560 seminars or other specific course offerings.

*Strategies to Promote Credibility*

During data collection and analysis, I used several strategies to improve the credibility and validity of this study. Triangulation of data involves the use of multiple sources of data and multiples means of analysis for confirming the findings (Merriam, 1998; Patton, 2002). Thus, I triangulated data obtained through observation, interviews, and documents to identify complementary and contradictory evidence. In addition, by combining theory-driven deductive analysis with open-coded inductive analysis of collected data, the credibility of the findings should be strengthened.

*Ethical Considerations*

In a qualitative study, ethical issues are more acute in comparison to a quantitative approach because “while all social research intrudes to some extent into people’s lives, qualitative research often intrudes more” (Punch, 2005, p. 276). Ethical issues include harm, benefit, consent, deception, confidentiality, anonymity, intervention, and privacy. In consideration of the above ethical issues, the study design was reviewed and approved by both my doctoral committee and the Institutional Review Board. I provided an informed consent form that illustrated the purpose of the study, expected risks, benefits, and procedures of participation to all student teachers in both sections of the student teaching seminar. Participants’ unfavorable perceptions or comments about the student teaching seminar, CIP, or instructor’s teaching style that were expressed in interview transcripts were not revealed during the semester. Thus, participation in the study did not have an effect on the evaluation that students received from their instructors. Participants also had an opportunity to review and clarify their perspectives concerning the analyzed and interpreted results of their CIP experiences.

Since this study required an investment of additional time beyond the seminar, participating students were rewarded with gift cards. Additionally, some participants reported the benefits they received from their participation (e.g., getting better and quicker technical assistance). Interview questions also facilitated their reflection of underlying beliefs, teaching practices, and CIP experiences.

# CHAPTER 4

# FINDINGS

## Introduction

Two main research questions grounded the complex processes of data collection and analysis for this study: 1) How does the collaborative inquiry project affect student teachers' understandings and practices related to Active Student Engagement (ASE)? and 2) To what extent does an activity theory framework support identification and analysis of student teachers' individual and collective understandings and practices during a collaborative inquiry project? The analysis produced themes, ideas, and descriptions that were refined and validated through triangulation. This chapter reports on the results of this study, including stories of the participating student teachers' experiences, the challenges they encountered, and the progress they made through their field practicum, seminar class, and collaborative inquiry project (CIP).

## Participants' Profiles

### *Student Teachers*

Eight student teachers—four male (Coach, John, Matt, and Robert) and four female (Joanna, Mary, Nancy, and Anna)—were identified across both sections of a student teaching seminar. Coach, John, Matt, Joanna, and Mary were enrolled in the graduate program section, and Nancy, Anna, and Robert were enrolled in the undergraduate section. Each graduate student had previously majored in history as an undergraduate and was currently pursuing teaching certificates. Three had prior teaching experience in public or private schools: Coach, the only African American participant across seminar sections, had roughly two years teaching and

athletic coaching experience, and was working at a middle school special education program as a part-time teacher; John and Matt held provisional teaching certificates, and John was working as a provisionally certified, middle school social studies teacher. Among the undergraduates, none had prior experience directly relevant to their pursuit of a teaching career. Nancy volunteered at a local youth organization, and Anna worked part-time on a board of education in a rural area. Robert had five years of prior military experience but no prior teaching experience.

Table 4.1 provides the individual profiles of the student teachers who participated in this study with relevant information about them. The mean age of participants in both groups was similar (graduate students = 25.6 years old; undergraduates = 25.3). The graduate student group included both the youngest and oldest participants. Mary, 21 years old and the youngest participant in the study, began her freshman year at age 17 after having completed roughly one year of college credit during her senior year of high school. The oldest participant, John at 32 years old, spent roughly 10 years completing his undergraduate degree.

Table 4.1

*Participating Student Teachers' Profiles*

| Seminar Section | Name (Pseudonym) | Gender | Age | Major | Teaching subject /Grade | Prior teaching experience |
|---|---|---|---|---|---|---|
| Graduate | Coach | Male | 27 | Elementary ed /history | GA history / 8th | 2 years in private school and athletic coach |
| | Joanna | Female | 23 | History /speech communication | Geography / 6th | No |
| | John | Male | 32 | History | GA history /8th | 2 years as a provisional teacher |
| | Mary | Female | 21 | History | Social studies / 7th | No |
| | Matt | Male | 25 | History | GA studies / 8th | 1 year as a provisional teacher |
| Undergraduate | Nancy | Male | 25 | History/ Social studies | Social studies / 6th | No |
| | Anna | Female | 23 | Social studies | Economics /12th | No |
| | Robert | Male | 28 | Social studies | U.S history /10th | No |

*Instructors*

Instructors from both sections of the student teaching seminar class also participated in individual interviews. Two male instructors, Dr. Miller and Mr. Howell, led the seminar class during the semester. As summarized in Table 4.2, Dr. Miller taught the graduate section of the student teaching seminar. Previously, he had taught social studies for three years at a junior high school and has since gained 11 years of teaching experience as a teacher educator. Dr. Miller has taught a variety of social studies education courses, including curriculum, field practicum, and research classes both at the undergraduate and graduate levels. While serving as program and graduate coordinator, he attempted to "institute a lot of reforms" in the program. These included increasing opportunity for student teachers to gain field experience, developing program rationale and standards, and strengthening relationships between inservice teachers and schools.

Mr. Howell, the instructor of the undergraduate section, was a doctoral candidate in the Social Studies Education Program at UGA; previously, he completed a master's degree in the same graduate program. He taught a variety of high school social studies subjects (e.g., psychology, government, economics, and world history) for six-and-a-half years. Earlier in his doctoral studies, he taught an initial field experience class and a curriculum class and served as a student-teacher field instructor for five semesters. Due to his prior experience in the program, he was familiar with several student teachers enrolled in the seminar. During the interview, Mr. Howell indicated that several personal circumstances influenced his performance as a seminar instructor. First, he became father to a newborn baby during the semester, which led to a minor change in the classroom schedule. In addition, he was in the process of completing a doctoral dissertation and preparing to graduate. As a result, he reported that the busy personal schedule resulted in his providing less seminar support and guidance than he had initially planned.

Table 4.2

*Instructors' Profiles*

| Pseudonym | Seminar section | Gender | Prior teaching experiences | Current status |
|---|---|---|---|---|
| Dr. Miller | Graduate | Male | 3 years in junior high school<br>11 years in teacher education program | Associate Professor |
| Mr. Howell | Undergraduate | Male | 6 years in middle school<br>3 years in teacher education program | Doctoral candidate |

## Individual Participants' CIP Experiences

Interview transcripts, student teachers' CIP reports, and their inquiry evidence were collected and analyzed to encapsulate the experiences of the student teachers in this study. The findings indicate diverse and complex connections between student teachers' perceptions and reality. Some participating student teachers reflected on their teaching practices and developed understanding through CIP experiences, but others reported difficulty in understanding the benefits of CIP for their professional development. The following section details individual student teachers' CIP experiences, highlighting differences and similarities in individual attitudes, beliefs, and implementations.

### *Graduate Student teachers*

*Initial CIP round*. During the initial CIP round, prior experience influenced student-teacher performance. Unlike the male graduate student teachers (John, Matt, and Coach), the female graduate student teachers (Mary and Joanna) did not have previous teaching experience. Although receiving previous exposure to real classroom contexts through an initial practicum, lack of actual teaching experiences magnified perceived differences between the initial practicum and the student teaching period. Mary reported the differences between the observed school during the initial practicum and the practicing school in this semester as "night and day" with respect to differences in their physical environments, school cultures, and student behaviors.

Mary and Joanna both reported initial challenges and frustrations stemming from impoverished school environments and student behaviors. During the first CIP group session, both focused on discussing their challenges rather than sharing their ideas and plans for the first inquiry implementation. Thus, both Mary's and Joanna's focus was connected to the challenge they faced that seemed most significant to them: classroom management issues. Mary focused on the effectiveness of group work in her classroom environment because she noticed that students were easily distracted when they were required to do or learn individually (e.g., fill out worksheets). Thus, she developed a worksheet and story-based scenario to guide group discussion among students. The field instructor's observation report revealed that Mary's inquiry implementation facilitated students' active engagement. According to the report, the change in student engagement between the lecture and group-based learning was described as "amazing…students immediately turned on to the material and were actively working, learning from one another."

Joanna also focused on collaborative group work during her first inquiry implementation. Although concerned about some classroom management issues and her students' lack of experience in working collaboratively, she planned and implemented a collaborative project requiring students to "find information from the resources and represent their discovery to other students." Upon analyzing the video-recorded instruction and student work, she observed that students' engagement in collaborative learning environments had improved, which she would not have predicted based on her limited previous experience. Mary and Joanna reported their first inquiry implementation proved successful in that they were better able to understand their students, manage their classrooms, and facilitate student engagement. At the same time, first

inquiry experiences provided opportunities to reflect on and modify their practices in the second inquiry implementation.

Compared to the female graduate student teachers (Mary and Joanna), who focused on classroom management issues during their first CIP implementation, the male graduate student teachers (John, Coach, and Matt—each of whom had previous teaching experience), focused on specific instructional methods or conditions of ASE. During the first interview round, the male student teachers indicated that their prior teaching experiences helped them gain confidence in managing disruptive and problematic student behaviors. As a result, they focused on how to actualize their teaching beliefs and rationales while establishing ASE.

John and Coach emphasized that students' learning should be connected to their own real-life situations. Referencing the list of ASE components provided during the seminar, they argued that ASE could be improved by providing opportunities for students to connect learning content with their personal lives. During the first interview, both noted that current educational problems were connected to the family, community, and society surrounding students' lives, and they reasoned that schools should therefore provide students ways to deal with their "life problems" in learning. Their CIP implementations were consistent with these beliefs and interests.

John attempted to connect the historical context of the Great Depression to what he perceived as his low SES students and the experience of their communities. Thus, he planned to combine simulation and discussion to address the influence of the stock market on the economic system during the Great Depression. He suggested students could indulge their personal interests when they bought company stock in a Web-based stock market simulation. John reported getting

a satisfactory result from the planned lesson in that students connected classroom content and activities more critically and actively with their real-life interests and in so doing improved ASE.

During the first several classes, Coach initially implemented lecture-based instruction similar to his CT's practice. However, he observed that students were easily bored with lectures and inferred that his lecture needed to incorporate classroom discussion as a supplementary learning activity. In his first inquiry, Coach attempted to discern whether classroom discussion could be successfully implemented in his classroom. He planned an open-classroom discussion about the Civil War and the Reconstruction era. Coach used video recordings of student discussions and the field instructor's observation report for his analysis. He evaluated the classroom discussion as successful in promoting students ASE, noting that students enjoyed discussion as they smiled, laughed, and shared their concrete responses to the issues. Coach reported the inquiry experiences provided more accurate and vivid feedback on his practices, which helped his subsequent planning and practices.

In contrast to the experience of other graduate participants, both Matt and another student teacher were supervised by the same CT as a group, and so Matt and his teaching partner planned their instruction together. For the first inquiry, Matt planned group-based role playing. He divided his class into several groups that represented diverse segments of southern society (e.g., Radical Republicans, freedmen, and defeated southern leaders) during the Reconstruction era in American history. Each student analyzed different primary sources and taught one another what they learned in the sources. Matt collected and analyzed student work samples, lesson plans, the field instructor's observation report, and video clips in order to evaluate the lesson. Unlike the other participants, he described what he learned from the result of his first attempts as "disappointing." He reported that future attempt to challenge students through role playing

should better reflect students' background knowledge and their capacity for implementing planned learning activities.

*Subsequent CIP rounds*. Through three rounds of CIP, graduate student teachers used CIP opportunities to improve instruction and facilitate ASE. Overall, graduate student teachers' reflections on their first inquiry experiences were facilitated by classroom discussion, CIP group discussion, and their instructor's feedback. Their reflections also influenced planning and implementation of the second inquiry. Mary reflected on and evaluated her first CIP implementation by watching her video recorded teaching practices using the VAT system. She noticed that the transition from the lecture-centered teaching practice during the first half of the class to the following group-based activities was not implemented smoothly. She perceived a need for additional preparation for transitions in classroom activities, which triggered the practical ideas evident during her second CIP implementation. During one class, Mary assigned and projected pre-assigned student groups on the SMART Board™ and arranged classroom desks for each group before the class started. Students participated in group settings, initially via a lecture on slavery in the United States, followed by group activities during which students read a passage describing a slave's life as they sought appropriate answers to the given questions. In her CIP report, Mary acknowledged that the her second inquiry focus could be perceived as irrelevant to the featured area of inquiry project (i.e., instructional methods and techniques for improving ASE); however, she noted that creating a disciplined classroom environment is essential to implementing diverse methods and techniques. Thus, she reported that her CIP implementation could nurture learning environments in which students would better engage in meaningful learning. Mary concluded that her second implementation was successful in that

students were better prepared for group activities and involved in learning activities when disruption was reduced during transitions.

As she became increasingly familiar with the SMART Board™, Joanna became interested in its interactive classroom use and attempted to make her PowerPoint presentations more interesting and interactive. Thus, for the second round of CIP, Joanna's inquiry examined the effects that interactive use of SMART Board™ technology had on ASE. Joanna evaluated her CIP implementation by reviewing video clips, lesson plans, and student work samples. Although the lesson was considered successful in improving ASE, Joanna was unable to conclude that improved ASE was associated with her SMART Board™ use. At the beginning of class, Joanna announced that students needed to pay attention to her lecture in order to execute an artifact creation activity, which students were eager to do, and thus, Joanna perceived that pre-notification to the students might have affected the observed student engagement during her lecture rather than her use of SMART Board™ technology per se. However, Joanna reported that combining the SMART Board™ with other activities (e.g., group discussion, hands-on activities) would have the potential for improving interaction between her and her students and ASE in the classroom. The second round of CIP provided an opportunity to explore this assumption during further teaching practices.

Both John and Coach described their first CIP experiences as being beneficial and successful. However, Dr. Miller's written feedback on their CIP reports indicated the need for detailed description about their practices and deeper reflection. During individual interviews, John and Coach acknowledged the lack of thoroughness in their reports. In addition, they reported that they came to understand what they were needed to do for better CIP implementation so that the second round of their CIP would be much better than the first one.

During the second CIP, John examined whether increasing his students' ownership of learning content could facilitate their engagement and meaningful learning. He attempted to employ a "democratic approach" by soliciting student participation in selecting learning content, which was captured in a 10-minute video clip. First, students were asked to read the textbook while considering what was important for them to learn and why. After reading, several students presented topics that they thought to be interesting and important, followed by a short classroom discussion as to whether the elicited topics (e.g., changing agricultural industry, the early explosion in urban populations, the baby boom in Georgia) were important to learn. John asked all students to write one piece of information relevant to the topics listed on the classroom board. Many students approached the board and wrote down information about the topic, while some students took individual notes on their own learning about the topic. John reported that he was "satisfied and pleasantly surprised" with his second CIP implementation. The video clip of the classroom depicted students actively engaged in learning, earnestly taking notes, actively participating in classroom discussion, and reading silently. The second CIP implementation fortified John's belief about the importance of connecting students' interests and life experience with social studies learning activities.

During his second inquiry, Coach implemented 'Search and Rescue'—a term he coined for a technique he created. Students were asked to search for interesting historical facts or people using diverse learning sources (e.g., newspapers, Internet, and encyclopedia) beyond the scope of the textbook and were assigned to document and present their findings at the following class meeting. While he expected voluntary participation of students in this activity, he changed his initial implementation from voluntary to mandatory participation due to low student participation. His evidence collection plan included samples of student work and a survey to elicit students'

perceptions concerning the method. Coach evaluated his ‘Search and Rescue’ implementation as improving ASE. As students became familiar with the method, they selected personally interesting historical facts and shared them with other students; he expected the method could be incorporated with other instructional techniques to generate synergy for improving ASE. However, according to Dr. Miller’s evaluation, his CIP report still lacked in essential components of meaningful CIP experiences. For example, Coach did not attach any collected evidence of inquiry and did not offer responses to several guiding questions. Although Coach acknowledged the need for improvement during the interview, his second CIP experience indicated continuing struggles with meaningful CIP implementation.

Matt and his peer partner continued to plan specific instructional methods for facilitating student engagement by improving students’ decision-making skills. Like John and Coach, both of whom attempted to connect learning with the lives of students, Matt assumed that emphasizing decision-making skills could help students make better choices in real-life situations. He selected President Truman’s decision to drop the atomic bomb on Japan during World War II and presented diverse situational factors that influenced Truman’s decision. He then posed an open-ended question to the class: “What should Truman do?” During the seminar, asking open-ended and ‘essential’ questions was a highlighted instructional strategy for facilitating ASE. Matt suggested that students might become increasingly interested in engaging planned learning activities if they were allowed to search for and generate their own alternative ideas rather than simply repeating those provided in assigned materials. While Matt monitored the progress and engagement of students, individual students considered the viability of their alternative decisions. After individual decision-making, students shared and discussed their decisions as a group and voted for the best decision. Matt’s inquiry evidence included his

presentation material, lesson plan, student work samples, video clips, and field instructor's observation report. He reported satisfaction with the inquiry, noting that students were actively engaged in group discussion with their creative decisions. Student-generated alternative decisions were "tremendously varied," which Matt interpreted as ASE during the activities.

Based on the previous two rounds, graduate student teachers' CIP focuses for their final inquiry varied. As a final focus of CIP implementation, Mary combined strategies she perceived as effective during previous implementations, such as specific guidance for group activities and better preparation for transitions. In addition, she included group work such as artifact creation. During the final CIP implementation, she distributed detailed step-by-step procedures to guide students toward the accomplishment of the learning goal. Each student identified and collected relevant information from a textbook, then passed the information sheet they created to other students. By sharing information sheets among group members, students were able to collect information and then create and present the information through a creative artifact (e.g., news story, poem, Q&A guide). After examining recorded students' activities and their work samples, Mary concluded that students were actively engaged in this lesson. Detailed procedures for group activities helped students engage in both individual and collaborative tasks. In addition, activities for artifact creation facilitated students' motivation to learn and work collaboratively. Mary confidently said, "I've almost perfected the technique."

For the final CIP, Joanna planned a simulation although she remained "extremely worried about student behavior." According to the results of the learning style survey, which the practicing school conducted in the early of semester, most students in her classes were classified as kinesthetic learners. Therefore, Joanna speculated that a simulation could facilitate ASE as students physically participated in the learning activity. While she taught about the colonization

of Australia, each student portrayed convicted English prisoners who were transferred to Australia and became its first settlers. Students acted out the diverse experiences of prisoners (e.g., conviction at court, the voyage, and doing hard labor in Australia) and wrote reflections on their experiences. Joanna video recorded students during simulation activities and collected several students' reflective journals for further analysis. She reported that the explicit structure of the simulation, including very specific direction for student activity, helped to minimize the student distractions and behavioral problems of concern prior to implementation. She also indicated that the simulated lesson was especially successful in motivating and facilitating a class that was previously "hard to handle and had a major problem with behavior." Joanna reported that the final inquiry provided valuable insights for modifying her initial assumptions about the maturity and readiness of sixth-graders to participate in simulated learning activities and that it improved her confidence in her own ability to design, plan, and implement new approaches in the classroom.

John planned the final CIP implementation using competition to facilitate ASE during learning activities. Specifically, he planned a series of competitive instructional activities for several classroom periods. For homework, he assigned a work sheet comprising several questions, and then divided his class into two groups to implement a quiz show based on the assignment. During the following class, John attempted once again to connect learning activities with student lives as students created a 'family crest' representing their individual reflections and life plans compared to the life histories of several Civil Rights Movement leaders. He posted the family crests on the classroom wall so that students could judge the best one. During his highlighted instructional activity, 'Scavenger Hunt,' students were divided into six groups and walked about the school building to search for hidden clues needed to complete a blank puzzle.

Video-recordings of the students' activities revealed that they were actively engaged, enthusiastic, and worked well in collaboration with other group members. Students encouraged each other to "pick up the pace," helped team members to search for information in the textbook, and divided the workload among members to win the game. The review of assessment results also fortified John's initial evaluation of CIP implementation. He observed that all student groups returned their puzzle sheets with correct answers, and the submission rate of their homework was higher than that of previous classes in which the competitive instructional strategies were not applied.

Coach, who struggled to pace his CIP implementation, completed his final inquiry by exploring the effect of his proximity to his students on ASE. During his field experience, he noticed that students became distracted in group or pair-based activities. Usually, he stood at the center of the classroom during the activities, so he believed that moving in order to reduce his physical distance from students would facilitate their active engagement in learning tasks. Thus, during the inquiry he intentionally moved around the classroom while monitoring the students' activities. He concluded that his close proximity to students helped to improve ASE during group discussion, and he also reported that distracting behavior decreased. As with his second inquiry, however, he did not include inquiry evidence, though he planned to collect and use a video vignette and the field instructor's observation report. Again, his CIP report was relatively short and lacked detail compared to other graduate student teachers, and he did not respond to several guiding questions but rather repeated previous responses. Although both John and Coach reported on their initial challenges to CIP implementation, their results at the end of CIP rounds were markedly different. While John's second and final CIP reports included specific description of the inquiry processes as well as elaborated ideas and reflection, Coach did not support his

assertions with respect to meaningful and motivated student participation. In addition to lacking thoroughness in his CIP implementation, Coach failed to perform satisfactorily in his e-portfolio—a capstone project in the program. As a result, he did not earn credit for the course.

Initially, Matt planned a class session in which students would create and present a eulogy for the leaders of the Civil Rights Movement; however, he changed his focus to a game-based review activity. Instead, Matt and his teaching partner prepared a bingo game based on a previous eulogy lesson to review and integrate students' learning about the Civil Rights Movement. He expected that a game type review would increase ASE as well as support students' retention of information through an enjoyable activity. He collected lesson plans, game questions, and video clips as inquiry evidence. Matt evaluated his implementation as being both successful and unsuccessful. The method was successful in that students enjoyed it, which might help students retain certain information; however, the characteristic of bingo game review, which asked for just one correct answer to the given question, limited the potential to nurture historical reasoning. Matt reflected that the final inquiry enabled him to consider diverse review activities for his subsequent teaching practices. Regarding the performance of graduate student teachers' CIP participation, the seminar instructor reported that participation was not representative of the "whole range of quality" observed among all graduate student teachers' in the seminar.

*Undergraduate student teachers*

In contrast to the graduate student section, the undergraduate section completed only two of the three planned CIP implementations. During the interview, the instructor, indicated that he canceled the final CIP rounds and rescheduled its due date. He explained that during the first round of CIP reports, undergraduate student teachers reflected on their initial lack of understanding about the purpose, procedures, and expected outcomes of CIP as well as their lack

of motivation for engaging in CIP. Thus, he decided to increase the motivation of student teachers by reducing the planned number of CIP implementations while attempting to clarify the CIP-related issues during seminar meetings. In addition, Mr. Howell did not provide individual written feedback to student teachers because he considered it more important to provide opportunities of self evaluation and reflection than to provide instructor feedback on "what was wrong and what was good." Given such differences between seminar instructors, both similarities and differences were evident between the CIP experiences of the participating undergraduate and graduate student teachers.

*Initial CIP round*. Similar to the female graduate student teachers (Mary and Joanna), the female undergraduate student teachers, Nancy and Anna, identified classroom management issues as one of their most important challenges. Although assigned to the same student teaching school as her initial field practicum, Nancy perceived student teaching as stressful and the CIP as "extra work." Nonetheless, despite initially negative perceptions about CIP, she implemented the inquiry project diligently. During the initial phase of student teaching, she noticed several students who were "participating with minimal to no effort in the class." Thus, Nancy resolved to investigate "how to get the unmotivated students more involved in the classroom" during the first CIP round. She designed two projects involving units about Canadian provinces. In the first project, students maintained an individual learning portfolio in which they compiled assignments and daily reflective journals. The second project focused on hands-on learning activities. The class was divided into six groups of students, and each group investigated six provinces of Canada using library sources and guiding questions. As the final phase of the project, each group created a mobile depicting what they had learned in their research. She expected that each project would increase active engagement by allowing students to track what they had accomplished, to

reflect on their own progress and challenges, and to interact with their peers. Nancy collected and analyzed student portfolios and video records focusing on the involvement of students identified as less-motivated. Nancy reported partial success in facilitating less-motivated students' involvement, but frustration in inquiry evidence that some students' involvement did not improve. The results of her first inquiry project led her to investigate other strategies and techniques that might energize less-motivated students. Her initial negative perception about CIP improved, as she acknowledged the value and benefit of inquiry.

Anna taught high school economics and was initially concerned about one unmotivated class that included low-achieving students and several who required special education. Her first inquiry focus compared individual and group work effectiveness on student motivation. Anna planned a series of assignments on different economic systems and allowed students to choose whether to conduct their assignment individually or as part of a group. She collected and analyzed samples of student work, the field instructor's observation report, and lesson plans. Anna observed that some students were more engaged in the assignment while completing them individually; some group activities such as art work were successful, while others (e.g., jigsaw activities) did not appear to improve students' motivation. Based on her analysis, she tentatively concluded that the form of activity itself (i.e., group work or individual work) did not inherently improve ASE. Rather, she observed that the structure of group work, teacher's guidance during group interaction, and individual student interests in topics seemed to be important influences on ASE and reported that she would take note of this for her future teaching practices. Similar to Nancy, Anna's initial perception of CIP was that it was a burdensome assignment that added stress, a perception shared by other student teachers in the undergraduate section of seminar. Anna continued to express frustration and questioned the purpose of CIP when she wrote her

first CIP report, but following the first round of collaborative inquiry, she acknowledged the benefits of her experiences.

Robert, a male undergraduate student, described his five years of military experience as a chance to “learn to adapt different cultures, different people and how they learn.” During the first individual interview, Robert criticized the student teaching seminar and CIP as “just nothing but busy work.” He indicated that the seminar activities and topics were not connected to his interests. He described the purpose of CIP as being to “force you to look at different things that you might be able to fix,” but perceived the inquiry process as a “no-brainer” that did not need to be reported. Robert focused his initial inquiry process on the effectiveness of different types of questions for preparing the class and students for learning. He planned to use different types of questions (e.g., questions using quotations of primary sources, random questions, and review questions) at the beginning of class followed by five minutes of writing time. He suspected that if given questions were effective in improving ASE, students’ written responses would include refined and detailed thoughts. During the seminar, providing writing time before a whole class activity was identified as a strategy to increase ASE by allowing students to organize their thoughts while formulating their explanations. After providing several warm-up questions to the class, he concluded that two questions promoted ASE. He reasoned that if migrant students could connect their lives to specific content questions, they would become more actively engaged with writings and lessons. Robert concluded that providing introductory questions that connect students’ lives, cultures, and heritages promoted ASE.

*Subsequent CIP rounds*. Nancy attempted to maximize the benefit from her second CIP in order to investigate her practices over several periods. While she and her CT designed unit-long projects, she questioned whether unit-long projects improved ASE as students addressed

learning achievement standards. Because unit-long projects involved diverse instructional considerations (e.g., group work or individual work) and learning activities (e.g., researching through laptops or books, group discussion, artifact creation), she attempted to explore how project activities influenced ASE. After reviewing students' learning accomplishments from the previous project and investigating the ongoing project, Nancy collected student work samples, implemented instructional materials, and obtained feedback from students. Her detailed CIP report revealed that unit-long projects were successful and effective in improving ASE as well as increasing students' accomplishments. Through inquiry procedures, she observed that students gradually became familiar with the unit-long project while they acquired learning skills such as the use of diverse learning resources, analyzing and integrating collected information, helping other students' learning, and representing findings. She also noted the importance of the instructors' roles and skills in modifying planned activities according to the observed students' challenges.

Anna's second CIP indicated a continued focus on classroom management issues originating from unmotivated students. In order to address these concerns, she previously implemented negative reinforcement for disruptive behavior (e.g., subtracting grades, assigning detention, writing students up). She reported frustration that the negative reinforcement did not improve students' behavior, so she planned to use incentives to improve students' performance. During the inquiry, she implemented three different incentives: bonus points for completing the review guide, bonus points for winning the review game, and a free homework pass for completing the artifact creation, and she compared test scores before and after the incentive was given. She also observed student behavior in order to determine whether incentives affected ASE. As more students completed their review guides to earn bonus points, overall test scores

increased; however, incentives involving the review game were not judged as effective due to the chaotic implementation of the game. The homework pass incentive facilitated students' competitive nature and engagement in creating artifacts to win and obtain incentives. Based on the success of the review guide using incentives, she required students to complete the review guide as a mandatory assignment.

Similar to his first inquiry focus, Robert investigated different types of instructional materials that were used at the beginning of a class. He believed the facilitation of students' interests and engagement to be important at the beginning of the class in order to sustain ASE throughout the class period. Thus, he prepared three different materials – PowerPoint presentations, guided reading questions, and discovery research projects – and compared the length and depth of students' written reports following implementation to evaluate their influence on ASE and student learning. Robert perceived that lectures using PowerPoint and guided reading questions were successful as students paid greater attention to the lesson, raised diverse questions, and submitted lengthy reports. As predicted, students responded more actively to the questions that were related to their own lives. However, the discovery research project on World War I did not produce satisfactory results. Robert observed that the activity's structure and instructions were confusing to students. Although stating he would focus on the effects of different introductory materials at the planning stage, his CIP report showed that he expanded his inquiry focus to whole classroom practices at the implementation and analysis stage. This expansion of focus resulted in an unclear statement of reflection and analysis.

### Influence on Student Teachers' Development

Within the student teaching seminar class, CIP was designed primarily to facilitate student teachers' exploration of diverse methods and techniques that could improve ASE in their

classroom teaching practices. At the same time, CIP provided student teachers with an opportunity to hone their reflective practices in order to increase their capacity to address the challenges and obstacles encountered in authentic classroom situations. The results indicated that CIP experiences provided student teachers with opportunities to acquire and develop practical knowledge of effective instructional methods to promote ASE as featured during the seminar. Furthermore, student teachers indicated improved development and deeper reflection as professional educators.

At the same time, however, several challenges emerged. In order to promote ASE during the seminar, student teachers were asked to refine their understandings and practices with respect to effective instructional methods and lesson planning, as well as to relate learning activities to the interests of their students. While individual student teacher's CIP reports detailed their attempts to increase ASE in classroom, this section examines four emergent themes related to overall student teacher development: refined conceptualization of ASE, improved understanding of students, implementation of situated instruction, and the development of teacher identity. These themes include the development of student teachers' knowledge and skills in improving ASE as described in the distributed handout in the seminar classroom (see Appendix B), as well as refining their perception and practice during student teaching.

*Refined Conceptualization of ASE*

As student teachers engaged in CIP, their implementation and reflection influenced their conceptualization of ASE. The findings indicated that student teachers evolved firm beliefs concerning the importance of ASE for both student learning and for their own professional development. In addition, CIP aided student teachers in exploring the complex nature of ASE in real classroom settings.

*Fortified value of ASE in teaching and learning*. The initial round of individual interviews with both graduate and undergraduate student teachers indicated that all student teachers acknowledged ASE as critical for providing meaningful learning experiences, as well as for facilitating their own professional development. Mary stated that "it (ASE) is definitely important because the whole point is to have students engaged in your classroom and learning." Coach commented on the perceived importance of ASE for student learning as well as for his development as a teacher:

> I think it (ASE) is important because without active student engagement you really have no gauge of what you've taught them. For instance, in the business world, they take surveys or they emphasize customer service. And without feedback, the businessman doesn't know whether they have a good product or not. I feel like education is the same way. Without active student engagement, without feedback – meaning no kids being responsive … — you have no gauge of whether you are giving them what they need. So, active student engagement is a byproduct of a business principle which means provide good customer service and in return you will get more students, more opportunities and it is a win for everybody.

*Exploring the nature of ASE*. While agreement was evident regarding the value and importance of ASE, student teachers revealed different perspectives on the nature of ASE. Some questioned whether ASE would be a worthy issue to explore through CIP. During the first interview, Mary described her initial thoughts about ASE and CIP:

> I think I can see active student engagement in my classroom when it is happening. I don't need to see it on the video (CIP activity) to know it is happening. … Like today, when I had my kids raising their hands and saying "Oh, I have this great idea" and just being involved. I feel like I can see it that way.

Robert expressed similar opinions during the first interview:

> I don't need to write up a report to see that (ASE). To me, it's like a no-brainer. "Okay, this is what is working." It might not work in the next class but it's working in this class, so this is what I need to keep doing. So, I don't see the need to write up all that mess and then post it on live text (CIP report) and talk about it.

Both Mary and Robert viewed the emergence of ASE as so self-evident and simple that it did not require further inquiry. Consequently, they initially perceived that CIP implementation might be of limited value because it required them to explore obvious phenomena.

Most student teachers expressed having superficial understanding of ASE initially, focusing mainly on observable student reactions to teaching and learning practices, such as student behaviors related to perceived challenges in the areas of discipline and classroom management. Five of the eight student teachers noted that classroom management was their primary concern during student teaching. Initially, they attempted to promote ASE by reducing the distractions caused by other students. Consequently, their rationale when evaluating their teaching practices in improving ASE focused on well-behaved reactions among their students, such as "attentive listening to lecture, asking and answering questions, and vocally participating in discussion."

Subsequently, however, student teachers observed that managing student behavior alone did not ensure ASE in the classroom. As required, student teachers utilized diverse forms of evidence including video clips, lesson plans, students' work samples, relevant test scores, and observation reports obtained from their field instructors or peer student teachers. While student teachers analyzed the evidence, they refined their initial perceptions concerning ASE. For instance, John employed video clips as evidence throughout all CIP rounds and noted how his initial reflections on observed ASE were further modified through watching video clips:

> Actually, as I watched the video I felt a little let down. When I was in the heat of the moment, I felt like the students were really connecting with the information. I was positive that everyone participated, also. Well after viewing the video I saw at least two kids that did not go to the board

When student teachers focused on lectures or interaction involving specific students, they initially failed to observe other students' engagement in learning activities. Based on their limited initial observations and interactions, student teachers tended to misjudge the overall level of engagement and the effectiveness of their efforts to stimulate ASE. The inclusion of CIP video clips helped student teachers identify the 'hidden spot' in classroom practices and aided them in modifying their initial conclusions and to plan lessons that accounted specifically for individuals or groups who were less engaged.

Student teachers also reported frustration when ASE did not influence student learning achievement. Nancy described the discrepancy between observed ASE and the actual learning achievement of one of her students:

> It looks like he (the student) is listening and it sounds like he's getting it. He asking me questions but when I look at his grades, he is not passing, he is making 50. So, it's not like he's skimming the surface, he's truly suffering in his grade. I don't understand it.

Such frustration stimulated several student teachers to modify their perceptions, acknowledging that ASE does not ensure student achievement. Furthermore, some student teachers acknowledged that improving ASE involved myriad factors and did not depend solely on the instructional technique or method they employed. Several factors, such as rapport with students (as in the case of John, Mary, Joanna, and Anna), teachers' physical proximity to students during instruction (Coach, Nancy, and Robert), and classroom organization (Mary) were mentioned as factors affecting ASE during interviews and CIP reports.

*Improved Understanding of Students*

The second indication of student teachers' development through CIP is their improved understanding of students. Understanding the culture and lives of students was identified in the shared list of ASE components as being critical for planning and implementing a lesson that

bridge learning content with students' interests. Their initially limited understanding of how students' environments influenced performance posed several challenges to student teachers. However, as the CIP progressed, they were better able to anticipate how environment affected students, providing a foundation for improving their relationships with students and refining teaching practices.

*A trigger for understanding students*. Several student teachers in this study experienced "culture shock" when they perceived that their practicing school environments differed from their expectations. For instance, Mary described her practicing school environment as a "totally different side of the world." Joanna's questions on the first day of the field practicum also reflected surprise at the differences between her expectations and the realities of her new teaching environment:

> The day I walked into there (the practicing school), I was [asking myself] how I'm going to do this. I don't know how to relate to these kids. I've never been in their culture. What are they going to think of me?

The culture shock appeared to stem from the dissonance between the naïve expectations of student teachers and the reality of their new educational environment. Student teachers based their initial assumptions on and expectations of school environments on their own prior schooling experiences and limited observations. The interview data indicated that most student teachers shared similar sociocultural backgrounds (Caucasian, rural or suburban, middle class) and prior schooling experiences (good relationship with peers and teachers, high achievers). Most reported stable support and encouragement from their families that cultivated achievement orientation. In contrast, during their field experiences student teachers encountered ethnically and culturally diverse students, a lack of motivation, and inconsistent support from family and community.

In response, student teachers' inquiries emphasized deeper understanding of their students by examining the influence of family, school, and community. Anna stated:

> I want to know why they failed this test. Was it because they didn't study for it? Was it because they had something else going on at home or is it just because they didn't understand and need extra help?

Thus, the differences noted between the attitudes, behaviors, learning, and cultures of the student teachers and their field-placement students in classroom environments were prominent in inquiries.

*Expanded and enriched understanding of students*. Everyday interactions helped student teachers recognize the influence of family, community, and society on their students' attitudes, perspectives, and behavior. All student teachers cited the interwoven relationships among students, family, school, and community at least once during the rounds of interviews. John described feeling frustration in his experience as a provisional teacher:

> I'm in an ethically diverse school in a low income area. You might go talk to someone who teaches at an all white school or mostly white school with a higher income and they're going to tell you something different. The kids come in. They sit down and do their work. There is not as much messing around. And it is a community thing because all the parents support the school, whereas in mine, it's not. … If the parent just doesn't really care, they're not going to support you. I think it where it all boils down to, not only the relationship between the school and the parent but the whole attitude of the community toward education.

Despite such challenges, student teachers acknowledged that understanding students and building rapport was necessary for the creation of meaningful learning experiences. The graduate student section video vignette and field notes of the first CIP group session illustrated how interaction helped student teachers share the common challenges they faced and seek practical solutions together. During the group session, Mary and Joanna described challenges they faced with respect to classroom management issues and limited student motivation, and Coach and

John, who both had teaching experience as provisional teachers, suggested several techniques that they might try in order to improve interaction. Joanna then applied one of the techniques in her classroom:

> I actually just had the kids write down something that they liked to do at my school just as a way for me to get to know them better. I think that made them (think) 'Wow, Ms. Joanna really cares about me'.

In the last interview, Joanna described her CIP implementation as fortifying her understanding of students and the importance of establishing relationships with students:

> I think through all of those CIP, what I learned most out of everything was that in order to be successful at what you're doing, you have to establish a relationship with the kids. Like, to me, that is the overall, above-all thing. And I think looking at the video, I can see how my relationship with the kids grew.

In addition, CIP facilitated refinements in the student teachers' understanding of diversity in the classroom. Aside from Matt, who described the students in his practicing school as primarily Caucasian, the remaining student teachers commented on the cultural and ethnic diversity of their classrooms. Nancy described attaining a gradual understanding through "eye-opening experiences":

> I kind of knew this (the issue of diversity) but it (CIP) made it more apparent that what you know in your life and where you come from really affects what interests you and what you can relate to and therefore what you're going to do really well. … So seeing that helps me to grow to try to adjust things to adapt different ways. Because when I first started student teaching, I hadn't been in such a cultural place. I didn't know how to relate the material to them because I didn't know much about it. But after getting to know some of the students, asking questions, that kind of thing, I was better able to adjust my lessons. … I tried to understand their culture to see who that student is, where they are coming from, because there is something more from the culture that he comes from.

Nancy's description illustrated how increased understanding of student diversity can help student teachers develop relationships with students as well as provide better learning opportunities for them.

Continuous interaction with students in the classroom helped student teachers recognize and value student characteristics. Interview data and CIP reports indicated increased understanding of different student characteristics such as “short attention span” (as in the case of Matt’s observation), “dominant learning style” (Joanna), “competitive nature” (John), and “jealousy” (Mary). For example, Mary’s evolved understanding enabled her to plan and implement situated instruction.

> I have a better understanding of the student in general and the person in general of that age level, [such as their] typical behavior, typical behavior problems, issues, thing that they think [are] important... and I obviously know more about the type of [instructional] activities that I can use with the age group and that their capabilities are as far as learning.

Through CIP, student teachers also recognized the potential for students to learn and succeed. Based on their initial observations and perceptions regarding student readiness, all CIP reports documented doubts concerning the implementation of planned lessons and learning activities. For example, Matt expressed concern that his students might be unable to execute decision-making activities, and Mary wondered about her students’ capacity to contribute to group-based activities. However, student teachers reported that students engaged well in designed learning activities when given appropriate support. Upon analyzing student work samples and video-recorded student reactions, Matt reported that his 8$^{th}$ grade students were able to critically analyze President Truman’s decision to drop atomic bombs in Japan, and furthermore, students generated alternatives to his decision. Matt reflected on his findings about the potential of student learning as follows:

> Middle school students are capable of making well thought out decisions. A lot of times, people probably think ‘Well, middle school students are immature, they’re not going to be able to [think] straight’, but with guidance I think if they’re shown the right way then they can”.

Similarly, Mary reported that "preconceived notions that group work could not work in my classroom were proven wrong by this (first) inquiry." As evident in both Matt's and Mary's perceptional changes, CIP implementation triggered deeper exploration of student learning ability and methods to promote success.

These experiences also helped student teachers recognize the influence of teachers on student learning and life in general. Anna described how understanding student potential influenced both her perception as well as student attitudes:

> I had one specific student in my lower-level economics class who was just apathetic, he just didn't care. And for a long time I thought that he couldn't do it and I was proven wrong when I sat down with him one day. I was like 'You're not getting up from this desk until you finish this' and he just needed somebody to tell him that he could do it because everyone had given up on him and he told me, 'I've never had anyone tell me that I can do it'. … I realized that all students have some sort of desire to learn whether they want to admit or not. They have ability to learn. It's just my job to pull it out. It's my job to find what makes them want to learn.

*Improved Teaching Practices*

The third CIP theme involved improvements in student teachers' practice. Based on the refined understanding about ASE and students, student teachers improved their capacity to plan and provide effective, meaningful learning experiences.

*Influence of inquiry practice*. As student teachers became increasingly familiar with the inquiry activities (planning, implementation, analysis, and reflection) through required CIP implementations, they refined their inquiry skills. Student teachers improved their skill in handling complex data, affording the potential to promote deep reflection and improved practice. For instance, Joanna utilized the results of the learning style survey administered by her school district. The survey results indicated that the majority of her students were "kinesthetic learners."

Joanna subsequently planned and implemented hands-on learning experiences while simultaneously increasing ASE.

Improved inquiry skills enabled student teachers to detect subtle differences in student engagement not previously identified. According to Matt, he was able to "analyze student behavior better" and "knew better when to move on or when to spend more time on certain aspects of the lesson." As student teachers gained further inquiry knowledge and skill, they applied inquiry skills to their daily practices. As Joanna stated, "Every day [of student teaching] is [an] inquiry project," helping student teachers overcome obstacles in their classroom.

*Refinements in situated instruction*. CIP assisted student teachers in identifying situated factors and in modifying their planned instruction. During her second inquiry, for instance, Nancy noted that students experienced difficulty progressing during planned group projects due to confusing instructions and a lack of time allotted for completing the project. Based on these observations, and corroborated through students' written comments, she altered her lesson to increase student engagement by giving clearer instructions and reducing the required components of the project.

Student teachers increasingly considered differences in instructional factors, such as differences in prior achievement levels and classroom dynamics. Student teachers, for example, occasionally taught different subject levels; Anna taught economics for both the basic and regular sections ("tech" and "advanced" level respectively). After the first inquiry round, during which she compared the effectiveness of individual work and group work in the classroom, she differentiated instructional methods during the second CIP implementation.

> I know my first period class (advanced level) I could allow them to work in group and I could allow them to choose their own group members, and they'd get the work done. And in second period (tech level), we had to do all individual work because when they were

> put into groups, they created distraction for one another and so I definitely tried to tweak it for each class".

*Use of diverse instructional methods*. An analysis of the CIP reports indicated that student teachers' instructional techniques and methods became increasingly diverse. During the initial CIP implementations, student teachers tended to mirror the cooperating teacher's practices or made modest refinements (e.g., group discussion after lecture). However, in subsequent CIP implementations, a range of diverse instructional methods were evident. For instance, Joanna's final CIP implementation involved an historical simulation that required more preparation than her first and second CIPs which only employed group discussions after lecture. Several student teachers, including Nancy, Anna, and John, also designed unit-long projects. For instance, John reported on the "use of competitive nature of students in learning." He planned a series of classroom activities—group discussion, artifact creation, and game-based activities—to utilize the competitive nature of his students. The design and implementation of a unit-long project appeared to instill confidence that student teachers could implement innovative instructional methods during their field experiences and could be used to maintain inquiry focus over an extended period. During the initial CIP implementation, student teachers focused on a specific teaching method or technique in order to complete CIP in a relatively short time period. However, the unit-long project required additional time to plan and implement, as instructional factors had to be considered and divergent data was considered.

*Student-centered practices*. The improvements resulting from CIP implementations also appeared to facilitate efforts to provide student-centered learning environments. Student teachers incorporated students' needs and requests during the design and implement of CIP instruction. For example, John reflected that his initial instruction was primarily teacher-centered: "choosing

what [was] important and how it [would] be discussed" in the classroom was the responsibility of the teacher. During the second inquiry, however, he attempted to "involve the students" during instructional decision-making by allowing them to discuss and choose the lesson topic. John noted that "students in this age group are thirsting for some sort of control over their lives." Similarly, during both Coach's and Robert's historical inquiry projects for their CIP implementation, students decided on their topics and were not limited to the scope of the textbook in doing so. Both Coach and John indicated that increasing student autonomy affected student engagement positively.

*Identity as a Teacher*

A primary goal of student teaching and CIP is to support preservice teachers to become confident and well-prepared as they make their transition to the teaching profession. CIP experiences are designed to increase professional confidence by helping prospective teachers to identify and overcome practical challenges. Collaborative and reflective CIP practices helped student teachers to recognize or fortify the importance of continuous learning.

*Self-confidence*. Reflections on CIP experiences suggested increased confidence as prospective teachers. Productive CIP experiences, such as observing improved student engagement, establishing rapport with students and cooperating teachers, and facilitating student performance, were identified as mitigating the stress of CIP and student teaching. Student teachers also gained confidence in their abilities as professional educators as they overcame the diverse challenges of their classrooms and in the practicing schools. Several student teachers expressed initial concerns about teaching unfamiliar subjects. For instance, Anna majored in history – like all of the student teacher participants – but she was assigned to teach high school economics. Initially, she noted:

> Economics [is] obviously one of the social studies, but there is a lot of mathematical concepts involved in economics and that really worried me. … It wasn't that I didn't want to learn economics; it was that I was afraid that I would be doing a disservice to my students.

At the final interview, however, Anna described how the student teaching experience and CIP increased her confidence in teaching economics:

> I realized how important it is to cover more than just one area of social studies because they all interconnect in so many ways. And I realize at [the] high school level, economics really isn't as bad as I thought it was going to be. … I actually kind of want to teach economics now.

By exploring diverse aspects of different instructional methods through CIP, student teachers gained confidence as teachers. At the beginning of field-teaching placement, student teachers expressed great concern over the skills needed to implement appropriate instructional methods outside of their own content knowledge. During an initial assessment of her competency in implementing appropriate instruction methods, Mary said, "I don't know all these ideas with cute names like FishBowl and ChalkTalk, and all that stuff. That's just over my head and I don't understand what it is." After she completed all CIP rounds, during which she consistently focused on group-based learning activity, she noted greater confidence in her ability to implement group-based learning activities.

*Collaboration and reflection.* As perceptions of and experience in collaboration and reflection expanded, all student teachers noted that collaborative and reflective practices should be emphasized continuously in their future practices. In order to implement successful CIP, student teachers exchanged ideas with cooperating teachers, seminar instructors, field instructors, and peers. From the sharing of ideas with peer student teachers to joint implementation of lessons with a teaching partner or cooperating teacher, student teachers experienced diverse

opportunities to collaborate professionally. Joanna described the influence of collaboration on her simulation:

> As time went on I was talking more and more to other people about it and collaborative planning grew as I went along. Because at first I was like 'I don't know what to do'. … Someone just mentioned a little idea [about simulation] to me and I took the little idea and just expanded [it] into an entire simulation. And the kids go it and I think that just made it so worthwhile.

Matt noted that collaborative experience was the most beneficial part of CIP for his professional development, as illustrated in the following interview exchange:

> Researcher: What kind of components of CIP can be used in your future practices?
>
> Matt: Definitely working together with other teachers and discussing your own practice is something that should be brought into regular classroom settings. You definitely learn from others as well as from yourself and if you're not looking beyond the confines of your own classroom, it will be a lot harder to grow. So, definitely the collaboration with others.

However, not all collaborative experiences were perceived positively. For instance, undergraduate student teachers reported difficulties in utilizing the CIP group discussion sessions. Since the group was composed of three undergraduate students, an absence of one group member from the seminar class, limited the opportunity for members who were present to be exposed to different ideas that can be expressed through such interaction.

Likewise, several graduate student teachers indicated a decline in the perceived value of CIP group interaction. During the first interview, Mary stated that her first CIP group interaction "was really nice, I felt like that was just an extended time [of seminar class discussion]. We could just sit around and bounce ideas off people and I love to listen to Coach speak, love it." She perceived that informal exchanges of ideas and experiences provided emotional support needed to address the initial challenges of student teaching. During the second interview, however, she reported mixed perceptions: "It's been really informal so it's been nice to sit there

and talk with the group. But I feel like we need questions or something to guide us. ... I don't think we're really using our groups for collaborative inquiry." Mary's expectations for CIP group interaction shifted to address practical issues while other group members sustained informal aspect of interaction. Finally, during the final interview she concluded: "It wasn't very collaborative with my peers at all. There was no benefit to sitting around there and talking with anybody else."

Five student teachers reported experiencing systemic and concrete reflection through CIP, noting that writing CIP reports led them to much deeper reflection. Nancy explained the value of writing CIP reports to promote reflection:

> It made me sit down and really think in depth about why am I doing this, what are my goals behind it, how does this relate to my rationale? … Because I had to think about the answers to these questions (CIP report guiding questions). …So it just made it a little more evident when I saw it all typed out on paper and I guess it strengthened my ability to question why I was doing something and analyze why it was important.

The importance of reflective practice led to three student teachers to develop possible ways for maintaining reflection for their future practices. For instance, John noted that he "definitely will keep a journal with what's going on. Because I know I need to continue with the inquiry and will pay attention and inquire within about what I'm doing." Joanna mentioned reciprocal observation with mentor teachers as a medium for reflective practice: "I would love to have a mentor teacher that could come in and observe me and give me her feedback."

*Challenges during CIP Implementation*

While student teachers indicated perceived benefits of CIP, they also noted problems during implementation. Student teachers identified concerns in initially engaging in CIP, managing the technological requirements of CIP, and engaging in meaningful collaboration.

*Initial engagement.* All student teachers reported experiencing stress during the first several weeks of practicum teaching, which influenced their perceptions of the potential of CIP. Student teachers reported information overload in completing seminar activities, including peer observation, field instructors' observation, reflection assignments, e-portfolio development, standards framework, and CIP at the beginning of seminar classes, which limited their meaningful engagement in CIP. Six participants reported initially perceiving CIP as a burdensome seminar requirement. Anna summarized her perception of CIP in the undergraduate seminar section:

> I've talked to several students in my seminar class and originally, we were just like, 'Okay, what is the purpose of this? It just seems like an extra assignment that we have to do. We're stressed out enough. … Is this really beneficial?'

This questioning affected participants' first round of CIP implementation. Interview data revealed that none of the participants utilized the suggested period of four weeks to complete one round of CIP but instead spent only one to two weeks finishing their first CIP round. Accordingly, their CIP reports reflected a backward process: After completing a lesson, participants subsequently attempted to reconstruct how they had planned and implemented the lesson in order to address the guiding questions while completing the report.

The student teachers also expressed CIP implementation difficulties during the seminar discussions that included lack of motivation, technological inexperience, and the tight schedule for implementation. The seminar instructors, however, responded differently to student concerns. In the graduate section, the instructor required completion of the three CIP rounds as originally planned, while the undergraduate instructor eliminated the final CIP round, which appeared to influence student teachers' perceptions and practices.

*Technical challenges*. A video analysis tool was used to collect evidence of inquiry processes. Student teachers reflected on their video-recorded practices, which afforded them opportunities to reflect both as a participant and an observer. However, lack of prior experience using the video analysis system influenced how much and how well the student teachers used the technology. Initially, recorded video files had to be converted in order to be used in the current VAT system, which was a time-consuming process, and the lack of experience with the system created stress among the student teachers. Despite the support the researcher provided for student teachers as they converted the videos, field notes revealed that frustration with the video tools resulted in a reluctance to use them. In addition, the limited availability of video camcorders (one video camcorder and tripod per CIP group) had a negative effect on the collection of video evidence. For instance, Matt reported that, due to restricted availability, he missed several opportunities to record class practices that could have provided evidence for his second CIP.

In addressing this issue, the instructor of the graduate section, Dr. Miller, acknowledged the challenges of using video in CIP but explained to the student teachers how watching their recorded practices helped him gain a better understanding of classroom contexts and practice. Thus, graduate participants captured their practices on video throughout all CIP rounds (19 video clips total). In contrast, the undergraduate instructor changed the use of video from being a requirement to being an optional activity; as a result, only one video clip was presented by the undergraduate participants.

## Activity System Analysis

The second research question examined the potential of activity system analysis to detect the influence of broader sociocultural factors on student teachers' CIP implementation: To what extent does an activity theory framework support identification and analysis of the individual as

well as collective understandings and practices of student teachers during a collaborative inquiry project? Activity system analysis has proven to be a useful tool for investigating diverse sociocultural factors and their influence on human activities (Engeström, 1996, 1999a; Jung, 2007; Roth & Tobin, 2002). In order to ground the findings, a brief background on activity systems is presented. Findings from the analysis of participants' perceptions and activities using the lens of activity systems are then presented. Finally, evidence of conflicts and dissonance within student teachers' activity systems is summarized.

*Theoretical Background of Activity System Analysis*

The influence of CIP on student teacher development represents a "complex, situated, and distributed nature of ongoing activity" (Roth & Tobin, 2002, p. 113). Researchers emphasize continuous changes in constitutive components and relationships in activity systems, which imply that an analysis focusing only on specific stages would fail to provide holistic indicators of changes in ongoing activities. The findings for my first research question indicated that student teachers develop continually rather than at a single, specific time. In addition, previous findings suggested that changes in student teachers' beliefs and practices (e.g., cultural shock at the initial student teaching, improved understandings about diverse influences on teaching and learning practices, and decision-making about their future placement based on student teaching experiences) might be extended through detailed analysis of their associated actions. In order to examine student teachers' transitional experiences through student teaching and CIP experiences, I initially analyzed four stages of student teachers' activity systems: before student teaching, during initial student teaching, during refined student teaching, and after student teaching. As depicted in Figure 4.1, each stage of the activity system contains six components: subject, object, tool, community, rule, and division of labor. *Subject(s)* refers to the individual or group of actors

engaged in the activity in pursuit of the completion of shared object(s) (Engeström, 1996). Thus, in this study, participating student teachers are the subjects. *Object(s)* refers to the "raw material" or "problem space" (Roth & Tobin, 2002, p. 113) at which the subject's activity is directed and which is ultimately transformed into outcomes. The following activity system analysis indicated that student teachers formed diverse objects according to the progress of their student teaching and CIP (e.g., get a teaching certification, get a job) as well as their diverse, individual situations (e.g., decreasing disruptive student behavior, learning more methods and techniques). In order to achieve their perceived objects, student teachers use a variety of *tools* that can be both physical and external (e.g., a standards-based instruction guide, VAT, and SMART Board™) as well as symbolic and internal (e.g., mental models of student teachers).

The basic relations and dynamics of subjects, objects, and tools are involved in the other three components of the activity system (i.e., community, rule, and division of labor), which represent collectively mediated human activity. The *community* consists of multiple individuals and subgroups sharing general objects (e.g., student teaching seminar class and inservice teacher community). *Rule(s)* refers to the explicit and implicit norms, regulations, and conventions shared by the members of the community; for instance, as prospective teachers, student teachers are required to observe the code of ethics adhered to by their community of teachers. Finally, *division of labor* refers to the organization of distributed tasks in the community, both in its horizontal aspects (e.g., collaborative work between CIP group members) and in its vertical power and status (e.g., the relation between student teachers and school administrators).

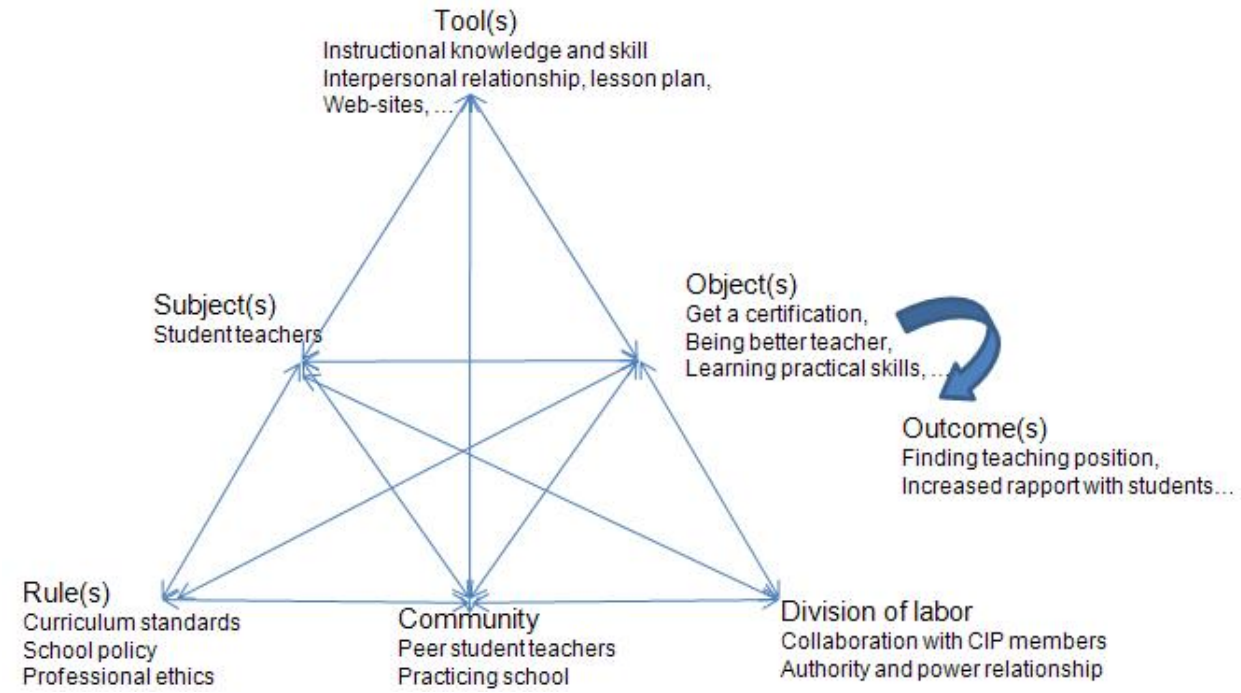


*Figure 4.1.* The basic structure of the activity system and its components (Engeström, 1996)

As represented by the arrows in Figure 4.1, the components of a human activity system are interconnected and produce diverse relationships (e.g., subject-tool-object, subject-rule-object, community-object-division of labor). For instance, tools mediate the relationship between subject and object, and the selection of tools reflects a subject's affordance, which is culturally and historically embedded (e.g., the use of computer technology in teaching practices mirrors current sociocultural changes in technology and student teachers' technological competency). Interconnectedness among the activity system components implies that changes in one component require subsequent changes in other components and relationships. The continuous changes among component relationships provoke internal and external contradictions, conflicts, and dissonances. Engeström (1987), for instance, referred to an activity system as "a virtual disturbance-and innovation-producing machine" (cited from Barsharina, 2007, p. 85). In the current study context, all student teachers reported many conflicts during their student teaching

that need to be experienced, reflected upon and understood in order to develop future instructional aids.

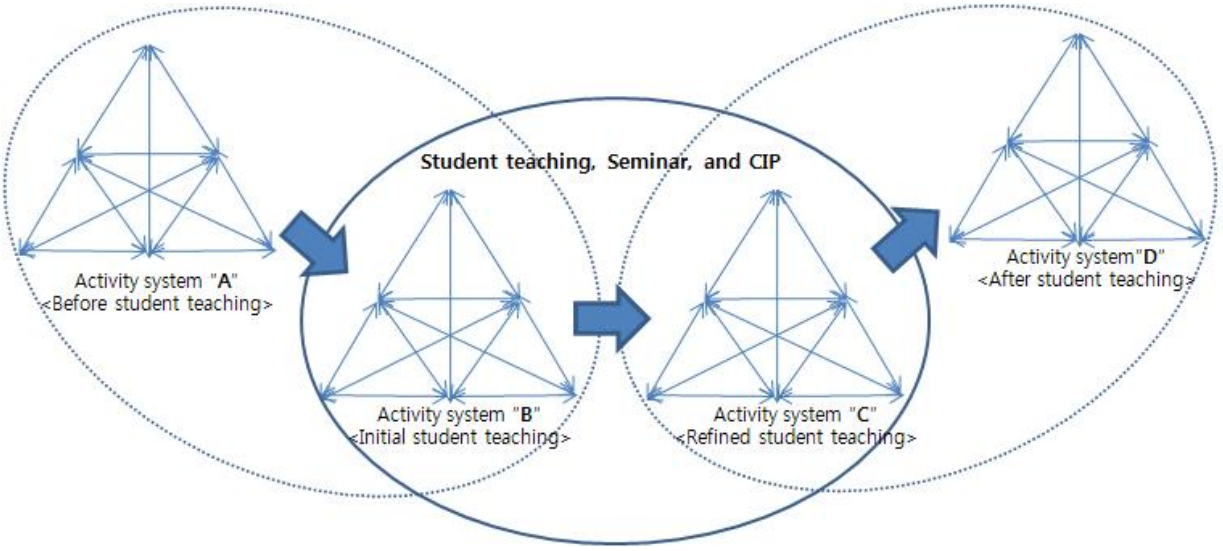


*Figure 4.2.* Combined analyses of student teachers' activity systems

Figure 4.2 depicts the developmental changes of student teachers' activity systems during the student teaching experience. Activity system "A" represents the pre-established activity system of student teachers, which mirrors the beliefs, perspectives, and experiences they derived primarily from their experiences as students. As they begin their student teaching practice, student teachers typically refine their perceptions and practices as teachers, resulting in the construction of activity system "B." Combining student teaching experience with access to supportive seminar activities, including CIP, is assumed to fortify student teacher development and help their transition toward becoming more competent prospective teachers, as represented by activity system "C." As they complete their field practicum and required seminar activities, student teachers should have developed more practical perspectives on the teaching profession and their expected activities as novice teachers in future placement (i.e., activity system "D").

By combining the four stages of activity systems (before, initial, refined, and after student teaching) with three comparable progress groups (entering an authentic situation, scaffolded engagement, and moving toward the world of praxis), the activity system analysis represents the transitional experiences of student teachers. In addition, the elicited contradictions in student teachers' activity systems reveal a different nature of contradictions along with changes in students' activity systems and the progression of student teaching activities.

*Entering an Authentic Situation*

This analysis focused on changes observed between the activity systems that participants employed before they started student teaching (activity system 'A') and their initial period of student teaching and CIP (activity system 'B'). As depicted in Figure 4.3, the comparison of two activity systems revealed contradictions within and across the activity system.

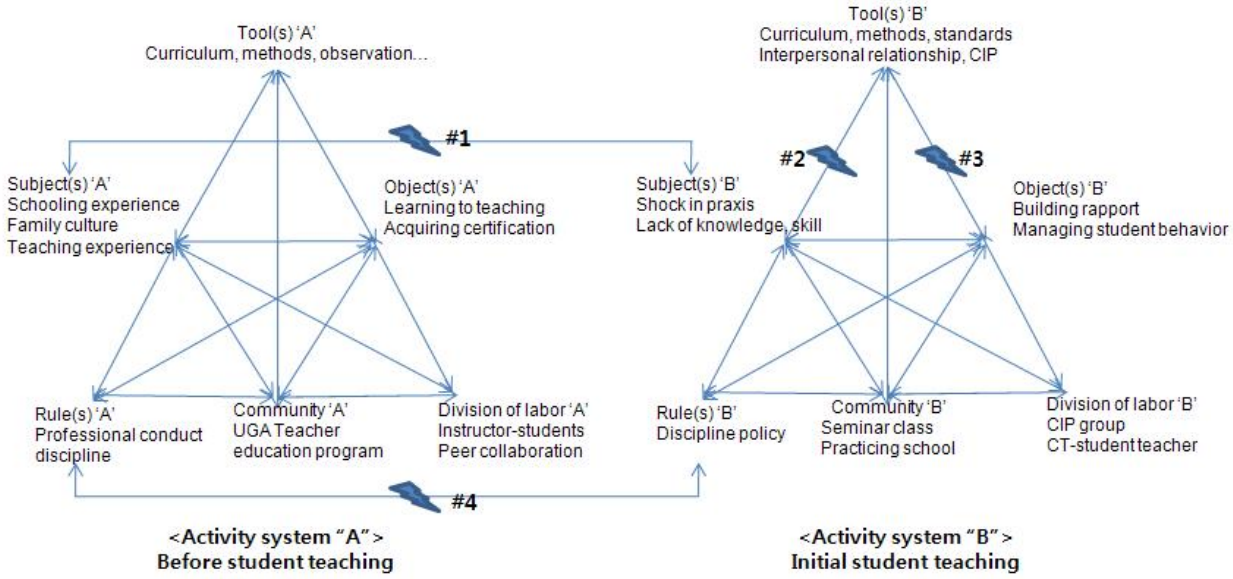


*Figure 4.3.* Conflicts and comparison of student teachers' activity systems before student teaching and during initial student teaching

*Initial perspectives of student teachers*. In previous studies in which activity system analysis was applied in a teacher education context (e.g., Fanghanel, 2004; Roth & Tobin, 2002),

the preservice teacher(s) was regarded as a single entity that presumably held common initial values, perspectives, knowledge and skills. However, the analysis of the pre-established activity systems that student teachers brought to their field practicum revealed distinctly different perceptions and experiences based on their own schooling, influences from their families and schools, and teaching experiences.

Five of the eight student teachers (John, Coach, Mary, Joanna, and Anna) mentioned that their current pursuit of a teaching career was influenced by a “good” teacher they encountered during their schooling, and they recognized a common set of attributes among good teachers, including the ability to understand students, to develop strong rapport with students, to express their passion for teaching, to apply effective instructional strategies, and to make learning experience relevant to their students’ lives. Experiences with a respected teacher influenced the student teachers in their motivation to learn, their interest in social studies, and their choice of teaching as a potential career.

Furthermore, the characteristics and practices that student teachers attributed to their respected teachers transferred to become their own stated objects of student teaching. Five student teachers indicated that they regarded becoming a better teacher as their object for student teaching, which reflected their modeling experiences with teachers they respected and admired. Student teachers indicated that they expected student teaching would help them “to reach out and help people and try and make a difference in people’s lives” (as stated by Joanna), “(to) help the other kids” (Nancy), and “(to) build … democratic citizens" (Anna). According to activity theory, “the goals of activity manifest themselves as images of the foreseen result of the creative effort” (Davydov, 1999, p. 39). In this study, participants noted similarities between what they perceived

an ideal image of a good teacher based on their experiences to be and the benefits they expected to gain from student teaching.

Student teachers' personal schooling memories and experiences were also connected with a supportive and/or disciplined culture in their own families. For instance, Anna described her parents as "kind of watching over my shoulder to make sure I did well in school and not doing my best was not an option for me." Not surprisingly, five participants had one or more inservice teachers in their family. Matt, whose parents were teachers, stated that having such influences meant that he "always thought about teaching as being a possibility" in terms of a career goal. Comparing his own experiences with those of other members in his group, Robert reported his schooling experiences as being "horrible," which led him to contemplate the drawbacks of current educational environments. In addition, Robert also reported a lack of support from his family due to his parents being divorced. However, he stated that the undesirable family circumstances he was part of growing up facilitated his development of autonomy as one of his defining characteristics.

In summary, activity system analysis demonstrated that student teachers developed initial conceptions about teachers, teaching, learning, and schooling based on their prior experiences as students. The continuous analysis showed that student teachers' initial conceptions and expectations were challenged in the authentic educational environments in which they practiced.

*Shock in initial praxis*. As noted previously, most student teachers reported experiencing frustration during their initial stage of student teaching (activity system 'B'). The perceived challenges originated from diverse classroom/school environments such as disruptive and unmotivated students (Mary, Joanna, Nancy, and Anna), cultural and ethnic diversity (Mary, Joanna, Nancy, Coach, John, and Robert), and lack of support from family and community

(Mary, Joanna, John, Anna, and Nancy). The discrepancies represented 'cognitive dissonance' between student teachers' expectations and the reality of teaching. Activity system analysis indicated a collision between two different activity systems: the one established before student teaching and the system created at the beginning of student teaching. This conflict in perception (as illustrated in #1, Figure 4.3) as a primary contradiction in their activity systems became specified in other contradictions (#2, #3, #4, Figure 4.3).

First, the authentic placement environment stimulated student teachers to evaluate their current practical knowledge and skills. Student teachers reported that the knowledge and skills acquired from teacher education courses that were previously completed provided tools for implementing student teaching and CIPs. For instance, John noted that "In the methods class, I learned a lot of techniques that I already used last semester in my own class. … Some of (the methods class instructor's) ideas, they were good and I use them." In addition, student teachers described their observations during the practicum as having a positive impact on their preparation. Joanna stated: "I was able to see a lot of different subjects and effective teaching practices." For Nancy and Robert, their cooperating teachers allowed them to participate in actual teaching practice at the end of the observation period, which facilitated recognition of their own need for refined knowledge of instructional methods.

Prior to student teaching, participants evaluated their content knowledge as being sufficient to teach social studies in middle or high school. For instance, Matt stated, "I feel like I have a good grasp on the subject matter and a good knowledge of the content." However, as the students began student teaching and encountered challenging classroom experiences, they began to identify deficiencies in their content knowledge. The gap between their initial confidence and the knowledge required for teaching represented a contradiction between subject and tools (#2,

Figure 4.3). For instance, three student teachers (Robert, Anna, and Joanna) subsequently reported lacking content knowledge to address the diverse topics covered in the middle and high school social studies curriculum, which included world history, geography, economics, and Georgia history, and which required that they undertake additional learning. Joanna pointed out that she had not anticipated the need to incorporate a "new subject" into her teaching:

> The one thing that has been a challenge actually is just learning the content. I haven't had geography. I've been teaching sixth grade so I haven't had this stuff since I was in sixth grade, so I'm having to relearn the content and then go teach it the next day which is a challenge.

Furthermore, the need for practical teaching ideas and techniques facilitated the contradiction between tools and objects (#3, Figure 4.3), which influenced student teachers' perceptions of the effectiveness of their own preparation. Several student teachers mentioned that the knowledge and skills they acquired during the teacher education program did not provide practical guidance for dealing with the classroom challenges they faced. For instance, Anna, Robert, and Mary shared a common perception that the current teacher education program was more theory-based than praxis-based. Similarly, Robert reflected on his own experience in the teacher education program as "learning a lot of theories difficult to apply in the classroom and [I] could have read a book and got more out of that." Student teachers perceived the teacher education program as theory-focused, emphasizing the influences of community (teacher education program) on shared tools (knowledge and skills of preservice teachers) documented in previous studies (Barnett, 2006)

The practicing school community and environment also influenced student teachers' instructional methods. For instance, Joanna's first CIP implementation illustrated how the school environment affected her use of instructional tools. Joanna's described her school as a Title I

school that focused on improving students' test scores in specific subject areas (e.g., mathematics, science, and language arts). She reported that her students were not provided with current social studies textbooks aligned with current curriculum standards since school resources were instead allocated to other subject areas. The limited availability of an important tool (in this case, a current textbook) to achieve the perceived object (i.e., providing meaningful learning experiences while improving ASE) stimulated changes in Joanna's initial expectation of student-centered practice, which resulted in presenting critical information from the current textbook via a SMART Board™.

Another contradiction emerged from the school community environment. Although student teachers did not state explicit expectations of school policy at their school, interview data revealed that their expectations were based on their own schooling experiences. In cases of disruptive student behavior, for example, the enforcement of rules at the student teaching school was different than what they had experienced as students at the same level. For instance, John compared his disciplined classroom environment when he was a student with the current school environment:

> When I was a kid, I don't remember not doing your work being an option. … There were always the people that didn't do their work but it wasn't as accepted as it is now. When I was in school, you were expected to come in and sit down and take your notes and do your work and there wasn't whole lot of extra talking to your neighbor. … There (current classroom) is no control, there is not as much of a learning environment now. Back then, it was your goal to come there and learn.

These perceptions represented student teachers' contradictions (#4, Figure 4.3) between the disciplinary rules in their own school and their practicing school; half of the student teachers struggled with this contradiction during the remainder of their student teaching.

*Situated refinements*. Several contradictions were evident between student teachers reflections on the utility of their prior knowledge and skills (#2, #3 Figure 4.3), and these contradictions influenced the formation of objects during the initial stage of initial student teaching. As explicit objects of the student teaching seminar, for example, both instructors identified seminar objectives in the course syllabus (refer to Appendix F). In addition, the purpose of CIP, which stressed evidential reasoning and collaborative, reflective teaching practices, was also introduced on the first day of the seminar class. However, in their schools, student teachers interpreted the shared objects of the seminar class and CIP differently based on situational factors. For instance, Mary and Joanna similarly investigated group-based instructional activities for improving ASE as well as for reducing students' behavioral problems they observed during lecture-based practices. Consequently, the stated and perceived objects of student teachers at the activity system "B" stage represented student teachers' short-term and solution-seeking characteristics in their object formation.

The comparison of perceived objects before and during initial student teaching also revealed a hierarchical relationship between activity and object. Activity theorists conceptualize multiple levels in goal-directed actions in order to achieve the object (Engeström, 1999a; Jonassen, 2000). The hierarchy of activity is composed of chains of actions and chains of operations; correspondingly, motive drives activity while goals and conditions produce actions and operations. For example, while student teachers maintained their perceived object of student teaching (obtaining teaching certification or being a better teacher), they conceptualized the actions required to accomplish these objects as learning effective instructional methods and techniques, increasing interaction with students, and learning new teaching content. While student teachers engaged in such actions, they also performed automatic operations such as

reading a textbook, grading student work, and recording teaching practices with video camcorders. Based on individually perceived disturbances between and among activity, action, and operations, dynamics can be also disrupted: operations can be actions. For instance, student teachers who held provisional teaching certificates stated they had few challenges regarding classroom management issues, having already experienced how to handle disruptive behaviors in the classroom. For them, dealing with student behavioral issues in the classroom was performed at the operation level with automatic and little conscious effort based on reports during interviews. In contrast, non-experienced student teachers (e.g., Mary, Joanna, Nancy, Anna) established managing students' behavioral issues as their action level, as evident in their frequently reported concerns, failures and successes in their conscious efforts.

*Scaffolded Engagement in Professional Practices*

While student teachers progressed through their field practicum, the student teaching seminar, and CIP, they both refined their understandings of students and inservice teachers and gained situated knowledge and skills as prospective teachers. They developed and refined their perspectives and practices through CIP scaffolding and seminar activities, resulting in a new activity system (activity system 'C') at the end of student teaching period. Figure 4.4 depicts the findings of the comparison between activity systems "B" and "C."

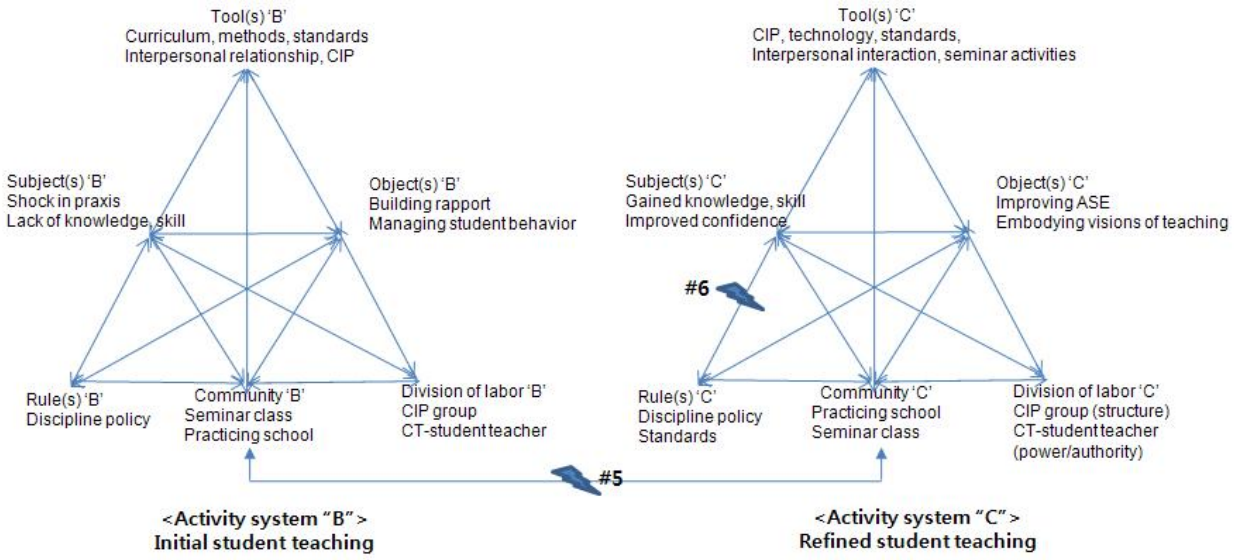


*Figure 4.4.* Conflicts and comparison of student teachers' activity systems in initial and refined student teaching

*Student teaching seminar as scaffolding*. Previous findings indicated that CIP experiences provided a systemic way to analyze and design solutions regarding perceived obstacles in improving ASE as well as reflecting on practices for continuous development. In addition, student teachers perceived that diverse seminar activities provided opportunities for refining their perceptions and practices. All student teachers participants except Robert noted that open seminar discussions contributed to the development of practical teaching ideas. Mary pointed out that classroom discussion was beneficial in identifying "what was working and what wasn't working in their classrooms." John, who perceived himself as an experienced teacher compared to other student teachers, also described the benefits of classroom discussions:

> I think I learn stuff from the kids (student teachers). I like getting ideas because no one thinks of everything on their own ever. And collaboration like this does help you with good ideas. I've used couple of ideas I've heard, because I always love using new ideas.

Joanna reported that on-line discussions were useful for exchanging concerns, information, and solutions. She further noted that the discussion board contained “a lot of great ideas.”

Student teachers anticipated being observed by their field instructors four times during the semester, and they used these opportunities to improve their CIP and teaching practices. Four participants (Anna, Coach, Mary, and Matt) used their field instructors’ observation reports as a component of their inquiry evidence, which they characterized as helpful in noting good practices as well as in highlighting areas needing improvement. Furthermore, Joanna and Mary noted that their interaction with field instructor was not limited to observed classroom issues; they shared overall concerns with the instructor, such as those about their relationship with the cooperating teacher and the availability of extra resources for instructional methods.

Student teachers perceived that their seminar instructor facilitated their CIP implementation. For instance, Dr. Miller gave written feedback to all graduate student teachers after reviewing each round of CIP reports. Graduate student participants underscored the influence of this feedback on their confidence and CIP implementation. For instance, Coach and John each received instructor feedback on their first CIP that suggested inquiry into more specific instructional methods to support ASE in their classroom. In the second interview, both student teachers indicated that Dr. Miller’s feedback allowed them to implement meaningful CIP experiences with a clearer understanding of the purpose of CIP.

*Learning in teacher community*. The analysis reflected increased cultural internalization into inservice teachers’ collective culture and practices. Engeström (1999a) defined cultural internalization as “reflective appropriation of existing culturally advanced models and tools” (p. 33). According to Lave and Wenger, cultural internalization could be interpreted as “a way of learning – of both absorbing and being absorbed in – the culture of practice” (1991, p. 95). In the

present context, cultural internalization involved the incremental assimilation of student teachers into the daily practices of inservice teachers. As depicted as contradiction #2 in Figure 4.3, student teachers recognized that some tools acquired through the teacher education program were of limited practicality in their field-teaching setting (e.g., not applicable to a specific student age group). This contradiction facilitated exploration and acquisition of new tools in practice.

Three student teachers reported observing cooperating teachers' good practices and attempting to apply them to their own practices. For instance, Robert stated: "I do like how my CT teaches. He teaches history almost like he's a storyteller and so it makes it real interesting." Joanna described her cooperating teacher's skill in classroom management and her opportunity to learn from it as such: "I'm lucky enough that my teacher has good skills and I've been able to model her. …I'm starting to learn how my CT does it and now I'm learning how to do it." The resources that were shared by cooperating teachers, such as curriculum standards, previous lesson plans, and Internet resources, helped student teachers to plan and implement their instruction. Joanna's cooperating teacher allowed her to use a laptop, which enabled her to search for a variety of inservice teacher resources. Similarly, Anna's cooperating teacher shared purchased access to a web-site providing review questions, study tips, and game items that assisted her in implementing her second CIP.

In addition, half of the student teachers reported observing, learning, and reflecting on the practices of inservice teachers. For instance, Anna observed the good practice of other inservice teachers: "I see other social studies teachers at the school. They are not just good teachers. They are awesome teachers. And so I've observed in their classrooms and kind of pick[ed] up little tidbits from them." In contrast, Coach stated he "learned so much from just observing people" and particularly learned "not to make those same mistakes." Such lessons indicate how modeling

– both positive and negative – influences how student teachers learn by studying the craft of inservice teachers.

Student teachers also used diverse instructional resources in their teaching practices, including textbooks, curriculum guidelines, primary documents, media products, and Web materials. Perhaps due to limited content knowledge and teaching experience, all student teachers used the course textbook as their primary source of teaching. Anna, who expressed concern with teaching different subject areas, stated that the textbook provided a "great service" in learning to teach. Curriculum standards were evident in lesson planning of more than one-half of the participating student teachers. Nancy, for instance, reported how current curriculum standards were used as a tool to organize teaching contents and activities:

> It (curriculum standards) helped me because in some places I didn't even know where to begin in teaching and so I know a minimal amount about areas in Oceania and so I felt like with them saying 'Well, you need to know about this about this' that kind of thing, that I felt it helped me in that way.

Other artifacts were also used in an effort to provide enjoyable and meaningful learning experiences. Coach, Matt, and Robert described how they used primary sources such as excerpts from books, newspapers, maps, and pictures. Half of the student teachers mentioned their use of Web resources, including those provided by professional organizations (e.g., National Council for Social Studies), government agencies (e.g., Georgia Performance Standard), and for-profit vendors (e.g., testprep.com). In order to deliver and implement their planned instruction, student teachers also created artifacts. Most used PowerPoint slides and technologies (e.g., SMART Board™) for presentation. Laptop or desktop computers were incorporated in the teaching practices reported by John, Nancy, and Coach, enabling students to retrieve and organize

information. Other documentary items (e.g., lesson plans, work sheets, activity guides, assessment rubrics, and review sheets) were also created by student teachers.

The selection and use of diverse resource and tools reflected sociocultural influences. For instance, standards-based instructional guides and revised textbooks represented socially endorsed changes in teaching content. The use of technologies in planning (e.g., retrieving information through the Internet), implementation (e.g., SMART Board™, laptop, and Web-based simulation), and reflection (e.g., VAT, CIP report, and e-portfolio) represented the integration of technology in teaching practices. In addition, routine use of diverse resources and instruments that were largely unfamiliar to student teachers prior to student teaching represents an affordance associated with becoming active members in the teacher community (Engeström, 1999a).

*Externalized culture of preservice teacher community*. While cultural internalization depicts growth in understanding and socializing in the inservice teacher community and teaching environment, activity system analysis also revealed that externalized perceptions were constructed through experiences in the teacher education program. The preservice teacher community's externalized values and culture guided their perceptions concerning current activities in the teacher community. In the present context, cultural externalization was evident in contradictions between the student teachers' emerging beliefs and shared practice and perception in the teacher community. Through their experiences with inservice teachers and reflections on their collective culture and practice that followed, student teachers identified several contradictions and attempted to formulate new activity systems to reduce or resolve the contradictions.

First, the lack of administrative support and poor implementation of school policy were cited by student teachers as examples of externalization. Contradictions on school policy (#4 in Figure 4.3), for example, were a persistent challenge to three student teachers as well as inservice teachers (#5 in Figure 4.4). Anna, Mary, and Joanna reported unresolved frustration in regard to the inappropriate implementation of school policy on problematic student behaviors. Mary stated:

> The students themselves just got away with behavior in actions at school, in the classroom, in the hallways that in other schools I know they would have been kicked out of the school. And they were able to get away with those things, [because] the administrator who was supposed to be in charge of discipline had no hold on discipline. That was extremely frustrating and so these students constantly misbehaved in class. … The teacher's hands were tied because we couldn't refer them to anyone because nothing was being done.

Each student teacher agreed that their school administrators needed to direct attention to this issue, an opinion that was shared by their inservice teacher community. Mary continued:

> I feel like after school everyday we seem to like gather in the hall like five of us and we just sit there and complain, you know, 'Why is this person still here? Why aren't they in alternative school?' or 'Why is such and such administrator not doing anything?' … So, mostly it is complaining about the school.

Although contradictions #4 and #5 illustrate similar problem situations (i.e., difficulties in managing disruptive students), contradiction #5 illustrates student teachers' perceptual changes in that they regarded the contradiction as a shared problem in the teacher community that could not be resolved by an individual community member. While these student teachers internalized the dilemma of inservice teachers, they acknowledged that adopting negative attitudes of inservice teachers in the given school environment would be inappropriate in their efforts to become professional teachers. Anna stated:

> This sounds so bad, but teachers had a tendency to be really negative and I didn't realize that until I started student teaching. I didn't realize that until I went to the teachers' lounge and heard everyone griping about a student and I've realized that I don't want to be that teacher. I don't want to have all these negative perceptions about my students because I think that interferes with their education.

Anna's comment revealed that inservice teachers' and school administrators' actions in dealing with problematic situations contradicted what student teachers generally expected of inservice professional practitioners and revealed her externalized perception of the culture and practice of the teacher community.

In addition, analysis of student teachers' CIP reports and interview data revealed that the emphasis on standards-based education is perceived as important as student teachers plan, implement, and reflect on their practices. As did their cooperating teachers and other inservice teachers, five student teachers in this study adapted their practices to meet requirements of standards-based education. For example, Nancy reported her experiences with standards-based instructional planning:

> We did set up questions to answer for each province and those questions were based on what they needed to know on the standards and so I do feel like we covered with that project. My CT and I decided the main categories that they needed to know. … We covered what the standards asked for.

While all student teachers perceived that planning for standards tests was a rule, and therefore a priority to be addressed, half of them perceived that practice conflicted with both their personal philosophy of teaching and distorted current educational practices (#6, Figure 4.5). Anna indicated that standardized tests "do not test a student's actual knowledge" but rather forced "students to memorize information and spit it back out on a test." Correspondingly, Robert argued that teaching practices in current climate of standards-driven education and military training were similar to the methods of creating a "robot." Coach described his

perspective on current standards and its influence on social studies teaching in his first CIP report:

> I believe that the analytical concept of teaching history and social studies has taken a back seat to GPS (Georgia Performance Standards) standards and CRCT testing requirements. Students are forced to read and recall random facts, however, losing the opportunity to express themselves analytically and creatively.

*Evolving relationships with cooperating teachers.* The evolved division of labor in the inservice teacher community has been defined by the cooperating teachers' attitudes towards their working relationship with their student teachers (Santoro, 1999). According to the differently perceived support provided by cooperating teachers, student teachers developed different divisions of labor. Anna and Robert had the freedom to implement and operate the classroom as they deemed appropriate. Although their reported practices were similar, differences were evident in their cooperating teachers' involvement. In Anna's case, her cooperating teacher encouraged her to "do it your own way" but provided her with constant help and support. In contrast, Robert perceived that his cooperating teacher "let [him] alone" to do his student teaching practices and offered little support.

Other participants acknowledged having limited power and authority with respect to classroom management and instruction, representing a vertical relationship in the division of labor, power, and authority among community members. For instance, five student teachers noted limited ownership of their classrooms and students, which influenced their practices in several ways. Matt perceived that students' behavioral problems might stem from their family situations; however, he did not perceive having the power or authority to contact the students' parents directly to discuss these issues. Mary overheard complaints about students, school policy, and environment from inservice teaches and perceived that "You all need to get [your] act together and go take care of it"; however, she did not express this opinion because she also

perceived “this is not my place to say that.” Joanna reportedly perceived limited authority while dealing with disruptive behavior in the classroom: “If it was my own classroom, I think I’d be able to come up with my own discipline system, but I’m in somebody else’s classroom and I can’t do that. I have no authority to say that.” Nancy assumed that limited power and ownership as inevitable for a teacher-in-training: “she (cooperating teacher) was going to be here when I left and she was here before I came so this was her classroom and I was a guest.” The perceived differences in the power and authority reflect the conflict between the activity systems used by student teachers and inservice teachers.

*Transitioning Toward Professional Praxis*

As student teachers refined their perceptions and practices (activity system “C”), their perceptions and expectations regarding their future practices as teachers demonstrated an evolved activity system (“D”). Figure 4.5 illustrates of similarities and differences between the two activity systems.

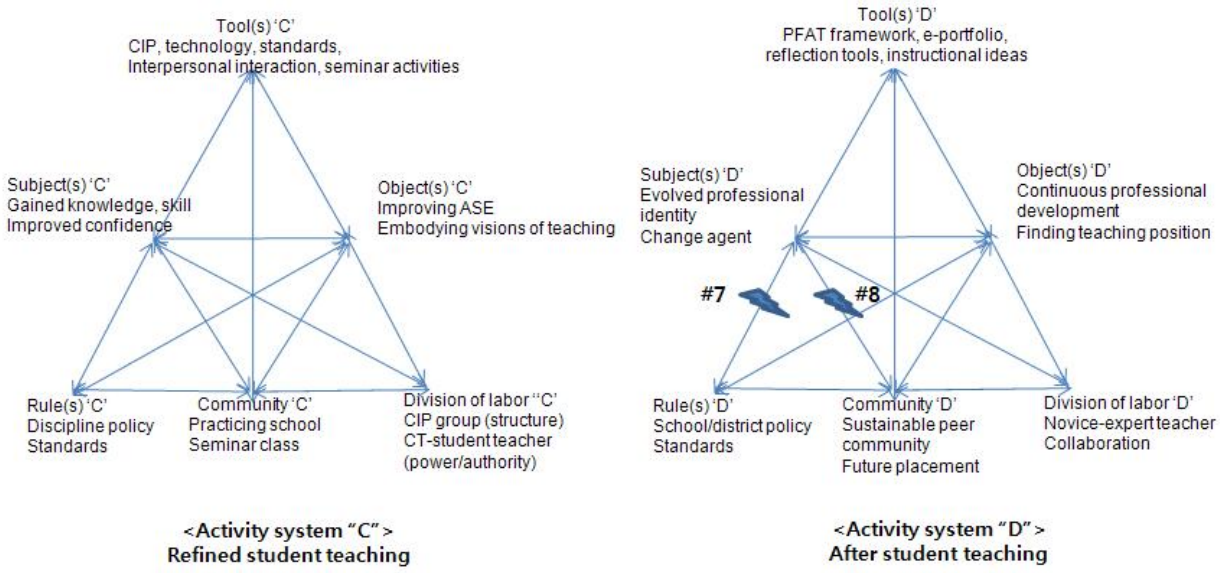


*Figure 4.5.* Conflicts and comparison of student teachers' activity systems of refined student teaching and after student teaching

This comparison illustrates how student teachers both reflected on their expectations, plans, and decisions for their future placement and incorporated them with their student teaching experiences. The majority of the student teachers reported conflicts that were implicitly or explicitly imposed in the teaching profession.

*Experience-based decision-making*. Near the end of the student teaching experience, some student teachers started applying for regular teaching positions and participated in job fairs and interviews with local school districts. Prior to the final study interview, two student teachers (Mary and Nancy) had signed contracts with their new placements. Their job-searching and interviewing experiences reflected how student teaching and CIP experiences influenced their decision-making in attaining their object (employment as a teacher). For instance, on several occasions Mary discussed frustrating experiences related to student discipline and lack of

administrative support at her student teaching placement. Accordingly, she initially described the importance of enforcing disciplinary policy as important in future teaching placements:

> From this experience I've learned that as soon as I start interviewing the main question that I'm going to ask is 'What is your discipline policy and do you really enforce it?' because I have realized that you can have a great policy but if you're not enforcing it, it's not doing anything.

During the next interview, Mary reported that she questioned her potential employers about discipline issues before making her decision:

> Actually, I've accepted my job and one of the first things I looked at was their discipline policy and it's much more strict than the school I'm at and when I spoke with the administrators who I interviewed with, I expressed that as a concern and was very reassured that they're very strict on their discipline policy.

This case illustrates the impact that student teaching (including CIP) experiences have on object formation (finding an appropriate school) and achieving that object.

Joanna, Mary, and Nancy indicated a change in their targeted teaching position for future placements. During the first interview, they each reported being eager to teach in high school; however, their student teaching experiences in middle school increased their understanding and confidence in interacting with middle school students. Nancy explained changes in her decision making:

> [During the practicum period] I was assigned to observe in a high school classroom. Loved the type of lessons that the teacher did that I observed, loved the interaction, loved the level of commentary, everything like that. … But then when I was actually in the classroom, that's when I guess my motherly instinct kicked in and also just seeing how funny they were, how much they acted like baby, that kind of things and so a lot of that went into why I wanted to teach [in the middle school]. … I've become passionate about middle school.

Nancy also noted that the influence of standards on teaching practices could influence implementing she would be able to enact characteristics of effective teachers. She explored that issue during job interviews and classroom observation:

> I've spoken with the principal things like that (implementing test focused practice) to kind of get an inside view of how it is. … The school is a little more relaxed than some schools. … It's not drilled that you have to [focus on tests preparation]. … I sat in on a few different classes today and I watched the interaction with students and stuff like that. And one of the teachers actually uses a lot of role playing in her classroom and so I was glad to see that I could do that.

Mary and Nancy reported that understandings and perspectives, refined through student teaching and CIP, enabled them to seek specific conditions (i.e., strict enforcement of the school policy on student behavior and flexibility in implementation of innovative instructional methods) to accomplish their perceived objects (i.e., to be better teachers) (Davydov, 1999).

*Constructing future practice*. Three student teachers reported having strengthened beliefs that collaboration with other teachers would be important in their practice. Mary's e-portfolio reinforced the importance she placed on collaborative inquiry for improving teacher practices: "There is a great need for some sort of collaborative inquiry program for inservice teachers" and "collaborative inquiry should be the most important activity scheduled during a teacher workday, or during planning or meetings with administrator." Similarly, Matt noted the importance of sustaining positive collaboration through CIP:

> Definitely working together with other teachers and discussing your own practice is something that should be brought into regular classroom settings. You definitely learn from others as well as from yourself and if you're not looking beyond the confines of your own classroom, it will be a lot harder to grow. So definitely the collaboration with others.

While Matt, Mary and John had indicated that collaboration in the teacher community as expecting a division of labor (i.e., horizontal relationship) in their future placement, two other student teachers identified the potential benefits from the relationship between novice and experienced teachers through mentorship as representing a vertical division of labor in the

teacher community. Nancy and Joanna both mentioned that having working relationships with experienced teachers could be beneficial to their continuous growth. Joanna stated:

> I would love to have a mentor teacher that could come in and observe me and give me her feedback and then also be able to go observe her so I could take the best of me and her and put together and come up with some great strategies that I could use.

More than half the student teachers reported gaining practical skills and knowledge, such as classroom management (as reported by Anna), lesson planning (Anna), teaching techniques (Mary and Nancy) and subject knowledge (Robert, Joanna, and Anna), as instructional tools in their future practices. In addition, seminar activities involving online and offline discussions and e-portfolio development were identified as resources to refine in subsequent practices. For example, Matt identified several ideas for instructional methods through peer discussion. Although he did not implement those ideas during student teaching due to differences between the content and grade level at his student teaching placement and those at his future placement, he wrote down these ideas for future consideration. John regarded the framework used in the seminar class for classroom discussion and e-portfolio development as a valuable analytic lens for reflecting on future practices:

> It (the framework) makes you look at different kind of angles to the same big picture, but you're looking at it from different angles, whereas if you're doing your own reflection, it's usually 'Did they get it? Did they have fun? Did I have fun? Are they going to pass the test?' So, I think it is very different. I don't want to say they are two different things because [at] the heart of them they are the same thing but I need to go deeper on my own and I guess I will have to do that on my own.

In addition, five participants (Mary, Joanna, John, Anna, and Nancy) reported that their inquiry skills, nurtured through the CIP experience, could be applied to address the challenges in their future practices. Anna stated:

> I think I would apply the project in my own classroom if I realized that I was having a problem with something. If classroom management was an issue, I'd definitely use the

> project to compare different methods of management in the classroom or low test scores, how do I combat that? I think I could definitely use ideas from the project to figure out.

Student teachers also expressed their willingness to use the CIP components such as the use of video records (John), reflective journals (John), and peer observation (Joanna and Nancy) to enrich their future reflective practices.

*Enduring conflicts and evolving roles as change agents*. The analysis at the end of student teaching revealed that all student teachers identified influences outside of the classroom that would impact their teaching practices, including policy at the federal (e.g., NCLB), state (e.g., GPS, CRCT, and EOCT) and local level (e.g., district curriculum map), as well as the school culture. Five student teachers indicated that the imposition of standardized tests would be inconsistent with their personal teaching beliefs and would raise internal and external conflicts in their future practices (# 7 in Figure 4.5). Robert, for example, described possible conflicts that originated from the expected standards-based practice:

> Nine times out of ten, it's (the local school district) going to be test savvy, it's going to be competition: 'We need the highest test scores and the most people passing' and therefore, I think I'm going to be forced to do that even though it's against my ethics and everything I believe.

Robert indicated he would resolve such conflicts by attempting to find a "middle ground":

> Essentially what I found afterwards is that you have to find a middle ground where you satisfy both sides where you can be satisfied as an educator, that you're still doing what your believe is right and you're still fulfilling your obligation to the state and county.

Five student teachers cited improved understanding of diversity issues in the teacher community. These student teachers observed and taught in low socioeconomic school environments identified associated challenges in the teaching profession. They identified that

perceived problems in the teacher community, such as a high turnover rate and lack of adequate support, could become *their* problems. Mary identified harsh realities in her teacher community:

> On my seventh grade hallway alone, three teachers at least were leaving. One was an English teacher and he'd only been teaching for about three years and he just couldn't handle the students and behavior. It was just driving him crazy and making him miserable because there was no learning going on in his classroom.

While acknowledging that understanding the hardships and challenges that current teachers experience was important, she also conceded that "whining and complaining about it wasn't the way to handle it. I realized that you really have to have a desire to work with these types of kids to be able to do." Robert provided a detailed account of possible conflicts (#8, Figure 4.5) in the teacher community the influences of these changes on the current teacher community:

> The way I see is like you have the old perspective and then you have the new perspective. The new perspective is what UGA is trying to teach and those are the ones that I think that are not as beaten down, the state hasn't beat in them. … Whereas you had the old school guides that are 'Okay, we tried all those neat tricky theories and stuff like that, they don't work. The state is going to beat us down. This is the way we're going to do it. We're going to teach the test because we want to keep our job.' …And the new inservice teachers have 'Okay, we know that we have an obligation to the state but we have an obligation to the society as well.' That's my perception. I think there are two different worlds out there and it's very important not to get tangled in the old school where you're teaching towards test.

Thus, Robert acknowledged the need for change in the current teacher community and the awareness of the need to change traditional perceptions and practices in bringing about changes within the teacher community.

# CHAPTER 5

# GENERAL DISCUSSION

## Introduction

Student teaching has been regarded as a crucial experience for prospective teachers that facilitates their professional development by modifying their dispositions, perspectives, knowledge, and skills though learning by experiencing (Koskela & Ganser, 1998; Weasmer & Woods, 2003). Furthermore, the influence of diverse sociocultural factors inherent to the authentic student teaching environment has drawn increasing attention (Hoy & Woolfolk, 1990; Kagan, 1992; Tang, 2004). In order to support student teachers in their professional transition and development as teachers, instructional support emphasizing collaboration and reflection has been applied. In this vein, this study examined the effects of collaborative inquiry projects (CIP) on the professional development of student teachers and also explored the role that sociocultural factors played in this development through the lens of activity system analysis. This final chapter begins with a summary of the study by revisiting major findings of the study while connecting and comparing them to relevant bodies of research. The chapter closes with the implications of this case study for future practice and research in the field of teacher education.

## Overview of Key Findings

This study was conducted in order to examine two research questions:

1. How does the collaborative inquiry project affect student teachers' understandings and practices related to active student engagement?

2. To what extent does an activity theory framework support identification and analysis of student teachers' individual and collective understandings and practices during a collaborative inquiry project?

Overall, collaborative inquiry practices supported student teachers' professional growth, and activity system analysis helped to clarify the socioculturally mediated nature of student teachers' development and growth. Findings indicated the positive influence of CIP implementation on student teachers' perceptions as well as their emergence as prospective teachers. While student teachers faced numerous challenges in everyday classroom teaching environments, CIP provided a systematic way to analyze problems, design and implement solutions, and reflect on their (and others') practices. Student teachers' initial understanding of active student engagement (ASE), which initially focused on behavioral cues as an indicator, evolved into a more refined and mature conceptualization. As they collected and analyzed diverse evidence, such as student work samples, records of classroom teaching practices, test scores, and observation reports from others, they evolved integrated, holistic perspectives on ASE that acknowledged diverse factors and the value of systematic reflective practices.

CIP implementation also facilitated student teachers' understanding of their students and the factors that affected student life and behavior in the classroom. Increasingly, student teachers recognized the importance of family, school, and community influence on students' learning and classroom behavior. Upon reflection, student teachers prepared and implemented increasingly relevant classroom approaches that they considered to be meaningful to their students. Finally, while they experienced success and failure during CIP implementation, student teachers expanded their understanding of educational issues, improved their ability to develop and implement situated teaching practices, and created a professional identity as teachers.

Activity Systems Analysis helped to identify specific changes in student teachers' values, perceptions, and practices. The progression of experiences revealed contradictions between their perceptions and practices, which resulted in refinements and alterations to student teachers' initial activity systems. Student teachers modified their activity systems as they adopted, altered, or rejected the collective perceptions and practices of inservice teachers. Comparison between activity systems at different student teaching stages indicated that development was incremental. In addition, several sociocultural factors directly or indirectly influenced the identity of student teachers as professional educators.

In the following sections, findings regarding the effectiveness of collaborative inquiry for supporting student teacher development are synthesized with existing research and theory. Next, the nature and meaning of student teachers' professional growth and development is articulated. Finally, I examine the relationship of the contradictions between student teachers' perceptions and practices.

*Collaborative Inquiry and Student Teachers' Development*

Edelson, Gordin, and Pea (1999) noted that inquiry-based activities provide three important learning opportunities: growth of general inquiry abilities, attainment of specific investigation skills, and understanding of concept and principles. The findings of this study indicate that student teachers developed general inquiry abilities that included "posing and refining research questions, planning and managing an investigation, and analyzing and communicating results" (Edelson et al., 1999, p. 393). While student teachers inquired regarding the meaning of ASE, CIP prompts helped them to conceptualize important inquiry procedures (e.g., finding a topic of inquiry, planning courses of action, identifying relevant evidence, analyzing collected data, and sharing and reflecting on results). Anna described the CIP process

as a “puzzle” that required her to “put a lot of things together” before realizing the result of her inquiry. She further noted that during CIP processes, “answering questions in LiveText™ (CIP report)” helped assure that “everything got put together” and ultimately resulted in “beneficial” experiences.

Consistent with Edelson et al’s (1999) inquiry focus on skill development, student teachers in this study refined investigative skills as they planned to collect and analyze the evidence of inquiry. Students employed diverse inquiry methods such as exploring quantitative data (e.g., comparing test scores and using survey results), synthesizing documentary sources (e.g., analyzing student work samples, lesson plans, and observation reports), and applying naturalistic approaches (e.g., implementing classroom observation and analyzing video-recorded practices).

Student teachers also refined their understanding of ASE as a result of CIP, indicating improved importance of ASE in student learning and expanding their understanding of contextual factors such as the influence of family, school, and community culture. In addition, student teachers revised and implemented instruction based on their improved understanding of ASE in their own classroom environments. Inquiry practices provided student teachers with valuable opportunities to acquire and articulate concepts and principles for facilitating ASE. Based on their positive inquiry experiences during student teaching, more than half of the participants indicated that they would continue to use inquiry practices in their future teaching as a means for professional development.

The findings also support the results of previous studies indicating the potential of technology for facilitating collaborative and reflective practice of student teachers (Barnett, 2006; Bryan & Recesso, 2006; Cunningham & Benedetto, 2003; Harris et al., 2005). Barnett

(2006) noted, “the viewing and reviewing of classroom videos provides powerful opportunities for preservice teachers to reflect on their practice and in articulating their epistemological and pedagogical beliefs.” In the present study, student teachers used the Video Analysis Tool (VAT) to collect evidence of inquiry. The graduate student teachers in this study, who applied VAT more frequently than the undergraduate student teachers, indicated that watching video-recorded practices facilitated their reflection. For instance, graduate student teachers mentioned the use of video helped them find the “hidden spot” of dynamic classroom interaction, which otherwise would not have been noticed during the teaching moment. Noticing previously undetected student reactions and behaviors enabled student teachers to modify and refine their initial teaching practices.

In addition, watching video clips helped student teachers to generate and articulate instructional ideas in order to plan and refine teaching practices. According to the graduate seminar instructor, the video vignette also provided a more vivid and authentic representation of the situated classroom environment of student teachers to their instructors, deepening their understanding of student teachers’ CIP implementation. Maher and Jacob (2006) found that computer-mediated communication facilitated reflective practice by increasing intellectual and emotional communication among participants. Similarly in the present study, asynchronous online discussion facilitated interactions among student teachers and their instructors. Student teachers were able to post their concerns and experiences within discussion threads, where peers could then share ideas and provide emotional support. Student teachers also exchanged ideas and alternative solutions to shared concerns and problems. Online communication also facilitated emotional support during seminar meetings as student teachers gave and received peer comments.

These shared experiences and ideas were often adapted or directly applied to the participants' teaching practices.

However, the findings also reinforced obstacles identified in previous studies. For instance, the technology placed additional burdens on, and engendered resistance among, student teachers' willingness to engage in CIP. The limited participation of individual members during CIP group discussion sessions is consistent with difficulties in negotiating collective understanding in collaborative inquiry groups noted by previous researchers (Farr-Darling, 2001; Tillema & van der Westhuizen, 2006). For instance, sharing video-recorded practices in the CIP group could enable student teachers to engage in meaningful discussions concerning their underlying beliefs related to teaching practices and differences in their classroom contexts (Barnett, 2006). In the graduate CIP group, Matt shared video clips with other members; however, other members did not acknowledge that this function was provided in the VAT system.

*Student Teacher Development*

Whereas some researchers have suggested there is a lack of understanding of how skills emerge among inservice teachers (Wilson & Berne, 1999) and preservice teachers (Calderhead, 1991; Calderhead & Robson, 1991; Kagan, 1992), the present study offers insights concerning the nature of student teacher development. Researchers have reported that pre-established perspectives and values derived from student teachers' own schooling and teacher education experiences influence approaches to teaching (Calderhead & Robson, 1991; Weinstein, 1990). The activity system analysis identified the existence and influence of student teacher preconceptions during their student teaching experience as well as changes in student teachers' initial conceptions. In this study, five of eight student teachers reported modeling the approaches of teachers they observed during their K-12 schooling or college experiences. These experiences

shaped their beliefs in terms of effective practices (e.g., teaching history through storytelling, connecting learning content to students' lives) and the characteristics of a good teacher (e.g., their care for students, their passion for teaching). The analysis indicated that most student teachers perceived developing and attaining these characteristics to be their initial teaching goal. The findings also indicated family support was an important influence on initial conceptions, as student teachers consistently reported their family culture as caring and disciplined, and several reported having one or more inservice teachers among their family members.

Thus, the influence of prior schooling, modeling, and family shaped student teachers' ideal images of teaching, schooling, teachers, and students. Calderhead and Robson (1991) pointed out that ideal images of teaching practices were not applied to student teachers' practices when challenged by different environments and student needs. Since initial teaching ideas and images dominated and framed their experiences, student teachers resisted refining or modifying their initial images of teaching. The participants reported culture shock during initial student teaching, indicating how pre-established images contradicted what they encountered in everyday school environments. Student teachers were challenged by classroom management issues, cultural and ethnic diversity, and unmotivated students, reflecting dissonance between their initial expectations and the reality of the classroom.

While some studies indicated difficulty in modifying existing beliefs, other researchers reported refinements similar to those in the present study when student teachers were provided appropriate support, such as collaboration, inquiry, and reflection. Milner (2005) explored the effects of a seminar course on student teachers' perceptions of diversity. Similar to the present findings, Milner found that course activities, including group discussion and reflective writing assignments, facilitated refinement in beliefs and practices and improved student teachers'

awareness of diversity issues. In the present study, CIP and the seminar helped student teachers to progressive refine initial conceptions with respect to diversity in the classroom. For instance, Nancy described student teaching as an “eye-opening experience” that led to her acknowledging the importance of understanding diversity. Robert addressed the importance of addressing cultural diversity when he attempted to connect the cultural background of his students into his teaching practice.

The comparisons across stages of student teaching and CIP progress shed light on three professional development foci: development of teacher knowledge, increased confidence as a teacher, and the establishment of collaborative and reflective practice. According to Shulman (1986), the development of different types of teaching knowledge (e.g., subject matter content knowledge, pedagogical content knowledge, and curricular knowledge) is key to the “transition from expert student to novice teacher” (p. 8). In the present study, several student teachers were initially concerned by their perceived lack of subject knowledge expertise when asked to teach different social studies subjects (e.g., geography, world history, and economics). Student teachers initially emphasized their subject area deficiencies; however, by using diverse resources (e.g., textbooks, curriculum guidelines, relevant primary resources, inservice teachers’ lesson plans) and support from cooperating teachers, they increased their knowledge and gained confidence in new content knowledge.

The collaborative inquiries also helped student teachers to refine their pedagogical content knowledge and curricular knowledge. Initially, the majority of student teachers reported their lack of knowledge and skills in instructional methods and lesson planning. As student teachers received guidance through interaction with peers and inservice teachers, they attempted to apply increasingly diverse instructional methods in their teaching context. As a result, student

teachers improved their competence in designing and implementing student-centered and situated instruction (e.g., simulation, role-playing, and unit-long projects) and employing diverse teaching methods and tools (e.g., SMART Board™, primary documents, media materials, and hands-on activity materials).

Several studies have cited increased self-confidence as an indicator of student teachers' professional development (Hoy & Woolfolk, 1990; Weinstein, 1990). In the present study, student teachers reported improved self-confidence as prospective teachers. They solved practical challenges and observed concrete evidence of their impact on student learning during their student teaching experience. Improved self-confidence, in turn, increased the accuracy and utility of student teachers' self-assessments as initial novice teachers (Calderhead & Robson, 1991; Kagan, 1992).

Cochran-Smith (1991) suggested that interactions between preservice and inservice teachers are particularly critical during teacher preparation. In the present study, student teachers progressively appropriated, engaged, and evaluated inservice teachers' collective perceptions and practices through collaborative interactions. Over time, student teachers became increasingly reflective on inservice teachers' practices, enabling them to refine and personalize their individual identities as teachers (e.g., being more approachable to students than the cooperating teacher was). Thus, collaborative and reflective practices were critical to hone student teachers' identities as professional educators which they acknowledged as being critical for their continuous professional development.

*Challenges during Student Teaching*

Consistent with previous studies, student teachers in the present study faced diverse challenges when they were immersed in authentic teaching environments (Kagan, 1992;

Veenman, 1984). Challenges occurred at the individual level (e.g., perceived lack of confidence and knowledge as a teacher), the classroom level (e.g., classroom discipline, motivating students, organizing classroom work, and assessing students' work), and the organizational level (e.g., limited support from school administrators). Challenges, contradictions, and dissonance between perceptions and practices have been described as typical of and essential to professional growth among student teachers (Calderhead, 1991; Fuller, 1969; Kagan, 1992). Fuller (1969) found that as student teachers expanded their professional knowledge and practice repertoire, their concerns shifted from self-focused to student- and instruction-related issues. Some researchers have highlighted preservice teachers' individual characteristics (e.g., Piggf & Marso, 1987) and their relationship with cooperating teachers (e.g., MacDonald, 1992), while other researchers have focused on gaps between theory and practice (e.g., Wubbels, 1992). Similarly in the present study, most student teachers provided reasonable explanations regarding the challenges they faced at the individual and interpersonal level (e.g., lack of confidence in instructional methods and student teachers' critical perspectives on the theory-based teacher education program).

The influences of sociocultural factors on the challenges and concerns of student teachers have become increasingly common (Makinster, 2006; Roth & Tobin, 2002; Santoro, 1999). According to Roth and Tobin (2002), analysis across the student teaching experience indicated that the challenges of student teaching were closely connected with situational, contextual, and sociocultural contradictions—contradictions that could rarely be resolved without systemic and structural changes. Among diverse situational, contextual, and sociocultural influences in the present study, some contradictions suggest paradigm conflicts between university-based teacher education and the field-based practice. For example, the majority of student teachers in this study reported conflicting values related to the use of standardized tests. The reality of the school

environment, which emphasized improving student test scores, reflected the influence of current standards-based educational reforms. Collectively, student teachers noted that standards-based reforms have prioritized academic performance in core subject areas, standardized testing programs, and standards-based teacher qualification and preparation. The "No Child Left Behind" (NCLB) legislation also encourages the implementation of standards-based educational practices to improve student achievement (U.S. Department of Education, 2002). Despite empirical evidence on the positive impact of standards-based educational reform on student achievement (e.g., Carnoy & Loeb, 2002; Hamilton et al., 2003), several have challenged the claims of positive effects of current reform efforts (e.g., Chapman, 2004; McNeil & Valenzuela, 2000; Meyer, 2005). In the present study, conflicts were evident among all participants between their individual values and beliefs and the values and priorities of their student-teaching school.

Student teachers' personal perceptions of, and arguments against, standards-based educational reform (standardized tests in particular) appeared consistent with the values and philosophy of their teacher preparation program, which emphasized social, democratic values in social studies teaching. Thus, conflicting perceptions and experiences regarding standardized tests paralleled and supported arguments on the negative impact of standards-based education reform. For instance, consistent with Chapman's (2004) findings, Robert, Coach, and John criticized test-intensive education based on the pressure on teachers to sacrifice important educational and societal goals in social studies teaching, such as raising democratic citizens and decision-makers. Myer (2005) reported the marginalization of several subject areas, including arts and foreign languages; Joanna reported similar marginalization of social studies in her school.

# Implications

## *Technology Utilization*

Technology-supported collaborative inquiry often involved additional burdens for student teachers. Chang, Sung and Lee (2003) reported that a lack of familiarity with technology can hamper participants' collaborative inquiry practices; in this study, the lack of previous experience with VAT seemed to influence student teachers' CIP. The seminar instructors and I expected short video clips that embodied and reflected the target practice of student teachers' CIP. However, several student teachers recorded their entire hour-long classroom practice as evidence of CIP, requiring considerable time to convert and upload it onto the VAT system. Thus, greater attention regarding the relevance and use of VAT might be needed to improve student teachers' benefit from the video capture and analysis technology.

In addition, technology often served as tools for documenting requirements rather than tools to support formative development. Most student teachers simply transferred their work from paper to LiveText™ without assessing or evaluating their performance or sharing among peers. In retrospect, the researcher may have overestimated student teachers' technology competencies and their motivation to integrate technology into learning activities. The hour-long workshop training was not sufficient to either address the range of questions and needs or ensure needed technology skills and knowledge. Thus, in order to derive the benefits of e-portfolio during collaborative inquiry, factors that influence participation (e.g., technological competency of participants, the available support system, and the expected obstacles of technology use) need to be identified and addressed during initial planning stages.

*Student Teaching*

Most student teachers reported feeling overwhelmed, especially at the initial stage of student teaching. In this study, the initial stage of student teaching evoked stress and generated contradictions that appeared to limit student teachers' motivation and confidence. The instructors also added additional requirements and tasks to be addressed during the semester. As a result, student teachers frequently overlooked crucial information designed to associate student teaching with collaborative inquiry and the group seminar meetings; they initially tended to resist the non-student teaching aspects of their preparation. Wadlington, Slaton, and Partridge (1999) suggested several instructional strategies to reduce student teachers' stress, including keeping reflective journal, providing opportunity for interaction with novice teachers, matching collaborative teacher partners, and furnishing specific information about classroom management. In the current context, similar strategies might have lessened the workload of student teachers. For instance, field instructors could have recorded student teachers' practices using video camcorders during classroom observation. Captured video clips could then be used as direct evidence of student teachers' inquiries and/or as a sharable resource for post-observation conference to facilitate and structure interactions among the student teacher, field instructor, and cooperating teacher.

*CIP*

Although a few student teachers reported benefits from minimally structured CIP group interaction, several participants suggested that guidelines were needed to improve interaction among group members. While theoretical and practical issues remain as to the task structure needed in collaborative learning environments (Dillenbourg, 1999; Oxford, 1997), careful consideration of readiness to collaborate, differing classroom contexts, task scaffolds and

activities (e.g., rubric for peer evaluation and presentations of group collaboration results) could facilitate the construction and sharing of collective knowledge.

Several student teachers also cited the usefulness of the Preservice Framework for Accomplished Teaching (PFAT), which was generated previously during the social studies education program at UGA, and relied on it to guide their reflective practices. Most, however, stated that they could not apply the framework throughout their student teaching. Instead, they used the framework to address the required e-portfolio tasks near the end of student teaching, suggesting that the PFAT framework might be better early incorporated systemically across related teacher education courses (e.g., methods, curriculum, and observation practicum) to facilitate the growth of the dispositions, knowledge, beliefs, and practices of competent teachers.

In this study, CIP focused on collaborative learning among student teachers. However, several researchers have examined the influence of key educators, including seminar instructors and cooperating teachers, during collaborative inquiry (Barnett, 2006; Barnett, Harwood, Keating, & Saam, 2002; Farr-Darling, 2001; Mule, 2006). For example, inservice teachers' participation during the collaborative inquiry process supported the student teachers' exploration of and reflection on the shared beliefs and practices of teachers (Barnett, 2006; Mule, 2006). These findings suggest that interaction with and support from cooperating teachers influenced student teachers' professional growth. In order to bridge school-based practical perspectives with university-based theoretical perspectives, ongoing collaborative discourse among university faculty, practicing teachers, and preservice teachers may be necessary.

*Seminar*

The seminar provided a forum for collecting, sharing, organizing, and synthesizing student teachers' perspectives and experiences. Several resources (e.g., video vignettes and e-

portfolios) may well be beneficial if employed previously to strengthen student teachers' understanding of real-world teaching demands prior to being immersed in student teaching experiences. Researchers report that the incorporation of video-based cases in teacher education courses could enhance preservice teachers' understanding of authentic classroom problems, framing questions, implementing inquiry or problem-solving processes, and engaging in reflective practices (Barnett, 2006; Harris et al., 2005; Sherin & van ES, 2005). In the current context, the CIP video clips could also serve as cases. To introduce preservice to teachers to authentic classroom teaching dilemma, Kim and Hannafin (in press) used a case-based approach to guide preservice teachers in analyzing authentic classroom teaching vignettes. The cases featured video excerpts of classroom settings where problems and issues emerged, the teachers' decision making and reasoning processes were made available, and guidance was provided to scaffold understanding about the challenges of teaching as well as developing their skills and knowledge needed to address the issues. Prospective teachers, in effect, become increasingly familiar with the challenges and realities of real-world teaching prior to student teaching by engaging several of the problems and issues encountered in the present study in a safe, risk-free context. Thus, before prospective teachers experienced the culture shock and discrepancies noted in the current study, foundation and method class instructors could incorporate video clips to introduce teaching concepts along with practical considerations for implementation the range of everyday classroom settings.

This study identified several differences between the seminar instructors with regard to teaching style as well as their interpretation and implementation of seminar activities. These influenced both how CIP experiences were provided and how participants developed professionally during the student teaching and seminar experiences. Although the seminar

instructors met and exchanged ideas about the progress of the seminar course, increasingly formal and structured communications and interactions might have mitigated some of the undesirable variability in both the activities and their influence on student teachers.

*Activity System Analysis*

The activity system analysis in this study was conducted to examine the complex nature of field practicum experiences and to identify the influence of a range of entities such as the teacher education program, the practicing school, seminar activities, and current educational policies. Roth and Tobin (2002) pointed out that student teachers attempt to adapt to a troubled system rather than to change systemic and structural relations in the system. However, they emphasized that individual adaptations were insufficient to resolve problems that are socially mediated. In other words, to address and overcome obstacles in educational practice, student teachers must come to understand the socially mediated nature of problems and develop appropriate activity systems to guide their future professional activities. The contradictions identified through activity system analysis could provide grounded understanding for developing strategies to support student teachers as they create and refine new activity systems as they transition through student teaching and beyond.

In order to mitigate the barriers that stimulated contradictions, increased collaboration among diverse stakeholders such as university faculty, school administrators, inservice teachers, and policymakers, may be necessary. Several researchers (e.g., Mule, 2006; Coburn, 2003; Little, 1993) have employed such collaboration across diverse issues (e.g., school reform, teacher evaluation, and professional development). However, both practical difficulties encountered during collaborative attempts and diverse barriers to constructing shared understandings about problems and possible solutions were reported. Activity system analysis could offer both

methodological and practical ways to address these issues. Activity system analysis could provide shared, uniform terminology and visual syntax to specify and depict the complex sociocultural factors of the human activity system (i.e., subject, object, tool, community, division of labor, and rule). For instance, the student teacher participants observed that practicing teachers often complained about the impoverished school environments and students' disruptive behaviors, which decreased inservice teachers' motivation and likelihood of remaining in the teaching profession. These same observations and experiences seem likely affect novice, induction teachers' professional perceptions and practices with similar consequences. In order to support student teachers and novice teachers in overcoming such challenges, school administrators, local school districts, and university faculty could analyze and share activity system analyses findings to formalize both the nature and consequences of interactions among professional educators.

This study also attempted to identify changes by analyzing and comparing student teachers' activity systems at different stages. In effect, the analysis attempted to identify and represent both "snapshots" of student teachers' activity systems at specific stages as well as to examine changes as they progressed through different stages and faced obstacles that hampered them in reaching their perceived goal of student teaching. According to contradictions at different stages in student teaching, seminar activities could be refined to provide 'just-in-time' learning resources and support as challenges and contradictions emerge.

## Limitations

Participants' CIP experiences indicated that student teachers reported diverse factors and experiences involved in student teaching. Although such information helped me to identify and interpret their experience in authentic classroom environments, it occasionally proved difficult to

distinguish the influence of ASE from myriad related factors within their student teaching environments. I attempted to associate those ASE factors identified in seminar with the CIP experiences of participants; however, occasionally the CIP reports and interview transcripts reflected intermingled rather than discrete perceptions and experiences. Consequently, several ASE indicators emphasized in seminar could not be detected and documented in the findings of this study; in addition, it is possible that some findings I attributed to ASE might also be attributable to other influences in the student teaching context and experience.

While proving beneficial in many regards, the application of activity system analysis also revealed limitations. Differences in disposition, emotion, and perception among student teachers, who were regarded as the constituents of the subject of this study, had not been investigated in previous studies. Previous researchers typically defined their subjects by their roles or titles in a specific context of activities, such as student teacher or novice teacher. It is possible that focusing on groups of subjects might have oversimplified or obscured the individual subject's identity. This might affect the findings with respect to assumed (or presumed) relationships between the subject and related components of the activity system. Fanghanel (2004) noted that neglecting the impact of subjects on other components of the activity system could limit the ability to characterize the complexity of the situation, especially for differences in complex learning contexts, as evident in the present study. In order to overcome such limitations, this study included student teachers' perceptions (e.g., different values about CIP) and emotions (e.g., frustration and excitement) to execute a more thorough analysis of the subjects. However, this approach needs to be examined by other researchers in varied contexts to establish the broader utility of activity system analysis.

Several themes identified in student teachers' activity systems reflected "indeterminacy" (Fanghanel, 2004, p. 589) regarding with regard to their location in the activity system triangle. That is, many activities were not, and are not, discreetly classifiable as nested within a single component. For example, *reflective practices* can be categorized as rules and as tools. According to the varied perspectives of student teachers and the context in which the term was used, *reflective practice* was perceived as a rule that was emphasized and shared in the seminar class. At the same time, student teachers used *reflective practice* as a tool to help them achieve their object of improving teaching practices. To minimize possible misinterpretation, rather than treating practices as unitary and solely within activity system components, I attempted to converge multiple social variables to examine the multiple ways in which they were manifested.

I also employed a framework to compare different stages of the student teaching experience: before, initial, refined, and after student teaching. To provide sufficient data at each stage, three rounds of interviews were conducted to identify possible differences in the perceptions, experiences, and practices of student teachers. However, expanded interview rounds and implementation periods could have produced important, informative data regarding student teachers' activities and perceptions. For example, during the first interview, I posed two different sets of questions (i.e., pre-established perceptions and initial student teaching experiences) during a relatively short time; thus, limited the time was available to further explore the student teachers' preconceptions. As a result, transcripts of the first round of individual interviews contained limited information about collectively shared perceptions and experiences of student teachers' prior collaborative learning experiences and perceived regulations as prospective teachers. It is possible that focusing on fewer, but richer, data collection methods might have increased the depth of response from interviewees.

This study also raised, but was unable to address resolve, the question of how many participants were needed to conduct valid, reliable activity system analyses. I analyzed eight student teachers' activity systems at four different stages of student teaching (i.e., before, initial, refined, and after student teaching), comprising a total of 32 activity systems. Through data reduction and analysis, I attempted to represent "unity in diversity" (Tolman, 1999, p. 76) while analyzing the participating student teachers' experiences. However, some perspectives and experiences were excluded from the study, suggesting the analysis could be limited in revealing potentially important differences between and among the individual participants. Conversely, individual activity system analysis may have certain limitations in representing the collective features of human activity, such as division of labor or shared norms and regulations in the group work context. Consequently, the decision about the appropriate number of participants should be based on an understanding of the benefits and limitations of small and large numbers of participants, the focus of the study (e.g., exploring human activities in a certain context, comparing activity systems among different group of subjects), and practical considerations.

Finally, I acknowledge the possible influence on my personal characteristics on the implementation and interpretation of the present study. As an international student, I had limited previous interactions or relationships with preservice or inservice teachers or teacher educators in the United States before this study. Although accumulated interaction with the participants helped me to understand the overall system and culture of teacher education, my initial lack of understanding could have impeded my ability to explore the thoughts and practices of the participants during the interview processes to a greater degree.

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# APPENDICES

# APPENDIX A. SOCIAL STUDIES EDUCATION PRESERVICE FRAMEWORK FOR ACCOMPLISHED TEACHING (PFAT)

**PRESERVICE SOCIAL STUDIES TEACHERS….**

| **I) Content and Curriculum** | **IV) Assessment** |
|---|---|
| 1a) demonstrate understanding of foundations, aims, and practices of social studies education and their relationship to democracy | 4a) employ different types of assessments based on knowledge of their characteristics, uses, and limitations to promote student growth |
| 1b) demonstrate knowledge of content and modes of inquiry that are central to the subjects they teach | 4b) use pre-assessment data to develop and support appropriate student learning goals |
| 1c) use subject-specific forms of pedagogy that make content accessible to students | 4c) implement assessments that match instructional goals |
| 1d) continue learning in their subject areas | 4d) involve students in self-assessment to help them develop awareness of their strengths and needs as learners |
| 1e) help students to make interdisciplinary connections | 4e) develop and use valid, equitable grading procedures |
| 1f) interpret and create curriculum that reflects state, local, and national content standards | 4f) use assessment data to communicate student progress knowledgeably and responsibly to students, parents, and other appropriate stakeholders |
| | 4g) keep accurate and up-to-date records of student progress |
| **II) Knowledge of Students and their Learning** | **V) Planning and Instruction** |
| 2a) demonstrate that all children can learn at high levels by providing supportive and challenging learning experiences for all students | **5a) articulate clear and defensible rationales for curricular and instructional decision-making |
| 2b) demonstrate understanding of how students learn | 5b) develop and implement short and long term instructional plans that progress coherently towards learning goals |
| 2c) respect and are responsive to students as whole people | 5c) vary instructional strategies and materials to support active student engagement in worthwhile learning for all students |
| 2d) demonstrate an understanding that social, linguistic, and cultural diversity play a role in student learning | 5d) adjust instruction appropriately according to student response |
| 2e) design instruction that adapts to students' development, learning styles, and areas of exceptionality | 5e) vary their instructional roles (e.g., instructor, facilitator, audience) |
| 2f) establishes respectful and cooperative relationships with families and community members in support of student learning and well-being | 5f) value and engage in collaborative planning and instruction |
| **III) Learning Environments** | **VI) Professionalism** |
| **3a) create an equitable and culturally responsive classroom | **6a) systematically reflect on their own practice to improve teaching and learning |
| 3b) create democratic learning communities characterized by collaboration, mutual support, and shared decision-making | **6b) engage in collaborative inquiry |
| **3c) organize classroom experiences to promote active student engagement in the pursuit of worthwhile learning | 6c) advocate for teaching and learning that support equity and high expectations for all students |
| 3d) manage classrooms effectively to promote student learning and safety | 6d) examine and further their knowledge of the history, ethics, social conditions, and practices of schooling |
| 3e) motivate students by providing engaging learning experiences | 6e) follow norms, expectations, and codes of professional conduct in support of student learning |
| 3f) draw on school, district, and community resources to foster students' learning and well-being | 6f) follow laws related to rights and responsibilities of students, educators, and families |
| | 6g) contribute positively to the broader school community |
| | 6h) learn from and contribute to professional organizations |

Double asterisks (**) represent five elicited core themes of the standards

# APPENDIX B. ACTIVE STUDENT ENGAGEMENT HANDOUT

## Active Student Engagement

Active student engagement is the thoughtful, reflective, mindful activity by which learners receive, process, manipulate, judge, and/or interpret knowledge to enhance their understanding of subject matter. This process moves beyond memorization and recall because learners actively gather, evaluate, and organize information to uncover complex, contradictory, and abstract ideas or apply knowledge in flexible ways.

Although active student engagement occurs within individuals, various methods of assessment allow teachers to gauge its presence in their classrooms. For example, observable student behaviors may provide evidence of active student engagement, including (but not limited to) comments or questions that synthesize prior learning, raise ideas that go beyond textbook or lecture materials, or situate knowledge in historical and cultural contexts. Non-verbal communication including facial expressions, seating position, and eye-contact may also reflect the degree of active student engagement. Whenever students are given opportunities to express their thinking (e.g., class discussions, written assignments, course projects), teachers are given opportunities to assess active student engagement. Below is a non-exhaustive list of attributes that relate to promoting active student engagement. This list will help you focus on one or two specific aspects of active student engagement to focus on during the first phase of portfolio construction.

- **After giving directions for complex activities, check for understanding by asking students to explain directions back to you**
- **Organize class discussions around "essential" questions**

  Wiggins and McTye (1998, p. 28-30) state that essential questions go to the heart of the discipline, cannot be answered in one sentence, have no obvious “right” answer, raise other important questions, are framed to provoke and retain student interest, and recur throughout learning.
- **In leading class discussions, call on particular students to encourage their participation**
- **In leading class discussions, ask particular students to respond to the ideas/comments of a fellow student**
- **In leading class discussion, extend wait-time for students to respond to questions**

  Wait-time is the process of providing time for students to generate responses to a question, waiting for students to formulate words for an explanation, and listening as students put their questions into words.
- **Learn about your students' culture**
- **Ask students to discuss the relevance of whatever they're studying to their personal lives**
- **Have students take a few minutes to write out thoughtful responses before beginning a whole class discussion**

  Wait-time is the process of providing time for students to generate responses to a question, waiting for students to formulate words for an explanation, and listening as students put their questions into words.
- **Try Think-Pair-Share**

  The strategy of think-pair-share provides students with time to think about a particular question on their own so that they can analyze it, generate ideas, and formulate responses. Students are then paired with other class members to discuss their ideas and responses in a non threatening environment. Finally, students are allowed to share their collective responses with the class.
- **Use several resources in a lesson to address the needs of diverse learners**
- **Provide formative feedback to individual students**

  Formative feedback is the process of responding to student behaviors and activities in the classroom either through verbal, written, or non-verbal communication. Feedback is most effective when it is provided consistently and in a timely manner (as soon as possible after the behavior in question takes place.

# APPENDIX C. PROMPT FOR COLLABORATIVE INQUIRY PROJECTS

| Inquiry stages | Guiding questions |
|---|---|
| Action plan | - What is the focus of your inquiry project (e.g., the aspect of your practice, method, technique, or tool) for the next four weeks?<br>- How might this method/technique influence active student engagement in your classroom?<br>- What you will do over the next four weeks to enact and improve your teaching in relation to the focus mentioned above? For example, describe the context and nature of the lesson(s) or activity(ies) in which you plan to attempt this method or technique of instruction.<br>- How does this method/technique compare with what you are currently doing in your classroom?<br>- What problems might occur as you employ this method and how might you deal with them? |
| Record (evidence) collection plan | - How will you capture the implementation of your method/technique as records of practice (e.g., a copy of your lesson plan, student work samples, video recordings, notes from your cooperating teacher, field instructor or students, peer feedback, etc)?<br>- How will your records inform you about your success in implementing your method/technique?<br>- How will your records inform you about the effect of your method/technique in promoting active student engagement? |
| Evidence | - Immediately following your lesson(s) did you feel that you implemented your method/technique successfully? Explain it.<br>- Describe your initial reaction regarding the success of your method/technique in promoting active student engagement.<br>- Explain how viewing and analyzing your records of practice altered, strengthened, or added to your initial reactions<br>- Are there alternative explanations that might have influenced active student engagement in your classroom?<br>- How might you discern the extent to which your method/technique or these alternative explanations influenced active student engagement? |
| Analysis summary | - Are you satisfied with your findings from this inquiry cycle? Explain.<br>- Based on your findings, what are some things you could do to further promote active student engagement in your classroom?<br>- Will the results of this inquiry cycle become the focus of your next inquiry? If so, what aspect(s) will you focus on?<br>- Describe how collaboration with others, particularly those in your Collaborative Inquiry Project small group, has helped develop your thinking regarding this inquiry. Provide specific examples. |

# APPENDIX D. INDIVIDUAL INTERVIEW GUIDING QUESTIONS

I. First interview

1. Could you introduce yourself?
   - Why did you decide to pursue teaching as your career?
   - What was the most influential factor that you lead to pursue teaching career?
2. What would you like to achieve through student teaching experiences?
   - Why do you think your perceived student teaching objective is important to you?
   - Could you explain your initial impression with your practice school, cooperating teacher, and students?
3. Could you describe your daily activities of student teaching in the practice school?
   - How teaching task, grades and subject was decided?
   - How do you interact with cooperating teachers?
   - Do you feel any rules or restrictions as a student teacher in practicing school?
   - How do you prepare your classroom teaching? How do you develop your lesson plans?
4. What challenges or problems about student teaching are your biggest concerns?
   - Did you expect you would meet the above challenges and problems before you start your field experience?
   - What would be appropriate solutions for those concerns?
5. What do you expect from this student teaching seminar class?
   - What do you think about the analogy of ‘teaching against the grain’ emphasized in this course?
6. In your perception, what will be the benefit of collaborative inquiry for your student teaching practice?
7. Could you describe your prior experience of collaborative inquiry in the teacher education program?

II. Second interview

1. Why did you select this aspect of active student engagement for your inquiry?

- Could you describe your inquiry cycle including plan, implementation, and evaluation?

2. What did you gain from this collaborative inquiry project?

- Do you think collaborative interaction with peer student teachers was helpful and productive? If so, could you tell me the reasons?

- Specifically, what could be your contribution to the progress of collaborative group interaction?

- How did you perceive the atmosphere of your group?

- If there are any areas that need to be modified or changed in your collaborative inquiry group interaction to yield more meaningful experiences, what would be the areas?

3. (After showing parts of group interaction) At this time, what did you think about his/her discourse?

4. In terms of your challenges and problems that you described the first interview, did you find any solutions?

- If so, how did you find it? If not, what makes you difficult to find solutions?

5. Did student teaching seminar meet your expectation so far?

- What are your perceived benefits of student teaching seminar?

- Are there areas of improvement or modification in student teaching seminar?

6. How is going on your student teaching compare to the previous month?

III. Final interview

1. During the last round of inquiry, what did you pick as your inquiry topic? Why?

- Compare to the first and second rounds of inquiry, what would be the differences in the processes and the outcomes of this round of inquiry?

- Through the inquiry projects, what did you learn, gain, or develop regarding your perceptions, knowledge, skills, and dispositions?

2. (After showing parts of group interaction) At this time, what did you think about his/her discourse?

3. How can you evaluate the benefits of group interaction for your inquiry project?

- For more meaningful opportunities of collaboration, what could be revised or improved in current structure of group discussions?

- If you develop a new understandings or knowledge through group interaction with peer student teachers that was changed from your previous one, what is it? How could you apply your new knowledge to your future practices?

- Did you include newly constructed meaning or knowledge in your portfolio?

4. What could be the most benefit from your field experiences?

5. What should be changed or improved current student teaching system for better learning experience of preservice teachers?

# APPENDIX E. SAMPLE OBSERVATION FIELD NOTES

Site: Aderhold Hall 274
Date: 2007.02.27
Time: 17:10 – 18:50

| Time | Observed incident and interaction | Remarks |
|---|---|---|
| 1711 | T distributed Tim wise reflection paper and other assignments with feedback<br>According to a short debrief of T,<br>- 8 student teacher shared and completed the video 2 are waiting my help<br>- others are still have technological problems and individual students are complaining or explaining their situation (some said they attached video clips to email, some uploaded clip in LiveText™)<br>- Still many student teachers have confusion between VAT and VAT2<br><br>T reflected his first look to CIP<br>- VAT helps to understand and look the classroom<br>- Collaboration part / some students are positive saying they had a chance of sharing and discussing about the issues / several students frankly showed their disengagement and disorientation about the group discussion interaction for the inquiry project<br><br>Interesting WebCT postings | Is there any effective way to inform the students about VAT and VAT2, way of submission of CIP report |
| 1722 | What time is it session<br>One ST questioned<br>- How do we know student ASE during lecture portion of the classroom?<br><br>- One FST shares her experience combining discussion and lecture in her classroom. Using board to visualize students arguments<br><br>- One MST mentioned he have to have a lot of lecture due to methodologies of CT<br><br>T mention nonverbal curs from students, questioning could be ASE.<br>But whole lot of people did not include assessment as their evidence for inquiry project<br><br>Assessment issues<br>- FST: when she use some examples that students were engaged at the classroom in the test, students could not get good scored on it<br>- FST: Standardized test and other forms of alternative tests are mixed in the classroom, so students may have some confusion<br>- MST; using the term 'celebration of knowledge' instead of 'test'<br>- whether test is reproducing of knowledge or asking students thoughts<br>- ST answered none of their test will be concerned about students thoughts<br>- there are ongoing classroom discussion about the purpose of assessment and what is good assessment, how can it be done in the classroom context<br><br>Coach asked<br>Culture is regarding learning as reproducing of knowledge and the society needs it.<br>MST; students are nor prepared to take alternative form of assessments (e.g., opinion portion of the test was blank) | School policy and student teachers' frustration about teaching and following assessment issues |

| | | |
|---|---|---|
| | FST; GA system is not allow to implement that kind of test<br><br>Jbill; based on his schooling experience, making connection between acquiring knowledge and thinking creatively in the classroom. And some frustration of school culture about the majority's reaction about 'teaching against grain'<br><br>T; vulnerable position as a student teacher<br>Big house kids make greater score than small house kids | |
| 1820 | Classroom discussion about standard 2. learning standards<br>ST suggests about what would be the most effective way to share and understand the whole prepared idea<br><br>T decides ; 25min of group (geographical) discussion and sharing<br>While I am observing the overall progress of group discussion, T approached and then we talked about<br>-criteria or focus of interest for including both section of seminar (instructors' teaching style, focus or progress of seminar class (e.g., how do they cover the standards stuff, how do they organize their classes), students involvement of seminar activities,<br>-way to report the classroom environment and additional data (i.e., student survey or interview with instructors)<br><br>T asked my evaluation about the current ASE in the classroom<br>It seemed like to me that the most of the student teachers are engaged in their group discussion session. They nodded, look back their hand outs and took notes. | |
| 1855 | 10 min break | |
| 1905 | About 45min of CIP group session<br>Before the classroom divided into their CIP groups, T instructed how the remaining time of group session should be going on; focusing on the reflection and share of your first round of CIP. | |
| 1910 | Video recording of our CIP (3rd time of CIP group interaction)<br>Members are explaining their focus of CIP<br>Approximately 60% of time was not directly related to their CIP experiences. The conversation was about their classroom management issues, some difficult students, something like that | |

Ideas for further research implementation

<Possible Interview Questions about CIP group session>

- What did you talk about the last CIP group sessions?
- How did you feel about the value of CIP group sessions?
- Do you think that your CIP group is progressing compared with the previous interactions?
- What kinds of specific concept, knowledge or understandings did you get from the group session?

<Questions about Seminar>

- How do you think about the current format of seminar?
- Are you satisfied with T's teaching style?

APPENDIX F. SEMINAR OBJECTIVES IN SYLLABUS

**University of Georgia**
**Department of Elementary and Social Studies Education**
**Social Studies Education Program**
**ESOC 5/7560**
**Student Teaching Seminar**

Spring, 2008
Wednesdays, 5-745 pm
319 Aderhold Hall

Todd Dinkelman
Associate Professor
629 Aderhold Hall
(706) 542-6492
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Marilyn Cochran-Smith discusses the challenges of "teaching against the grain," in her book, *Walking the Road: Race, Diversity and Social Justice in Teacher Education* (2005). Her words speak to the conceptual framework, and rationale, for our work together in the student teaching seminar:

> "Teachers who work against the grain are in the minority. Often they must raise their voices against teaching and testing practices that have been "proven" effective by large-scale educational research and delivered to the doorsteps of their schools in slick packages. Often they must provide evidence that their students are making sufficient progress according to standard measures of learning, despite the fact that they place little stock in those measures and believe, to the contrary, that they work against the best interests of their children. It is not surprising that teachers who work against the grain are sometimes at odds with their administrators and evaluators.
>
> "To teach against the grain, teachers have to understand and work both within and around the culture of teaching and the politics of schooling at their particular schools and within their larger school systems and communities. Unlike researchers who remain outside the schools, teachers who are committed to working against the grain inside their schools are not at liberty to publicly announce brilliant but excoriating critiques of their colleagues and the bureaucracies in which they work. Their ultimate commitment is to the school and lives and futures of the children with whom they live and work. They have to be astute observers of individual learners with the ability to pose and explore questions that transcend cultural attribution, institutional habit, and the alleged certainty of outside experts. They have to see beyond and through the conventional labels and practices that sustain the status quo by raising unanswerable questions. Perhaps most importantly, teachers who work against the grain must wrestle with their own doubts, fend off the fatigue of reform, and depend on the strength of their individual and collaborative convictions that their work ultimately makes a difference in the fabric of social responsibility.
>
> "Teaching against the grain is challenging and sometimes discouraging work. In most student-teaching placements, there are few opportunities for experienced teachers or student teachers to participate in thoughtful inquiry, reflect on their daily decisions, or collaborate with others (Goodlad, 1984; Little, 1987; Su, 1990). In most of their encounters with school and university supervisors, student teachers are encouraged to talk about "relevant" and technical rather than critical or epistemological aspects of teaching (Hursh, 1988; Zeichner et al., 1988). Finally, in most of their pre-service programs, the role of the teacher as an agent for change is not emphasized, and students are not deliberately socialized into assuming responsibility for school reform and renewal (Edmundsen, 1990; Goodlad, 1990a).
>
> "As this [course will illustrate], however, student teachers' and collaborations with teachers who are themselves struggling to teach against the grain make for a different kind of experience. Working and

> talking regularly with experienced teachers who share the goal of teaching differently allow student teachers to participate in their ways of knowing and reforming teaching. Despite their inexperience, student teachers do learn about teaching against the grain when they talk with experienced teachers in learning communities where questions are urged, answers are not expected, and the tentative forays of beginners are supported." (pp. 28-29)

The very notion of "teaching against the grain" is predicated upon assumptions about both how social studies currently *is* taught and how it *ought* to be taught. In this seminar we will explore both assumptions through dialogue, deliberation, and reflection on problems of practice related to social studies. Our aim is to draw upon the power of collaborative inquiry, where "questions are urged, answers are not expected, and the tentative forays of beginners are supported" (p. 29). We will make sense of what it means to "teach against the grain" in social studies, as well as it what it means to work "within and around the culture of teaching" to create the conditions for powerful social studies teaching and learning.

I expect that we may disagree about what these ideas mean. Indeed, this diversity will be one key factor that will determine the success of our time together. Another key factor is how well we develop *collaborative inquiry*—a core theme of the Social Studies Education Program. The seminar asks that you allow yourself to live with uncertainty, and to "trust the process." In this seminar, we can expect to be challenged, critiqued, and supported as we ask and respond to powerful questions. The idea is to learn and grow together from our experiences both in and out of public school classrooms this semester.

Throughout the semester, you should expect to feel tired, stressed, confused, and challenged. You also should expect moments that leave you feeling engaged, appreciated, supported, and connected. You should know that everyone who will be working with you (cooperating teachers, field instructors, faculty, and anyone else involved in this course) has been where you are and likely has felt many of the same ways you have. This seminar assumes that each of us is still in a process of becoming. Because this seminar establishes collaborative inquiry as both an outcome and a method of the class, each member has a responsibility to create the conditions for the success of this class. I expect you to make the most of your experiences by asking questions, taking notes of your experiences, listening, and being open to finding the unexpected in all situations. Our collective experience, like your individual experience, will depend greatly on how well we communicate. In this sense, it's not only true that the more you put into the course, the more you will get out of it. It's also true that *how* you put what you put into it matters a great deal. I want to assure each of you that your thoughts, questions, fears, and successes will be taken seriously, and we will work together to see these as learning opportunities for all.

**Objectives**

According to the approved course description for this class, students completing ESOC 5/7560 will…

**1) apply arguments from scholarship in the foundations of social studies education in crafting their own defensible rationales for practice as social studies teachers.**
**2) carefully reflect on student teaching experiences in light of the Social Studies Education Preservice Framework for Accomplished Teaching.**
**3) develop collaborative skills in working with other professionals to frame, analyze, and seek solutions to problems of professional practice in social studies education.**
**4) use appropriate technologies to support their work as social studies educators.**
**5) develop a professional portfolio that demonstrates mastery of social studies education program objectives.**
**6) demonstrate powerful understanding of the ways in which various forms of cultural diversity influence teaching and learning contexts in social studies education.**
**7) demonstrate an understanding of curriculum and instruction reflecting a vision of teaching social studies that is responsive to the demands of educating for democratic citizenship.**

As a seminar, this class is largely a discussion-based class. Although the instructor will set the agenda for most class meetings, your school experiences, your interpretations of what's happening in the schools, and your questions will provide a good part of the substance of the course. For this reason, you share the responsibility with others in this class to make our time together educative. Accordingly, every class member is expected to contribute to the conversation we will continue throughout the semester. Your participation in this course should reflect the same professional manner you should exhibit in the schools.

That is, your manner should be responsible, open-minded, thoughtful, and earnest. These dispositions suggest far more than "just talking" in class, but speak to a type of engagement that includes speaking, listening, critiquing and demonstrating concern for the learning of others in the class. Stated differently, your responsibilities extend to more than simply making sure you meet the individual course requirements. You also have responsibilities to your colleagues in this class, so that we might come together as a community of educators working to better understand teaching and learning in social studies through mutual, supportive, and critical inquiry.

# APPENDIX G. SAMPLE CODEBOOK OF COLLABORATIVE INQUIRY PROJECT ANALYSIS

| Theme | codes | attributes | evidence1 | evidence2 | evidence3 | evidence4 |
|---|---|---|---|---|---|---|
| Improved understanding of ASE | Behavior focused ASE | Notifying through students behavior | Mary R#1, p4 | Mary #1, p14 | Coach R#1, p4 | Mary #1, p14 |
| | | Providing interesting material | Coach R2, p2 | | | |
| | Importance of ASE | | Mary #1, p | Robert #1, p9 | Coach #1, p4-5 | |
| | ASE and CIP perception | | Mary #1, p11 | Robert #1, p7 | | |
| | ASE and learning achievement | | Anna #2, p10 | Nancy #2, p3 | | |
| | Changed conclusion through CIP process | | John #2, p9 (using VAT) | Joanna R2, p3 | | |
| | Refined understanding of ASE | answer to open question and decision making | Matt #2, p5 | | | |
| | | creativity | Matt R2, p3 | | | |
| | | making inference | Matt #3, p1 | Matt #3, p2 | | |
| | | making lesson worthwhile for students life | Anna #3, p5 | Anna R1, p4 | | |
| | Improved notifying of ASE | | Matt #3, p2 | | | |
| | | ASE through artifact analysis | Joann #2, p7 | | | |
| Understanding of students | Comparing current students with their prior schooling experience | | Anna #3, p4 | John #1, p5 | Nancy #1, p4 | |
| | Endeavor to understand students | | Nancy #1, p13 | | | |
| | Importance of strong rapport with students | | Joanna #3, p9 | Robert #2, p5 (safe learning environment) | Nancy #2, p1 | |
| | Understanding ~~connection among~~ school, family, and | | John #1, p6 | John #1, p7 | John #1, p11 | John #1, p12 |

| | | | | | | |
|---|---|---|---|---|---|---|
| | community | | | | | |
| | Understanding cultural/ethnic diversity | Interaction with immigrant students | Coach #1, p14 | Coach #1, p14 | Robert #1, p11 | Robert #2, p4 |
| | | African-American heritage | John R3, p1 | | | |
| | Understanding their age characteristics (development aspect) | Interests in life world | Anna #3, p3 | Mary #3, p2 | | |
| | | Short attention time span | Matt #2, p8 | Nancy R1, p5 | | |
| | | Competition | John #3 | John R3, p1 | Joanna #2, p7 (jealousy) | |
| | | Life changing period | Joanna #3, p3 | | | |
| | | Behaviors related to classroom dynamics | Joanna #3, p7 | | | |
| | | Learning style | Joanna R3, p1 | | | |
| | | Showing disrespect | Nancy #1, p5 | | | |
| | Initial lack of understanding of students ability to learn | Confused with long questions | Matt R1, p4 | Matt #2, p4 | | |
| | | Disorientation with simulation (role playing) | Matt R1, p4 | Matt #2, p5 | | |
| | Finding student potential to learn | | Mary R#1, p6 | Matt #2, p 7 (decision making skill) | Anna #3, p4 | Anna #3, p9 |

# APPENDIX H. SAMPLE CODEBOOK OF ACTIVITY SYSTEM ANALYSIS

<Before student teaching>

| Activity system | Codes | Attributes | Evidence 1 | Evidence 2 | Evidence 3 | Evidence 4 | Evidence 5 |
|---|---|---|---|---|---|---|---|
| Subject | Prior teaching experiences | prior teaching experiences before starting student teaching | Coach #1, p1 | John #1, p1 | Matt #1, p5 | Robert (during practicum) | Nancy (during practicum) |
| | Influence of schooling experiences | met good teacher | Coach #1, p3 | Anna #1, p1 (history professor) | John #1, p3 | Joanna #1, p1 | Mary #1, p1 |
| | | met bad teacher | Joanna #1, p1 | | | | |
| | | disciplined | Coach #1, p9 | John #1, P5 | | | |
| | | good student | Matt #1, p2 | Anna #1, p1 | Nancy #1, p4 (honored high school graduate) | Mary #1, (AP class taken) | |
| | | school/community culture | Matt #1, p3 | John #1, P5 | John #1, P6 | Anna #1, p1 | |
| | Importance of home and family | necessary education in home | Coach #1, p | John | | | |
| | | parents involvement or discipline | Anna #1, p1 (watch over my shoulder) | | | | |
| | | teacher parents | Matt #1, p2 (parents) | Anna #1, p2 (in the family) | Joanna #1, p2 | Mary #1, p1 (sister) | Nancy #1, p2 (mother) |
| | | parents care about schooling | Anna #1, p1 | | | | |
| | Concerns | teaching different subject | Anna, #3, p1 | | | | |
| | | lacking confidence about methods | Mary #1, p5 | | | | |
| | | lacking confidence about classroom management | Anna #1, p5 | | | | |
| | Characteristics as a social studies teacher | acute concern about social issues | John #2, p2 | | | | |
| | Individual nature | passion to education | Robert #1, p1 | Nancy #1, p1 | | | |
| | | interest to subject | Nancy #1, p1 | | | | |
| Object | perceived goal of student teaching | certification related | Coach #1, p1 | John #1, P5 | | | |
| | | back up plan | Coach #1, p7 | | | | |
| | combined object | certification and instruction | Matt #1, p4 | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | of student teaching | | | | | | |
| | to be a good teacher | learn more about basics of education | John #1, P9 | John #1, p12 (lesson planning) | Mary #1, p7 | | |
| | | help students (caring/approachable) | John #1, P9 | Joanna #1, p2 | Anna #1, p4(approachable) | Joanna #1, p3 | |
| | | teach life skills across curriculum | Joanna #1, p1 | John #1 , p9 | Anna #1, p4 (build democratic citizens) | | |
| | instructional dimension | classroom management | Joanna #1, p3 | | | | |
| | | general and abstract | Nancy #1, p6 | | | | |
| Tool | experience from provisional teaching | classroom management skill | Matt #1, p5 | John (everywhere) | | | |
| | | understanding of student interest | | | | | |
| | practicum (observation class) | teaching at practicum experience | Nancy #1, p8 (need to prepare) | Robert #2, p4,5 | | | |
| | teacher ed program at UGA | methods class (helpful) | John #1, p15 | Nancy #1, p8 | | | |
| | | methods class (not helpful) | Mary #1, p5 | Robert #1, p4 | | | |
| | | practicum class (helpful) | Mary #1, p5 | Nancy #1, p8 | Nancy #1, p9 | Robert #2, p4,5 | Joanna #1, p6 |
| | | great but impractical (overall program evaluation) | Anna #1, p5 | | | | |
| | previous career experience | athletic player and coach | Coach #1, p7 | | | | |
| | | part-time work and county ED board | Anna, #1, p3 (getting personal stories from inservice teaches | | | | |
| | | after school program | Joanna #1, p6 | | | | |
| | | military experience | Robert #1, p2 | | | | |
| | | volunteering at local youth organization | Nancy #1, p1 | | | | |