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Collaborative Reflective Practice of Two Early Childhood Educators:
The Impact on Their Ongoing Inquiry and Professional Development

A Dissertation for the Doctor of Philosophy Degree
The University of Tennessee, Knoxville

Stacy Cummings Onks

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Dedication

From a casual classroom observation to a dissertation project, two teachers were the inspiration for it all - the real Susie and Mary Ann. Their enthusiasm and pure delight in working with young children served as momentum to finish this project and to tell their story. I have learned more about dedication to a chosen profession from these two teachers than could be learned from books. Their every thought and action was guided by the phrase, “Is it good for the children?” Indeed, whenever and wherever Susie and Mary Ann are teaching, be assured it is good for the children. To the dynamic reflective duo, this is dedicated to you with much admiration.

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To Nathan, my ultimate teacher for the life lessons I really needed to learn.

Abstract

Two preschool teachers served as participants in this instrumental case study with the purpose of: (1) identifying the emergence of new understandings and processes of joint, shared activity, (2) examining the ways in which the use of two diverse methods (electronic and audio journals) influenced and mediated critical reflective practice, and (3) examining the link between reflection and action.

There were two major findings. First, the use of multiple methods to engage in reflection was found to be critical to encourage and support effective, rich reflection. Second, teachers changed the conceptualization of their professional relationships and of reflective practice. When their collaborative reflections were put into action, change in professional relationships and practices occurred.

From these findings, two themes emerged. The first theme encompassed the relational and structural aspects of the reflective setting that influenced reflective practice. The second theme involved the use of multiple tools or methods that mediated their processes. Included in the discussion are the ways structural and relational features of the school setting (and research design) influenced teachers' ability to engage in continual reflection leading toward new knowledge, skills and dispositions. The use of diverse tools was shown to contribute to the participants' abilities to reflect deeply and critically. Implications for the practice of collaborative reflective practice in early childhood settings include the reorganization of the school context to insure time, space and methods that promote shared reflective experiences.

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Chapter I

Introduction

At the end of the day, a preschool teacher sits at the writing center in her classroom, quietly sorting through the drawings the children created during the day. As she looks at each piece of work, the teacher is aware that although the drawings appear to be scribbles, the children had also narrated for her the story that unfolded in their minds as they created their drawings. As each child recounted their story, the teacher carefully wrote their words on the back of each drawing so they could be shared with their parents. The teacher alternately smiles as she pauses over one drawing and becomes contemplative as she views another. With each child's artwork, the teacher is remembering the day's activities, events and her responses to the children.

The vignette above is typical of a process in which educators engage everyday whereby they take a moment to reflect on a classroom occurrence and his/her response to that moment. This is an example of the initial process of reflection. The role of reflective practice in teacher inquiry has received attention as an educational process from the time of Dewey in 1933. Schön (1983) defined the process by identifying two types of reflection; reflection-on-action and reflection-in-action which are differentiated by their temporal qualities. More recent definitions state that reflective action is an “active, persistent, and careful consideration of any belief or practice in light of the reasons that support it and the further consequences to which it leads” (Zeichner & Liston, 1996, p. 9). As a result, teachers are better situated to use their full

complement of training and skills to assess their pedagogical decision making, consider options for responding with intent, and build upon children's daily learning experiences in relevant ways.

As the preschool teacher continues sorting through and straightening the writing center, she quietly talks to herself, recalling her day and her responses to the children. Her co-teacher notices this and joins her. They begin to discuss what occurred during the day as they revisit the children's drawings. They begin to construct a revised narrative of the day, built upon the fusion of their individual perspectives and interpretations. They remark that what they have learned together in this moment of shared reflection will give them the advantage in supporting the learning of children (and themselves) the next day.

As a daily visitor to the classroom where this observation took place, it was a common occurrence for these teachers to recount stories of their day to me. An integral part of our ongoing conversations included their randomly bouncing ideas and plans off of each other about how to better support children's learning. Yet, their plans and ideas to act were sometimes lost as the teachers found themselves engulfed in the routines, activities and responsibilities of a new day. As a result of witnessing this scene and many others like it, I determined to design a study with two, over-arching aims: (a) to investigate the role of collaborative reflective practice on the developing inquiry and professional development of these teachers, and (b) to create a systematic, "user-friendly" method and conditions to support their desires to more effectively and consistently link reflection to action.

The bulk of research on teacher reflective practices in the United States is conducted on preservice teachers (student teachers) rather than inservice (professional) teachers (Calderhead, 1989; Clift, Houston, & Pugach, 1990; Sparks-Langer & Colton, 1991; Boud & Walker, 1998; Chen, 1998; Freese, 1999; Parsons & Stephenson, 2005). While efforts have been made in recent years to include the active participation of teachers in research on reflective practice, “the voices of teachers, the questions and problems they pose, the frameworks they use to interpret and improve their practice, and the ways they define and understand their work lives are absent from the literature of research on teaching” (Lytle & Cochran-Smith, 1990, p. 83). To better understand the processes described above, this research will apply case study methodology with two early childhood educators employed as co-teachers in a laboratory preschool at East Tennessee State University.

It is hypothesized that by encouraging teachers to engage in continuous, systematic collaborative reflective practice a number of process outcomes are likely. First, the teaching unit will become more cohesive and efficient in their teaching practices, more effective and consistent at applying reflective methodologies in their teaching day as they turn reflections into action-oriented efforts in their classroom. Second, by offering teachers a method for reflecting that is teacher-friendly and effective they will engage in more reflective moments throughout their day, rather than making belated or random efforts to reconstruct teaching/classroom moments. Finally, through participation in joint activity of sharing reflections, reified in the construction of action plans, strategies, documents, and use of tools (i.e., audio tape players, documents such as planning forms, rituals and routines), the teachers will construct shared knowledge and skills, not possible when thinking and acting alone.

The unit of analysis is two-fold and includes (a) the interaction and related actions of the teaching dyad, and (b) the relationship between each teacher's reflective practice and her actions. The intent is to foreground the dyadic interplay, illuminated by the individual experiences of each teacher, thus, attempting to "preserve the inner workings of the phenomena rather than separating an event into elements – for example, isolating individual[s] from the environment" (Rogoff & Chavajay, 1995, p. 871). By observing both the collaborative and individual experiences of reflective practice, a more in-depth description of the process can be gained.

The goal of the collaborative reflective process is informed changes to practice that are guided in part by the teachers' knowledge and beliefs. For many teachers, their current process of reflective practice falls short of that goal as they identify a reflection, but implement no change to their practice. To further understand the reflective process and reach the ultimate goal of informed change to practice, the literature reviewed will describe sociocultural-historical theory which serves as the theoretical underpinnings of this study. Seminal and current research on reflective practice in early childhood pedagogy will be discussed that includes the praxis of reflective practice and the influence of teacher knowledge and belief systems on these practices. Additionally, teachers' decision making processes and the action-oriented goal of reflective practice will be discussed. Literature will be reviewed to illustrate and illuminate the case study method chosen for this research and the data collection strategies employed.

Chapter II

Review of Literature

Sociocultural-historical Theory

Description and definition. During the years from 1917 through 1934, Russian psychologist, Lev Vygotsky and colleagues, developed the sociocultural-historical theory. Vygotsky's theory assumed a prominent position during the 1980's in the U.S. among "culture and cognition researchers who were struggling to reconceptualize the relation of individual and society...and of learning in and out of school" (Rogoff & Chavajay, 1995, p. 866). In developing his theory, Vygotsky drew from concepts emanating from the historical and evolutionary development of the human species as well as child development. Thus, his theory was referred to as the social-historical or the cultural-historical approach (Berk & Winsler, 1995).

Vygotsky's theory was embraced for his inclusion of social influence on development and learning. He expanded on the prevailing theory and diverged from the existing view of development as a step process that followed a predictable and sequential path, as is central to a Piagetian constructivist view. Vygotsky (1978) expanded Piaget's theory of constructivism by taking into account the effect of social interaction and cultural impact on learning. Piaget stated that "there is no longer any need to choose between the primacy of the social or that of the intellect; the collective intellect is the social equilibrium resulting from the interplay of the operations that enter into all cooperation" (Piaget, 1970, p. 114). It is in Vygotsky's social constructivist theory that the social context of learning is given serious consideration.

Vygotsky (1978) identified social interaction and culture as being the basis for development and believed that an individual's interaction and participation in social/cultural activities was necessary for development to occur. Key to Vygotskian theory is that development and learning cannot be separated from the social context. Karpova (2005) emphasized this by stating that in the Vygotskian perspective, knowledge construction is always mediated and influenced by social interactions.

Community of practice and situated learning. Lave and Wenger (1991) described the process of learning through participation in social context as “situated learning” and “legitimate peripheral participation.” Within situated learning, individuals who engage in the joint construction of knowledge comprise a community of practice. Communities of practice are settings in which joint learning occurs through local actions and interactions. It reproduces and transforms the social structure in which it takes place whereby “...participants share understandings concerning what they are doing and what that means in their lives and for their communities” (Lave & Wenger, 1991, p. 98). Serpel (1993) stated that within communities of practice, a system of relationships supports the development of a context for learning mediated by the cultural and social activities that are unique to that system. Wenger (1998) identified a range of key characteristics of communities of practice that includes: mutual engagement, joint enterprise, shared repertoire, and negotiated meaning in practice (p. 73).

Hanks (1991) described the entrance into a community of practice requiring a shift in thinking as to the locus of learning – from the individual to a more participatory framework. By making this shift, learning is viewed as being distributed among the participating members with diverse expertise. Fosnot (1989) described classrooms as communities of discourse in which

participants engage in conversation, activity, and reflection. Participants within the community of practice communicate, construct knowledge, and develop new skills via the assistance of mediational tools.

Tools of learning. Vygotsky defined tools as “...a means by which human external activity is aimed at mastering, and triumphing over nature” (Vygotsky, 1978, p. 55). From this viewpoint, a tool is something that serves as an intermediary between a stimulus from the environment and an individual’s response to that stimulus. They are therefore referred to as mediational tools as they operate as a bridge and act as a go between. Moran, Lamb, Newton, Worthington, & Carow (2007) referred to tools as those things that help learners coordinate and make meaning with themselves and with others.

Tools of learning may come in various forms and can be manipulatives such as a pencil, or could be psychological or mental tools such as conceptual maps or writing. Vygotsky (1962) referred to language as an important mental tool that plays a critical role in cognitive development. “Language makes thinking more abstract, flexible, and independent from the immediate stimuli” (Bodrova & Leong, 2007, p. 14). Language converts an external stimuli or experience into an internal understanding for the individual, mediating social interactional processes, both intermentally (with others) and intramentally (with self). During the preschool years, learners develop not only social speech but “private speech”. The primary goal of private speech is to offer the learner a means for communicating with themselves to further guide and regulate their own thoughts and activities (Berk & Winsler, 1995).

From a Vygotskian perspective, mediators become tools when the learner incorporates them into an activity. Bodrova and Leong (2007) interpreted the function of tools to be an

instrument for solving problems or that facilitate performing some action. It is important to remember that these mediational tools are cultural tools. Being such, these cultural mediational tools first exist in shared activities and assist the learner in problem solving which makes it possible to then perform independently in situations that previously required assistance. The learner may then subsequently apply those tools to other uses. Their function as a scaffold to learning can be understood as they assist learners in making the transition from a more assisted performance to one that is completed with more independence.

Zone of proximal development. Vygotsky proposed a concept, the zone of proximal development (ZPD), to explain the relationship between learning and development resulting from the interaction between a novice and more experienced learner. Vygotsky (1978) defined ZPD as the “distance between the actual developmental level as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance or in collaboration with more capable peers” (p. 86). The zone of proximal development includes both individually enacted activities and those that are performed with the support and assistance of more competent individuals, giving rise to the idea that each is working to their potential supported by the other. From this relational view of learning, development occurs through exchange with others from which shared knowledge is constructed.

Rogoff (1995) identified three planes of socio-cultural activity that contributed to the construction of knowledge. These planes were considered to be inseparable concepts that were not hierarchical and “involve[ed] different grains of focus with the whole socio-cultural activity” (Rogoff, 1995, p. 141). These three planes were: personal (apprenticeship), interpersonal (guided participation), and community (participatory appropriation). Apprenticeship was a metaphoric

designation that described an individual's involvement in cultural activities that "advanced their skill and understanding through their participation with each other" (Rogoff, 1995, p. 143). The interpersonal process by which the participants communicated and coordinated their efforts was defined as guided participation. This could be face-to-face communication or joint participation in side-by-side activities. Guidance came in the form of direction offered through engagement with others and the cultural or social environment in which they interacted. Rogoff (1995) used the term participatory appropriation to refer to the subjective process in which a learner constructs new understandings from his/her participation in a joint activity or task. As a result, the learner carries forward both new knowledge and processes of coming to know to similar, subsequent experiences.

For interactions to have meaning, there must be a mutual understanding or intersubjectivity among the participants in the learning community. Intersubjectivity is defined as "...the mutual understanding that is achieved between people in communication... emphasizing that understanding happens between people; it cannot be attributed to one person or the other in communication" (Rogoff, 1990, p. 67). Rommetveit (1979) stated that intersubjectivity "...is based on faith in a mutually shared world" (p. 96). From this perspective, learners contribute to shared understandings as they participate in joint activities.

Göncü (1993) described prolepsis as a concept that contributes to our understanding of the development of intersubjectivity and collaborative reflective partnerships between teachers. The communicative process of prolepsis involves a shared world in which there are two presuppositions occurring between the participants. The first is a position of trust between the participants with a shared willingness to dialogue in some fashion and a willingness to try and

understand one another. The second is the presupposition on the part of the speaker that the listener has something relevant to offer to the interaction. Prolepsis is of interest in the teaching relationship, and in particular, to collaborative reflective practice, because it is the qualities of prolepsis that could be a key contributor of the development of a partnership.

In summary, Vygotsky's theory attributes the social context of the classroom as that learning space where experiences may begin to take on real meaning. This construction of reality in the early childhood educators' environment is influenced and guided by the social and cultural climates of their classroom and school community as well as the implementation of mediational tools. Participants of the shared community are learning from those in their environment and influencing the learning of others as they share their perceptions, ideas and experiences. In the pedagogy of early childhood education, socially constructed knowledge has been shown to be facilitated by collaborative reflective practices among teachers (Clift, Houston, & Pugach, 1990; Sparks-Langer & Colton, 1991; Freese, 1999; Glazer, Abbott & Harris, 2004).

Reflective Practice in Early Childhood Education

Definition. Reflective practice is concerned with the process of teachers making sense of the phenomena of their experiences or "how educators create what Shulman (1987) described as the 'wisdom of practice' within the complex and dynamic world of teaching" (Grimmett, MacKinnon, Erickson, & Riechen, 1990, p. 20). Reflective practice involves teachers looking carefully at their own practices and thinking critically about how those practices and actions could be more effective in supporting children's, as well as their own, learning. This concept goes as far back as Dewey in 1933 and continues to be discussed and studied today. From Dewey's (1933) viewpoint, reflective practice occurs when there is a problem to be solved. He

defined “reflective action as that which involves active, persistent, and careful consideration of any belief or practice in light of the reasons that support it and the further consequences to which it leads” (Zeichner & Liston, 1996, p. 9). Given this definition, the complete process of reflective practice is seen as that which includes not only critical thinking skills but the implementation of a plan of action based on the reflection.

Van Manen (1977) discussed three modes of reflective thinking: technical rationality, interpretive communication and critical reflection. Technical rationality deals with applying educational knowledge to adapt or modify generalizations to match an individual context and is action oriented thinking. Interpretive communication focuses on clarifying the meaning of individual and cultural experiences, assumptions and predispositions that underlie the choices made and the accepted practices of a particular learning environment. Critical reflection charges the practitioner with addressing issues from a moral, ethical or socio-political standpoint.

Schön (1983, 1987) described two different types of reflection that are distinguished by their temporal qualities. The first is reflection-on-action and occurs before a lesson, during the planning process and after the instruction when the teacher considers what has occurred. A teacher reflects on his/her practice involving as many possibilities as there are phenomena in their profession. This process typically occurs when a situation presents itself in a unique, possibly unstable, way causing the teacher to think critically about their understanding of that situation. At this juncture, the teacher is faced with constructing a new way of operating, testing out that new reality in an experimental way and arriving at a new theory of operating.

The second type of reflection identified by Schön (1983, 1987) is reflection-in-action which occurs on the spot and is likened to thinking on one’s feet. This can be the most difficult

for teachers, as quite often, unexpected situations or student reactions prompt a shift in thinking for the teacher. Reflection-in-action was felt to be enhanced by the element of surprise. If an action produced the expected result there would be no call to change. However, if an action produced a surprising result, whether pleasant or unpleasant, the teacher has reason to reflect on the practice. In this process, reflection interactively focuses on the outcome, the action, and the intuitive knowledge of the teacher.

In the National Association for the Education of Young Children *Conceptual Framework for Early Childhood Professional Development*, a clear statement regarding the intent of professional development activities was made.

Learning is most clearly integrated into an individual's professional repertoire when there are frequent opportunities to utilize the new information, to reflect upon its meaning and applications, and to receive feedback on how the new knowledge or skill is incorporated into one's practice (NAEYC, 2005, p. 9).

Reflective practice is also evident when a teacher has integrated the image of self as learner. With this perspective, a teacher views effective teaching to include the notion that "... learning is lifelong, and constructed not only within her [teaching] team, but along with the children she teaches" (Moran, 1998, p. 408). By reflecting on practices over time and in relation to others, the educator is positioned to be able to improve her practices and take her effectiveness in supporting children to a higher level.

Characteristics of a reflective practitioner. In a synthesis of research on social roletaking and guided reflection in teacher education, Reiman (1999) stated that "in the absence of reflection, practitioners run the risk of relying on routinized teaching" (p. 598). When teachers

engage in reflective teaching, they are more likely to demonstrate an ability for analysis of their thinking and actions while making ongoing adjustments. “Theoretically, it connotes conceptually complex, ethical, caring, and flexible persons who consider alternative viewpoints” (Reiman, 1999, p. 598). Bolton (2001) felt that reflective practice enabled a teacher to be more effective in providing educational opportunities that focused on the needs of the students. An effective reflective practitioner, therefore, was described as being alert and alive to the students’ needs.

Bartleheim (1993) identified a set of components that constitute reflective practice that include problem setting, testing, and personal responsibility. Problem setting involves defining the problem and framing its integral parts. Within problem setting, the teacher is required to see a familiar problem or classroom process differently and in such a way that new possibilities and options for resolution or improvement become clear. Testing involves the teacher taking an investigative approach to finding a solution. Personal responsibility requires the teacher to be accountable for the application of the solution to the problem. It is this aspect, personal responsibility, which could account for the teacher’s motivation to apply their skills to the problem. If the teacher feels personally responsible for the outcome, there will be greater ownership and energy dedicated to the process (Bartleheim, 1993).

Parsons and Stephenson (2005) conducted a study on the development of reflective processes for preservice teachers working in collaborative partnerships. They stated that teachers use the process of reflective practice to develop and reconstruct with others their understanding of an event or aspect of their professional practice. Collaborative reflective practice is not just a simple evaluation of whether a lesson or plan works; it goes much deeper than this. The reflective process is used to identify reasons for success or failure and to seek multiple

perspectives from pedagogical partners. This collective identification of reasons to act should draw upon diverse experiences of, “theoretical knowledge and understanding about children’s learning and pedagogy” (Parsons & Stephenson, 2005, p. 98). From delving into the nature of shared reflective practice, Parsons and Stephenson (2005) revealed a need for teachers to develop awareness in monitoring their own thinking and understanding about teaching, in relation.

A number of researchers have identified the characteristics of a reflective practitioner. Zeichner and Liston (1996) described five key features of a reflective teacher as one who:

- examines, frames and attempts to solve the dilemmas of classroom practice; is aware of
- and questions the assumptions and values they bring to teaching;
- is attentive to the institutional and cultural contexts in which they teach;
- takes part in curriculum development and school change efforts; and
- takes responsibility for their own professional development. (p. 6)

A related attribute of a reflective practitioner is teachers’ personal orientations to learning. If they possess an internal orientation and view learning and teaching as a process of self-discovery, they can more objectively reflect upon and review their practices. However, if teachers operate from an external orientation and expect clear guidance from others, they may have more difficulty detaching from their practices to reflect upon and modify them (Korthagen, 1988).

Taken in summary, a teacher who is a reflective practitioner possesses the total compliment of all those qualities that constitute an educator who is a critical observer and thinker. This teacher is flexible and creative in addressing the challenges of the teaching profession and is energized to put those reflective ideas into action. Reflective practitioners will

be aware of “themselves” and employ critical thinking skills on a professional and personal level with others. A reflective practitioner engages the profession with an open mind to lifelong learning through collaborative exchanges and shared classroom experiences geared toward continuous improvement. The reflective practitioner values these collaborative relationships to apply critical thinking skills to make sense of their experiences, referred to by Shulman (1987) as the “wisdom of practice”. This wisdom includes reflecting on their belief systems and knowledge base both of which may be drawn from classroom practices and teaching partners. This teacher will also be motivated by her ability to identify and meet students’ needs while emanating and promoting an attitude of confidence. The actions of a reflective practitioner are one of responding with care and embodying a love for learning that creates a rich, enjoyable experience for the students and themselves.

Strategies for developing reflective practice. It is important to identify strategies that promote the development of reflective practice among both novice (preservice) and experienced (inservice) teachers¹. Clift, Houston, and Pugach’s (1990) research offered three strategies for including reflective practice in contemporary teacher education programs. The first strategy was reflective teaching which required the teaching and analysis of brief lessons as well as critiquing lessons from live videotape of classroom instruction. A second strategy was the inclusion of action research, case study, and ethnographic methodologies. The third was the use of reflective writing and the inclusion of inquiry-oriented supervision. This form of supervision used key questions

...to focus student attention on their initial intentions, their thoughts and feelings during teaching, related pedagogical concepts, cause-and-effect relationships, contextual

interpretations of events, potential solutions to problems, advantages and disadvantages of various solutions within the particular instructional context, and development of a plan to monitor the effects of any solution attempted. (Clift et al., 1990, p. 105)

Sparks-Langer and Colton (1991) offered a synthesis of research on teachers' reflective thinking with the following implications. Reflective practices can be fostered through post-teaching reflective journals, analyses of self videotapes, assessment of students' learning, and action research. Reflection could also be promoted through analyses of cases that illustrated the particular aspects of their practice and offered a rich repertoire of skills, ideas, and attitudes. There are a variety of means by which faculty can model this practice that include: identifying/discussing lines of reasoning in decision making, affirming the uncertainty of knowledge at times, and demonstrating reflective practices.

Boud and Walker (1998) examined the promotion of reflection in education programs by reviewing literature that examined what constitutes the effective use of reflective activities and explored situations/conditions in which reflective activities might be used in professional education. It was their conclusion that teachers had to be honest about whether they were really interested in fostering reflection and whether they were prepared to take a contextualized view of reflection into account. "An honest self-appraisal conducted in conjunction with peers is one of the hallmarks of an effective promoter of reflection" (Boud & Walker, 1998, p. 14). By engaging in critical thinking and questioning of their practices via reflection, teachers are tasked to confront themselves and their teaching processes and outcomes which will challenge their assumptions regarding their existing practices.

In the Boud and Walker (1998) study, it was observed that the teachers had difficulty in engaging in reflective practice. The researchers described one series of reflective activities that required participants to follow a sequential “recipe” for reflecting. Some of these planned reflective activities became obstacles to accomplishing effective reflection rather than learning moments as the attempt to restrict or contain the reflective moment impeded the process.

Glazer, Abbott, and Harris (2004) conducted a research study in which two groups of elementary school teachers designed a process to investigate their reflective practices. The first group followed a linear sequence of tasks for their reflective time together and those linear tasks were: brainstorming, listing and grouping topics for discussion, reflection and a closure activity. The first group preferred this structure. The second group stated it was hard to stick with such a linear sequence of reflection as was outlined for them. They “found their naturally emerging reflection processes to be more holistic – incorporating listing and prioritizing topics, reflecting, and even problem solving concomitantly, rather than in sequence” (Glazer et al., 2004, p. 38).

Participants in the Glazer et al. (2004) research identified multiple rewards from their participation in the collaborative reflection group. Those rewards included learning more about the school and about themselves on a personal and professional level, the release of stress, and the benefit of having a designated forum to express their emotions as a positive outcome. One of the most important outcomes for the participants was sharing ideas developed with other colleagues which resulted in action to address problematic situations. It was noted that if the teachers had been reflecting internally without the collaboration of the group, they would have missed valuable alternatives to their own perspectives and might not have been able to work through the problem, or have taken their reflection to the next level – action.

Teacher mentoring plays a vital role in developing reflective practice. Reynolds and Grushka (2002) conducted a case study focused on the emotional environment within a mentor/mentee relationship. The aim was to identify factors that had an impact on cognitive skills development for mentees described as the emotional geography of the learning environment. Findings included the identification of crucial differences in the emotional factors within the mentor/mentee partnerships. Some mentor/mentee dyads developed a shared understanding of each other while other dyads did not. From comparisons of content from participants' journals, it was the conclusion of these researchers that the different experiences of the participants were strongly linked to the degree of emotional intelligence of the mentor and the mentee. Their findings further underscored the need for more research in the area of the emotional environment of mainstream teaching experiences.

Bean and Stevens (2002) explored the use of scaffolding reflection of preservice and inservice teachers using online and written reflection with their students. The participants responded to prompts for their reflection posted to an internet bulletin and given a deadline for posting their response. These reflective prompts dealt with the themes the participants were studying throughout the week. Findings revealed that scaffolding did help preservice teachers to formulate and articulate their belief systems, but did not help them examine or challenge their thinking related to larger areas of their teaching day. On the other hand, the inservice teachers had quite different trends in their reflections. For example, the inservice teachers had more local references that included the context of the classroom indicating they were filtering "all of the course's reading and discussions through the interactions of their specific classrooms, as we might expect" (Bean & Stevens, 2002, p. 216). This finding may indicate that inservice teachers

were more engaged in their learning community or community of practice than were the preservice teachers.

This review of research related to strategies for developing reflective practice is dependent upon the teacher's ability to utilize knowledge bases and belief systems that impact reflective practice. Literature will be reviewed next that defines what is meant by teacher knowledge, how it is developed and how teachers draw on their knowledge bases in advancing instructional expertise. Teacher belief systems will be defined and discussed in relation to their impact on teacher knowledge and instructional planning. Both teacher knowledge and beliefs will be reviewed in relation to their impact on decision making in professional contexts.

Teacher Knowledge and Belief Systems

The topic of teacher knowledge is complex and defining or describing teacher knowledge has historically been difficult territory. Borko and Putnam (1996) stated it is a possible pitfall in categorizing types of knowledge as those categories may come to represent a storage system of sorts to human thinking rather than a device for helping us to think about teacher knowledge. Yet, it is a common strategy among scholars to pose vital questions to frame research about teacher knowledge. Two of the questions that will now be addressed in regard to teachers learning to engage in critical reflective practice are: "What is meant by the term teacher knowledge?" and "What knowledge is essential to a teacher's focus and reflective practice?"

To define what is meant by the term teacher knowledge, it is helpful to identify some of the types of knowledge. Munby, Russell and Martin (2001) offered two broad categories of knowledge which were teachers' practical knowledge and pedagogical content knowledge. Practical knowledge "relates to practices within and navigation of classroom settings and

highlights the complexities of interactive thinking-in-action” (Munby, et al., 2001, p. 880).

Pedagogical knowledge “involves both what teachers know about their subject matter and how that knowledge is translated into classroom curricular events” (Munby et al., 2001, p. 880).

Shulman (1987) offered seven categories of teachers’ knowledge. These categories include: content knowledge, general pedagogical knowledge, curriculum knowledge, pedagogical content knowledge, knowledge of learners and their characteristics, knowledge of educational contexts, and knowledge of educational ends, purposes, and values. Shulman’s categories appear to take the broad categories of Munby et al. (2001) and break them out into more specific groupings.

To further explore the concept of teacher knowledge, Cochran-Smith and Lytle (1993) offered two more categories, “local knowledge” and “public knowledge”, which are differentiated by how knowledge is constructed (p. 43). For teachers, local knowledge is a way of knowing about their own teaching constructed by them through activities such as reflective collaborations (Cochran-Smith and Lytle, 1993). So then, local knowledge is more a position of knowing rather than a type of knowledge that can be constructed as teachers engage in collaboration within their communities of practice. Public knowledge is generated for the larger community of educators and refers to new knowledge generated in a teacher-as-researcher venue.

Chen (1998) conducted research to determine classroom decision making processes with regard to developmentally appropriate practice. Chen’s data sources were interviews, field notes from observations, and artifacts of the participants’ curriculum practice. Chen found that the five participants, who were preschool teachers at a private school, relied more on their knowledge of child development and learning in their decision making than their knowledge of the individual

student. As an example, if a teacher had knowledge regarding the individual child the teacher would modify the curriculum to meet the child's need. Otherwise, the teachers would make the decision for the individual child based on the normative trend of all children at that time. This finding prompted Chen (1998) to suggest changes to programs that would enable them to "turn teacher preparation programs from the focus on knowing what, to the focus on knowing how and why" (p. 42). From Chen's study, it is inferred that many types of knowledge are essential to teachers' effective practices and that a teacher's knowledge and experience impacted what they believed would be good for the children.

In order to understand how teachers make meaning of their experiences, it is important to identify the role of beliefs in teachers' development of knowledge. One aspect of the relationship is to differentiate teacher knowledge from teacher beliefs, yet it can be a difficult process because they are often used interchangeably. Richardson (2001) noted there is considerable similarity and intertwining between the terms and research on knowledge can be just as much about beliefs as it is about knowledge.

Dewey (1933) included the concept of belief in his definition of thought. He stated that belief is crucial as "it covers all the matters of which we have no sure knowledge and yet which we are sufficiently confident of to act upon and also the matters that we now accept as certainly true, as knowledge, but which nevertheless may be questioned in the future" (Dewey, 1933, p. 6). This somewhat confusing reasoning gives some indication of the complexity in understanding how beliefs influence teacher knowledge. To support the interrelated nature of beliefs and knowledge, Borko and Putnam (1996) stated, "we may find ourselves thinking that teachers' knowledge is organized into abstract, isolated, discrete categories whereas, in fact, what teachers

know and believe is completely intertwined, both among domains and within actions and context” (p. 879). Simply, knowledge and beliefs while difficult to differentiate both inform and guide teacher reflective practice.

Pajares (1992) stated that beliefs have been studied in diverse fields which have contributed to a lack of conceptual clarity “and the educational research community has been unable to adopt a specific working definition” (p. 313). Nespor (1987) offered a helpful definition of beliefs that includes an inference to their origin. Beliefs are stored in episodic memory that is constructed of material drawn from experience and cultural sources of knowledge transmission. Conversely, knowledge is stored in semantic memory. “Nespor argued that beliefs drew their power from previous episodes or events that colored the comprehension of subsequent events” (Pajares, 1992, p. 310). Nespor also stated that belief systems did not require general/group consensus or internal consistency to be valid and are unbounded. In contrast, knowledge systems are open to critical examination, are better defined, and receptive to reason. Even with the inconsistencies characteristic of belief systems, Nespor determined that beliefs are more influential in determining how individuals organize themselves and are resistant to change.

In a synthesis of research on teachers’ beliefs and belief systems, Block and Hazelip (1995) suggested teacher beliefs are derived from personal observations and experiences and further stated that beliefs are difficult to modify. It is in this area of research that the need for teachers’ voices is thought to be most critical in understanding the phenomena. Goodman (1988) suggested that guiding images from past events filter the development of teachers emerging knowledge. For example, teachers hold guiding images from their past experiences when they themselves where students that influence their belief structures as teachers.

Bean and Stevens (2002) made a connection between reflective processes and belief systems. These researchers found that the reflection process occurs at significantly different levels for preservice and inservice teachers and that preservice teachers relied heavily on their belief systems. This seems to indicate that preservice teachers do not see themselves as part of a local learning community. Rather, preservice teachers tend to draw more heavily on their personal belief systems and course texts while inservice teachers draw from a more local referent - - their school community and classrooms.

In a review of research regarding teacher beliefs, Vartuli (2005) described beliefs as the heart of teaching and examined beliefs from the perspective of teacher efficacy. Self-efficacy is defined by Bandura (1986) as an individual's judgment of his/her personal capabilities to perform the functions and actions required to achieve designated levels of performance. In other words, it is the teachers' perception or belief regarding their competence whether or not that perception is representative of their actual performance. Vartuli's (2005) review of research indicated that teachers' perceptions or beliefs influenced how they felt, thought and behaved having a direct relationship on their motivation levels.

Newell (1996) stated that the "essence of reflection is the interaction of experiences with analysis of beliefs about those experiences" (p. 568). Thus, students and teachers have to be aware of and critically analyze their own beliefs to be able to engage in effective reflection. It is not enough for teachers to merely engage in reflective practice. The desired outcome of the process is for teachers to link reflection to action – that is, to make more informed decisions about and within their classroom practices. It is critical to discuss teacher decision making

processes in relation to reflective practice while being mindful of the impact teacher knowledge and belief systems have on the overall interaction.

Teacher Decision Making

Teachers who engage in reflective practice are better positioned to make purposeful, deliberate decisions based on their meta-analysis of the situation occurring in the classroom. Bartelheim (1993) referred to reflective practice as interactive decision making. The decision making process could be the interaction that is inferred by the collaborative component of reflective practice. It is a problem solving exercise that requires the collaborating teachers to reflect on their current practices and note areas of success or areas for improvement.

Clift et al. (1990) stated that previous research findings have indicated that though teachers make many decisions throughout their day, they are not trained in appropriate strategies for decision making. If strategies are employed at all, they are not effective. This outcome may be due to the program models of teacher education in which a linear sequence of problem solving is offered to preservice teachers.

Spodek (1987) conducted a qualitative study regarding decision making processes of preschool teachers. He found that there was a great deal of commonality in the beliefs shared by the participants even though they attended different teacher preparatory programs. Spodek (1987) postulated that these commonalities in thinking could suggest a sharing of ideas while working together and also suggests “that teachers influence one another’s thinking about education more than do their college instructors” (p. 205). He did express caution in this explanation as this commonality could be due to teacher selection process of that particular school.

Teachers who engage in reflective practice are assumed to have the skills necessary to review their practices, identify problems or need areas, and develop effective solutions (Zeichner & Liston, 1996). As discussed earlier, Chen (1998) conducted research regarding preschool teachers' decision making processes. Chen found that the teachers' ability to make sense of the classroom situation affects the quality of the curriculum and their judgment of what is developmentally appropriate practice. It was stated that teachers' personal experience is an important vehicle for curriculum decisions and their decisions to some degree reflect the values of the society to which they belong. Within the classroom context, decision making was described as a process involving teachers making sense of situations, making judgments, and choices. Through this process, situations and classroom context are always in flux requiring the teacher to reflect on practices to make informed decisions.

McMillan's (2003) meta-analysis of teachers' classroom decision making practices revealed that experienced teachers are more adept at monitoring the complexities of the classroom than inexperienced teachers. While this would not be a surprising finding, it distinguishes between teachers who reflect more superficially versus those who engage in critical reflective practice. For example, novice teachers tend to reflect in more superficial ways by describing the classroom events whereas experienced teachers tend to reflect more deeply by interpreting what is occurring in the classroom. The more experienced teachers in this study were able to integrate auditory and visual cues from the classroom into more complex schemas. These more experienced and effective teachers engaged in a continual planning or decision-making process informed by their ongoing reflective practice.

Chapter Summary

From this review of the literature, a reflective practitioner is one who is described as continually engaged in a cyclic process of reflection and action informed by both professional and personal knowledge as well as beliefs. Clift et al. (1990) stated that systematic reflection is an important tool for teachers' growth. An important outcome of the iterative reflective process is a better informed teacher who acts with intent. From this stance, reflective teachers move from a trial and error style to an approach to their work that involves critical thinking as they develop discernment and an ability to screen out non-seminal information.

“In sum, the reflective practitioner consistently approaches...teaching in a thoughtful, curious [and critical] manner and believes that one of teaching's main outcomes is a greater understanding of the teaching-learning act” (Nolan & Huber, 1989, p. 130). It is believed that this continual questioning and reflecting results in a teacher who would have a greater repertoire of skills for understanding and decision making. Further, reflective teachers have an increased self-awareness of their belief systems and knowledge base, acting with deliberateness to guide and inform classroom practices. Thus, a reflective practitioner is able to think about what she is doing, make needed changes to her practices, and clearly articulate the reason for her actions based on purposeful, systematic reflections.

Chapter III

Purposes and Procedures

From the review of literature on teacher reflective practice, it is evident that the study of experienced teachers and the incorporation of diverse methods of reflective practice deserve further study. Thus, the purposes of this study included identifying the emergence of new understandings and processes of joint, shared activity as two experienced early childhood teachers engaged in collaborative reflective practice. A second purpose of this study was to examine the ways in which the use of two, diverse methods or tools (electronic and audio journals) influenced the teachers' processes of reflective practice and mediated critical reflective practice. Third, the link between reflection and action or change to practices was examined.

To respond to these purposes four research questions were formulated to guide this study and were:

- 1) What methods or combination of methods (written journals, audio journals) are most effective for teachers in obtaining useful reflections on their practices?
- 2) What is the process of reflective practice in which these teachers engage?
- 3) What new knowledge or skills have they developed from their reflections that inform their practices?
- 4) What is the nature of the relationship between reflection and action for these two teachers and/or in what ways does reflection inform their action?

It was hypothesized that by encouraging teachers to engage in continuous, systematic collaborative reflective practice a number of process outcomes were likely. Namely, the teaching

unit would become more cohesive and efficient in their teaching practices and more effective at applying reflective methodologies in their teaching day. Further, through participation in the joint activity of sharing reflections, reified in the construction of action plans, strategies, documents and use of tools (i.e., audio tape players, documents such as planning forms), the teachers would construct shared knowledge and skills, not possible when thinking and acting alone.

It was also hypothesized that by offering teachers a method for reflecting that was teacher-friendly and effective (audio recorder) they would engage in more reflective moments throughout their day, rather than making belated or random efforts to reconstruct the teaching/classroom moment. It was anticipated that the results or the method by which the participants reflected on their practices could be instrumental in understanding the same phenomena with other preschool teachers.

Research Design

Qualitative Research

The selection of qualitative methodology was an appropriate methodology given the research questions identified and the need to situate the sources of data within the natural setting. Denzin and Lincoln (1994) noted that qualitative research is multi-method in focus, involving an interpretive naturalistic approach to its subject matter. This means that qualitative researchers study things in their naturalistic settings, attempting to make sense of or interpret phenomena in terms of the meanings people bring to them (p. 2).

Yin (1994) stated that qualitative inquiry lends itself to exploring research questions with a more focused view of the area of interest by allowing for extensive time in the field.

Additionally, qualitative inquiry allows for a goodness of fit methodological design that could be redefined mid-research to accommodate unexpected findings and offered the best answers to the research questions posed (Mason, 2002).

Finally, this research method is intended to not only inform the field, but also to benefit the participants. This was a key characteristic of this methodology as the participants were the catalyst for this research and were interested in how their participation might inform their practices. Bolster (1983) explained it best when he stated "...I know this model has the greatest potential for generating knowledge that is both useful and interesting to teachers" (p. 305).

Instrumental Case Study

A case study is "an exploration of a 'bounded system' or a case (or multiple cases) over time through detailed, in-depth data collection involving multiple sources of information rich in context" (Creswell, 1998, p. 61). An instrumental case study is defined as being used to provide insight into an issue (Stake, 1995).

It was of interest to learn how the participants engaged in collaborative reflection and as a result began to change their practice. However, in the research area of early childhood education, it has been noted that a shortcoming of research methods is the tendency to formulate implications based on fragments or snapshots of a teaching day without the inclusion of the voices of the teachers, themselves (Lytle & Cochran-Smith, 1990). To address this, "...qualitative interpretive research via case studies and ethnographies offer promise for meeting this shortcoming by its focus on how participants construct meaning out of actions in their daily lives" (Goodwin, 1996, p. 108). To gain a greater depth of understanding into reflective practice by intimately examining the collaborative reflections of two teachers, an instrumental case study

methodology best matched the needs of this study. As such, in this study, adequate opportunities to hear the voices of the teachers/participants was assured and incorporated in the data collection strategies.

My Role as Participant Observer

Qualitative inquiry encourages observations in the natural setting and the inclusion of the researcher as a participant-observer (Creswell, 1998). Thus, I took the role of observer as much as possible and moved into the participant-observer role when it maintained the flow of the interaction. In the initial weeks of data collection, my role as participant observer was easier to maintain as Susie and Mary Ann reflected via the methodologies without much interaction with me. I entered their classrooms to observe as unobtrusively as possible with neither the participants nor children giving me much notice. I maintained flexibility in my roles during observations to allow for as little disruption to the natural setting as possible. If engaged in interaction, I reciprocated until I could fade back into the background of the natural setting. In later weeks, Susie and Mary Ann engaged me in their reflections including me in their dialogues and at those times my role was more participatory. Given the role of participant-observer and my emersion with the participants, subjectivity was an aspect of this research that must be addressed.

Peshkin (1988) offered enlightenment on managing one's subjectivity as a researcher. Acknowledging the researcher's biases, subjectivity was clearly identified and owned during the conduct of this study. I followed the recommendations of Peshkin to engage in a formal and systematic monitoring of self. To accomplish this, themes of subjectivity were explored during all types of data collection and recorded in my field notes. By doing so, I was aware of how my

subjectivity might have affected the outcome of the findings which will be discussed later in Chapter V.

Unit of Analysis

The unit of analysis was two-fold and included (a) the interaction and related actions of the teacher partnership (teaching dyad), and (b) the relationship between each teacher's reflective practice and her actions (including her use of the reflective practice tools). The intent was to foreground the dyadic exchanges, illuminated by the individual experiences of each teacher, thus, attempting to "preserve the inner workings of the phenomena rather than separating an event in to elements" (Rogoff & Chavajay, 1995, p. 871). As a result of focusing on this unit of analysis, the sources of data and context for generating data incorporated times when the teachers reflected and acted individually and together.

While observing the participants, the method of reflection itself was under investigation for its ability to be used effectively and easily by the participants. Additionally, the teaching environment was observed for its conduciveness to reflective practices of the teachers. During this study, it was of interest to identify:

- the impact of the reflective process on the personal and professional relationship of the teaching dyad,
- the depth of reflections of the teachers,
- which method or combination of methods allowed the teachers to reflect effectively in practice and in later planning sessions, and
- the application of knowledge and ideas learned from their reflection.

Participants and Setting

Sampling Strategy

For this instrumental case study research, the case consisted of a pair of early childhood educators in the ETSU laboratory preschool. In the planning stages of this research, the two participants, Susie and Mary Ann, were team teachers in the classroom. However, the staffing pattern changed as data collection commenced when they were assigned new teaching partners. Regardless, they continued to reflect together and were still teaching within the preschool in some capacity together. As they indicated a continued interest in participating, they continued to present as the best choice for this case study.

Prior to this study, Susie and Mary Ann, the pair of educators, had been teaching together for five years and had developed a friendship as a result of their working relationship. More importantly, each expressed an interest in learning more about how they currently reflected on their practices and how they might make improvements. In a sense, our mutual needs and interests in this topic facilitated the design of this study. These two teachers fit the case study criterion for selection in that they had the ability and potential to provide learning opportunities which matched the criteria for case selection as outlined by Stake (1994). On a more practical note, they were a convenience sample as both teachers planned to continue their work at the preschool for at least the length of time of the study and indicated no immediate plans to change their employment.

Susie's biographical information. Susie was born and has lived her 53 years in the same city in Upper East Tennessee. She identifies her race as Caucasian. After completing high school, she attended a local business college for one year. Susie married and had two children

staying home with them until both were school aged. At this time, she contemplated a return to work and realized her passion was in working with children. She obtained certification as a day care assistant (CDA) in 1983 and since that time accumulated over 25 years experience working with children aged birth – 5 years in various child care centers.

She worked in the capacities of teacher and assistant director before taking a preschool teaching position at the CSC at ETSU in 1999. She has some college credits but has not completed a degree stating she felt the time for her to do so had passed. She continues to take courses at ETSU in the area of early childhood education that would further her skills as an early childhood educator.

Susie completed an online abbreviated version of the Myers-Briggs Personality Inventory. The reasoning for selection and use of this inventory are described in the *Procedures* section in this chapter. From Susie's personality inventory responses, her personality was typed as being an Extravert Sensing Feeling Perceiving (ESFP). Individuals with this personality type are characterized as living in the moment. "Their focus on the immediate leaves them with a low tolerance for procedures, routines, and anything else that stands in the way of immediate gratification" (Kroegeer & Thuesen, 1988, p. 251). ESFPs are very accepting of others and have a strong need for harmony to the extent that they may repress anything that is less than positive. They have a grasp on reality and a firm grounding in what they can understand via their five senses. ESFPs prefer to learn by doing and do not typically engage in an excessive amount of planning for their multitude of activities. "When learning is fun and social and a chance to entertain or be entertained, the ESFP excels" (Kroegeer & Thuesen, 1988, p. 255). As to careers,

ESFPs thrive in a challenging atmosphere where things are different and require special effort to accomplish. Adherence to rigid routine or constraints is not a good fit for an ESFP.

Mary Ann's biographical information. Mary Ann, 40-years old, was born in New York where she attended and finished high school. After high school, she attended college in New York studying English and journalism. She had a job writing for a newspaper, but decided this was not her calling. On the suggestion of a friend, she relocated to North Carolina and began working at a preschool and discovered that she had a passion for teaching young children. She continued working in child care settings in teaching and directorship capacities. Family ties brought her to Upper East Tennessee where she began working at the CSC approximately 8 years ago.

She worked toward her bachelors degree at various institutions with the last being ETSU. Though near completion, she is uncertain as to when she plans to finish, but takes occasional classes in the area of early childhood to further her knowledge as a teacher. At present, she has accumulated over 16 years working in early childhood settings with children birth – 5 years of age.

For Mary Ann, the Myers-Briggs inventory revealed a personality type of Extroverted Intuitive Feeling Judging (ENFJ). Individuals with this personality type are considered to be great communicators. They are skilled at understanding the needs and motivations of others as well as being able to size up a situation in a caring and concerned way. An ENFJ is often a natural leader and others find it easy to relate to an ENFJ. For this personality type, learning is best accomplished through imitation and they are considered natural teachers. “They are natural

teachers and preachers, although they can become frustrated with the accompanying administrative demands, ending up somewhat disillusioned” (Kroegeer & Thuesen, 1988, p. 275).

The reflective/teaching dyad of Susie and Mary Ann. Susie and Mary Ann described their relationship as one that began as a friendship through their employment at the Child Study Center (CSC). Originally, each was working in separate areas of the CSC and liked the philosophies that each held in regards to early childhood education. Their shared philosophy is what drew them together and sparked their relationship. After about a year and a half, Mary Ann was assigned to move from toddlers to the preschool. It was at this time that Susie and Mary Ann began to work together in the preschool as a teaching team. They have known each other professionally for approximately seven years spending five of those years teaching in two preschool classrooms. For the remaining three years of the seven, they co-taught in the same classroom.

Setting

The research setting was the Child Study Center (CSC) at East Tennessee State University, which is accredited by the National Association for the Education of Young Children (NAEYC). The CSC is a model site for early childhood education for the state of Tennessee and is affiliated with the Center for Excellence in Early Childhood at East Tennessee State University. During the data collection period, it served approximately 118 children ranging in age from 3 months to 6 years. The children were placed in classrooms based on age and in compliance with the state child licensure requirements for teacher to student ratios.

There is a full time Program Coordinator/Director, an Assistant Director and two Executive Aides that oversee the functioning of the CSC. The Director of the CSC offered Susie

and Mary Ann her support for participation. The CSC Director expressed interest as to the outcomes of their participation and possible benefit to the entire teaching staff and their practices. The instructional settings are divided into three areas which are infants, toddlers and the preschool. Each instructional area had a Master Teacher that coordinated and supervised instructional delivery by the teachers and staff in those respective areas.

There were a total of seven full-time preschool teachers at the CSC, two graduate assistants during each regular academic semester and federal work study (FWS) students who supported teachers throughout the day. The schedules of the graduate assistants and FWS students varied from one academic semester to the next, meaning that the seven full-time teachers constituted the consistent staffing pattern (see Appendix A for staffing schedule).

The preschool classrooms (where this study took place) were located in the center of the CSC with the toddler and infant classrooms on adjacent ends of the “L” shaped facility (see Appendix B). The preschool classroom was one large area (approximately 2200 sq. ft.) serving 61 children in the 3- to 6-year-old age range. The classroom was separated into two smaller areas by a four foot high dividing wall that was intended to cut down on the noise levels within the preschool classroom (see Figures 1 and 2). Each of these smaller areas was approximately 1100 sq. ft. and the areas were divided into learning centers that addressed various developmental domains and was staffed by 3 - 4 preschool teachers. The teachers had the advantage of being able to easily see over the dividing wall into the adjoining area.

At the CSC there were some available planning and work spaces for the teachers. For the preschool teachers, the office space was limited. The participants shared one small office space with two other preschool teachers (see Figure 3). There was a large classroom in the CSC that

housed the CSC atelier (art room). This room was used for a wide range of meetings, ETSU classes, and indoor play for the children during inclement weather. The room was available for the teachers' use when it was not scheduled for other purposes (see Figure 4). The CSC had a small teacher lounge that was used as a lunch/break room (see Figure 5).

During data collection, the participants met in any available spot that was relatively quiet and conducive to their efforts to reflect on their practices and to plan curriculum. They could at times begin to reflect together and then have to move to another location as others filtered into their space. The participants also used their personal lunch hour or during "off-the-clock" time to discuss their thoughts regarding classroom and student needs.

The climate of the CSC during data collection would best be described as chaotic.

All 118 children were transitioning from their current classrooms to the next based on their developmental progress. This transitioning process was accompanied by changes in teaching dyads and triads as some of the teachers moved to different classrooms. At the same time, the CSC was undergoing the work intensive process of reaccreditation by NAEYC. Additionally, the CSC was preparing for the annual Early Childhood Conference held each July. For that conference, the CSC teachers were heavily involved with presenting, touring, and hosting the event which required an enormous amount of time on the part of their staff and teachers for several months.



Figure 1. Preschool classroom showing dividing wall to the right.



Figure 2. Preschool classroom on opposite side of dividing wall.



Figure 3. Preschool teachers' office space.



Figure 4. CSC atelier (art room).



Figure 5. CSC teacher lounge.

In Susie's classroom, the children were preparing for and transitioning to kindergarten. Due to the children attending a variety of area schools operating on different academic calendars, they did not all leave the CSC at the same time. The constant change in classroom dynamics extended the period of anxiety and excitement for the children and for Susie. As children were transitioned out of the classroom, a new group of children moved up from the toddler area to the preschool. For Susie, this was a bittersweet time of saying goodbye and an exciting time of greeting new children.

Along with the change in children in her room, Susie experienced a change in teaching partners. Susie's co-teacher moved up with the children and a new teacher joined Susie, further changing the dynamics of her room. Though Susie expressed that she was excited about this, there was still a negotiable amount of flux and change she negotiated during this data collection time.

In Mary Ann's classroom, the sense of disruption came not as much from children transitioning, but from staffing issues. During the data collection period, Mary Ann found herself consistently short staffed as her co-teacher was out on maternity leave and her vacancy was not filled immediately. Additionally, the typical staffing pattern included student workers and graduate assistants, but that work force was not available in the summer. Mary Ann found herself spending a large amount of her planning time resolving staffing issues rather than focusing on the children. This created a stressor for Mary Ann as her preference was to focus on issues revolving around the children's needs rather than administrative duties.

Planning periods were reduced during this time of staffing shortage, meaning Susie and Mary Ann had limited time to reflect in collaboration during the day. They were teaching in adjoining classrooms and could catch each other briefly during the day or possibly on the playground. Otherwise, their reflective opportunities were those they created during their lunch times or during off-duty hours.

Data Collection and Procedures

Prior to the commencement of data collection, Institutional Review Board approval was sought and granted from both institutions, the University of Tennessee and East Tennessee State University (Appendixes C and D) and Informed Consents were obtained from participants and others (teachers and children) who might be recorded or videotaped during data collection (see Appendix E and F). Over the course of three months, multiple forms of data were generated to achieve triangulation and gain a greater depth of understanding of the phenomena of reflective practice as it occurred for the participants in this setting. Data triangulation is a critical aspect of

case study methodology and is informed by multiple accounts and multiple data sets. As stated by Ritchie and Lewis (2003),

the primary defining features of a case study [is the]...multiplicity of perspectives which are rooted in a specific context....those multiple perspectives may come from multiple data collection methods, but they may also derive from multiple accounts – collected using a single method from people with different perspectives on what is being observed. (p. 52)

As I am the only participant observer in this study, reliability was achieved by triangulation among the various data sources. Construct validity was achieved by the multiple data and method sources of the research design.

Study Timeline

Data were collected across a thirteen week time frame for this study which was May – August 2008. There were seven sources of data (both individual and dyadic) that were collected with the initial data collection plan outlined below (see Table 1).

Table 1

Data Collection: Types and Timelines

Data Type	Frequency/Setting
Biographical questionnaire	Biographical questionnaire given to each participant at the beginning of data collection
Aptitude and attitude assessment Inventory	At the beginning of the data collection period, each participant completed the Myers-Briggs Personality Inventory (abbreviated version),
Interviews	Initial (beginning of data collection), monthly, and concluding (end of data collection) per participant
Audio journaling by participants	Minimum of three times per week per participant. Each participant received verbal cues to audio journal a minimum of three times per week
Written journal	Each participant received electronic journal question(s) for response one time per week that were returned at week's end
Observations and field notes	Observations occurred 1 - 3 times per week for each participant in their various work settings. Field notes were taken at each scheduled observation.
Classroom artifacts	Various artifacts such as lesson plans, newsletter, emails, schedules, curriculum documentation, accreditation documentation, teacher planning books/notes, etc. These artifacts were reviewed throughout the data collection period.

Procedures

The following diagram illustrates the flow of data collection for this study (see Figure 6). Each of these data collection methods are described in greater detail that will highlight their intended purpose and contribution to achieving the research goals.

Biographical Questionnaire and Assessment Inventory. At the commencement of the data collection period, the participants were given a questionnaire developed for this study to obtain historical and biographical information (Appendix G). To contribute an additional layer of assessment, the participants completed the electronic, abbreviated version of the Myers-Briggs

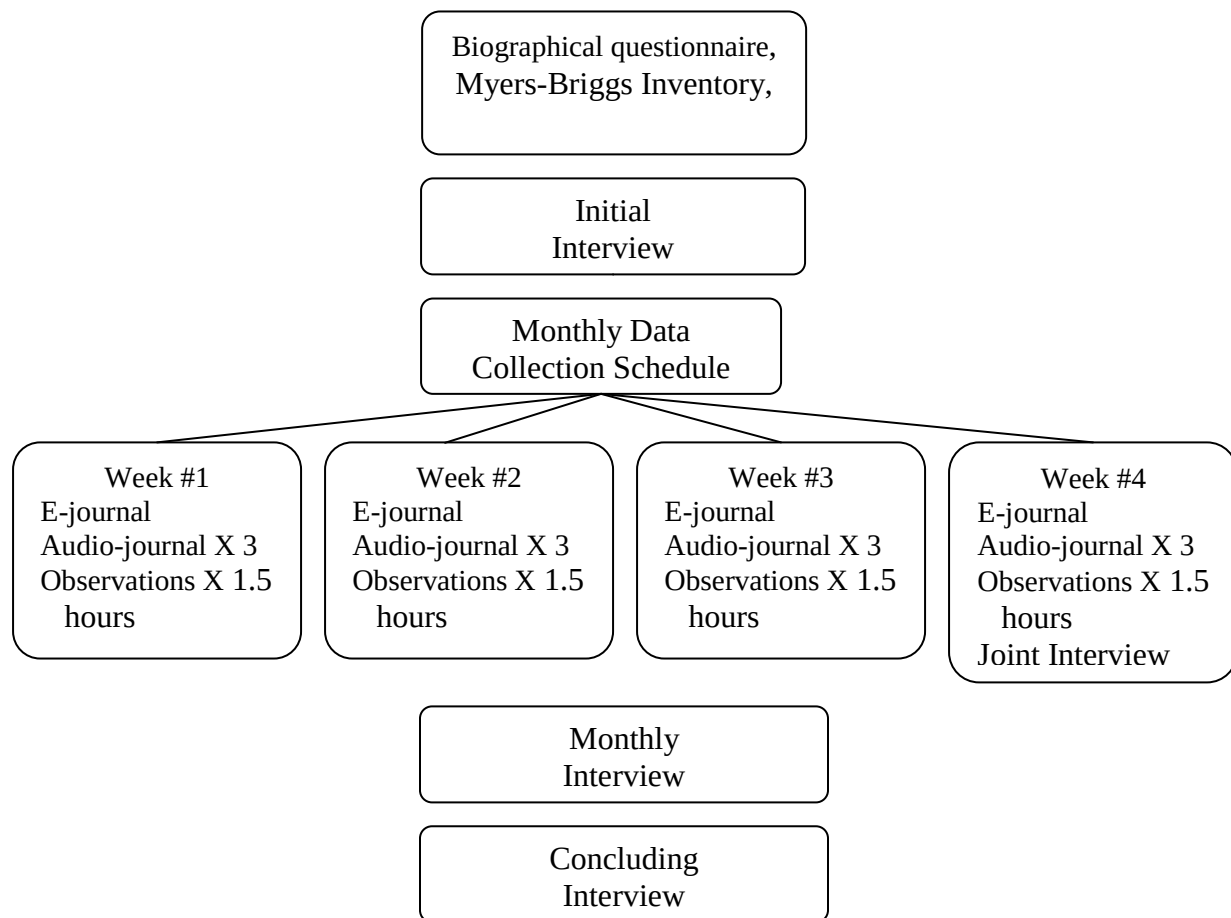


Figure 6. Flow of data collection.

personality inventory (see Appendix H) which can offer insight into actions and served to add to the interpretation of the participant's responses throughout this study.

Interviews

One-on-one semi-structured interviews were conducted at three points across the study. with an additional four joint interviews during and following the study. All interviews were tape recorded, transcribed verbatim, and thematized. See Appendix I for a list of guiding questions used during these interviews.

Initial interviews. The initial interview was conducted at the onset of the study. The purpose of this interview was to determine from the participants:

- What was the nature of and the difference in reflections that occurred for them in isolation versus those occurring in collaboration with their teaching partner?
- When, where and how did they reflect on their practices?
- What was the focus of their reflections?

The intended outcome of the initial interview was to obtain a better understanding of each participant's professional and personal motivations to include goals, concerns, interests, and needs. Any questions they had regarding the research design were addressed during this initial interview. Upon completion, the interviews were transcribed and their content reviewed before initiating the research project.

Ongoing interviews. A total of three joint monthly interviews were conducted at the end of each four week data collection period and were approximately one hour in duration. These interviews were guided by a content analysis of the audio journals, written journals, artifacts, field notes and observations conducted over the previous four weeks. In keeping with the tenets

of qualitative research design, it was the intent that the experiences of the participants guided and informed the research questions for that month as they related to the research purpose. The outcome of conducting these monthly interviews was to ascertain a better understanding of the overall experience for that month, what was learned versus what was already known or validated about their practices, and “aha” moments. By pulling from all the data sources, this was an opportunity to gain a better understanding of the participants’ reflections by pulling together the experiences from that month and identifying any changes in their practice that resulted from this reflection.

Concluding interviews. Concluding interviews were conducted at the close of the thirteen week study to obtain an idea of any changes in the teaching practices and in the professional or personal relationship between the two participants. It was a goal of these interviews (both individual and joint) to document and clarify the experiences of the participants during the research and gave them an opportunity to expand on and summarize their experiences. Select segments from the data sources collected during the three month period were used to assist the participants in recall during this final interview process. Part of the interview included questions to better understand their perception of the process (method) of audio journaling and written journals. Additionally, questions were posed to get a better understanding of the impact of these reflective processes on their teaching practices.

Audio Journaling

Participants were provided with small, digital, pocket-sized audio recorders for the audio journaling portion of the data collection. Audio journaling was used to obtain in-the-moment reflections by the participants as they kept these recorders on their person throughout their work

day. Each participant was reminded to complete their audio recordings a minimum of three times per week by me as I entered the research setting for observations and also when I sent the electronic written journal questions. The arrangement of their classrooms made this type of journaling optimum for the participants and eliminated the tedium of constantly handwriting their reflections. It was expressed by the participants that in the past they were overrun with documenting classroom practices and this data collection technique appealed to them. It was expected that the ease of audio journaling would produce more entries than if they were required to write them all as they occurred and was expected to ensure in-the-moment reflections of the teachers and their classroom experiences. A business card sized template was attached to the audio-recorder to offer them some guidance in the identifying information that should be included for each audio-journal entry (see Appendix J). The recorders were collected at the end of each week, transcribed verbatim and coded to identify emerging themes. The audio journals were also coded for depth of reflectivity using the LaBoskey scale.

Written/Electronic Journaling

The participants were asked to complete one written reflective journal entry on a weekly basis focused on their experiences for the given week. The participants received guiding questions via email on Friday morning each week and asked to return their responses by the following Monday morning (see Appendix K for guiding questions). This gave them the option of completing them during the workday on Friday or in their leisure over the weekend. The questions presented to them were guided by observations and experiences that related to the research topic or issue that came to the research field during that week's data collection. This data collection technique was expected to generate reflections of the participants during quieter

moments of their work day. On a weekly basis, the written and audio journals were transcribed verbatim, thematized, and coded using the LaBoskey scale.

Observations and Field Notes

I observed each participant on a weekly basis in their classrooms and during selected planning sessions for a total of 1 ½ hours each week, per participant. Observations included a combination of an individual teacher or both teachers together in the classroom, depending on the activity.

Classroom observations were scheduled at different times across the work day to observe the range of activities facilitated by the teachers across various classroom settings. I consulted with the participants prior to commencement of each week's observations to develop a schedule that ensured I would be observing a range of their daily activities.

Each observation was recorded in a field note journal and/or on a laptop computer. This data collection technique allowed me to observe the teachers in the moment and their reactions to the variety of situations that occur in the classroom. Observations at the beginning of the study were baseline observations. As the research progressed, the observation time was used to help determine if the reflective practices represented through audio journaling, written journals, and weekly interviews were changing classroom practices.

It was intended that I would videotape each participant during the observations for approximately five minutes per week. After three weeks, the videotaping process had proved too disruptive to the natural setting to be of value. The decision to discontinue videotaping was made so as to decrease the disruption and enable me to continue to enter their classrooms to observe and record my observations in field notes.

Physical Artifacts

One last type of data was the review of various documents generated by the participants in their daily work as well as by administrative and accrediting bodies (NAEYC, Tennessee Department of Human Services, etc). Prior to the onset of the study, I discussed with the participants the possibility of and plan for reviewing their classroom plans, notes, and other classroom documentation. As they are employed at a lab school, they were engaged in documentation that might be helpful to the purposes of this research. Documentation included children's artifacts, photos of children in learning activities, teachers' notes regarding children's development, potential learning activities, to name a few. These documents helped somewhat to situate the teachers' ongoing reflections as they referred to a range of activities in the school and their classrooms, but were not as relevant to this process as were the observations.

Data Analysis and Representation

The main sources of data for this study were interviews, observations, audio journal submissions, electronic written journal submissions, researcher field notes, and physical artifacts from the participants. These sources of data fall into the categories defined by Creswell (1998) to be the four basic types of information to collect: observations, interviews, documents, and audio-visual materials (p. 19). These data will be represented by visual maps, content analysis tables, and scoring analyses.

Storage and Management

All research data were stored in a locked filing cabinet. To protect the identity of the participants and any children whose interactions may be discussed, pseudonyms were assigned. The pseudonym key was protected and stored in a separate locked filing cabinet from the data.

Both filing cabinets are located in my office on the campus of East Tennessee State University. The computers used for sending electronic submissions both sent to and from the participants were password protected.

Analytic Process

There were three approaches undertaken to analyze the data. These include (a) constant comparative method, (b) LaBoskey's depth of reflectivity scoring, and (c) content analysis of reflective submissions that paralleled activities in the school setting.

Constant comparative method. A constant comparative method of data analysis was used to illuminate the research questions that focused on the impact of collaborative reflective practice on the thinking and actions of the participants. The constant comparative method is a process of "...taking information from data collection and comparing it to emerging categories" (Creswell, 1998, p. 57). Lincoln and Guba (1985) outlined four stages of the constant comparative method which are (a) comparing incidents applicable to each theory, (b) integrating categories and their properties, (c) delimiting the theory, and (d) writing the theory. By emersion in Susie and Mary Ann's experiences, a perception of their practices in collaborative reflection was formed.

During the first stage, the transcriptions of the reflective journal submissions (both written and audio recorded) were read multiple times to get a sense of emerging themes. The journal submissions were then thematized and notated in the margins of the transcriptions. This created a visual map for constantly comparing emerging themes to those previously identified providing "a format that present[ed] information systematically, so the user could draw valid conclusions and take needed action." (Miles & Huberman, 1994, p. 91). The visual maps created allowed for the identification and constant comparison of the emerging themes. Emergent themes

were compared separately for the written journals and audio recorded journals as well as for each of the participants. This “process of constant comparison stimulates thought that leads to both descriptive and explanatory categories” (Lincoln & Guba, 1985, p. 341).

The second stage of this data analysis process involved integrating categories and their properties. During this process, the themes of the reflective submissions were compared making the “judgment of whether a new incident exhibits the category properties that have been tentatively identified” (Lincoln & Guba, 1985, p. 342). This refining process served to test the properties of the themes and make them more explicit. As data collection and analysis occurred concurrently, data collection efforts in the latter weeks could be directed toward clarification and illumination of the emergent themes.

During the third stage of analysis, delimiting the theory, the themes or categories that had been identified were revisited for the possibility of reducing the number and further refining the phenomena. It is at this point of analysis that outliers and anomalies were reduced or eliminated as the categories became saturated. As saturation occurs, the categories become “so well defined that there is no point in adding further exemplars to them” (Lincoln & Guba, 1985, p. 344). See Appendix L for a list of the emergent themes and their properties that resulted from the constant comparative method of analysis.

Depth of reflective submissions. To determine the depth of reflectivity on the electronic written journal and audio journal submissions, a scale developed expressly for that purpose by LaBoskey (1994) was utilized with permission being obtained for its use. This scale uses three scores to assign a level of depth to reflective submissions (see Appendix M for explanation of LaBoskey scoring scale). Each of the submissions were scored using this scale. The levels of

reflectivity between Susie's and Mary Ann's submissions were reviewed to obtain an overall comparison of their depth in reflectivity. Additionally, a comparison was made of each participant's reflectivity score for the electronic written and audio journal submissions.

A second coder was enlisted to offset the effects of subjectivity and bias. The coder was a colleague who had recently completed a Masters in Counseling degree at ETSU. She had no affiliation with the CSC and did not know the participants on a personal or professional level. She was trained on the LaBoskey scale and the criterion for its scoring categories. She and I coded the first month of written and audio journal samples together to become familiar with the LaBoskey scale. She was given clean copies of transcriptions of the electronic written journals and audio journals for scoring. Inter-rater reliability was 75%, which was the equivalent to LaBoskey (1994) and her second coder.

Content analysis of submissions related to the setting. Once thematization and depth of reflectivity scores had been determined, the data could be further analyzed. The content of the audio journal submissions for each participant was compared for each week of data collection to ascertain how they utilized the method to support and represent key experiences and practices (see Appendix N and O). This analysis was undertaken to ascertain how the participants utilized their reflective practice and processes across the ebb and flow of activity that occurred in their school setting during the course of this study. The electronic written journal submissions could not be used for this analysis as they had guiding questions for reflection given to the teachers by me, whereas the foci of the audio journal submissions were of the participants' choice.

Throughout the data analysis process, the researcher's field journal and notes were consulted to examine the evolution of the project and to maintain focus on the research purposes.

Additionally, the supervising professor, Dr. Moran, was consulted continually throughout data collection and analysis serving as an external check to the research process (Creswell, 2003).

Fundamental Considerations

Ethics

Prior to initiating research, the participants, Susie and Mary Ann, were given consent forms. The content of these forms was explained to them, signed by them, and a copy given to all the participants in keeping with the requirements of the Institutional Review Board. They were aware that their participation in this study was voluntary and they could decline to participate at anytime. It was explained that the information in the research records would be kept confidential. It was explained that data would be stored securely and made available only to persons conducting the study unless participants specifically gave permission in writing to do otherwise. No reference would be made in oral or written reports that could link participants to the study. In addition to securing informed consent from the participants, their teaching colleagues and the parents of the children in the classrooms likewise gave their consent.

During the thirteen weeks of data collection, I checked on the participants continually to determine if they were feeling comfortable with the research process. At no time did they express that they felt at risk or pressured to continue with the study and chose to do so of their own will. On one occasion, Mary Ann expressed some mild stress as to the due date for the electronic written journals and that date was immediately changed to reduce her stress and to afford her the optimum opportunity for utilizing this methodology.

Trustworthiness

Establishing trustworthiness was a key concern during the design of this study and analysis of the data. Lincoln and Guba (1985) outlined five major techniques to help ensure the trustworthiness of one's data analysis and these include: (a) prolonged engagement, persistent observation, and triangulation; (b) peer debriefing; (c) negative case analysis; (d) referential adequacy; and (e) member checking. Four of these five techniques (all but negative case analysis) were employed in an effort to establish trustworthiness throughout the research process and are described in the following.

As to prolonged engagement and persistent observation, the data collection took place across a thirteen week period. During that time, I observed each of the participants three times per week totaling three hours of naturalistic observation per week. Though the data collection period was thirteen weeks, my familiarity with the setting and the participants prior to research lent itself to my easy access into their naturalistic setting thus eliminating a period of acclimation between myself, the participants, and the setting. It was my perception, reinforced by the statements of the participants, that we began this research experience with a mutual trust and respect for each other.

I had email exchanges with the participants a minimum of once per week regarding the electronic written journals. During the weeks that interviews were conducted, an additional two to three hours was spent with the participants. Data were triangulated among the journal submissions, field notes, and observations which offered a three-dimensional view of the phenomena.

Peer-debriefing was accomplished with regular, on-going dialogues with the supervising professor. During those dialogues, my observations and experiences were presented and she offered insights as to alternate perceptions of what I was observing and experiencing. This type of debriefing served to “expose oneself to a disinterested peer in a manner paralleling an analytic session and for the purpose of exploring aspects of the inquiry that might otherwise remain only implicit with the inquirer’s mind” (Lincoln & Guba, 1995, p. 308).

The technique of referential adequacy to develop trustworthiness was inherent in the research design. The audio recordings were transcribed for review and the written electronic journals were archived as they were received. Had I been able to continue videotaping the classrooms, the tapes could have contributed an added measure of referential adequacy for use with the participants during their monthly and concluding interviews. It was an unfortunate occurrence when that methodology proved to be disruptive to the natural setting and thus discontinued early in data collection. However, utilizing member checks was beneficial in clarifying the intent of any submissions or observations that were unclear. Coupling the electronic written journals and observation times afforded the opportunity to clarify any points that were not understood.

Chapter Summary

In this chapter I have included the purposes for the study and the rationale for a case study methodology. I have included the research questions and related areas of interest. Further, I have described the sample selection and setting as well as data collection procedures and analyses. I have noted the ways in which I have ensured the confidentiality of participants, and

my role as participant observer in the study, and establishment of trustworthiness. The next chapter will include the findings that emerged as a result of this research.

Chapter IV

Findings

Before presenting the findings, it is important to revisit the main purposes and questions that guided this research. The purposes of this study included identifying the emergence of new understandings and processes of joint, shared activity. A second purpose of this study was to examine the ways in which the use of two, diverse methods or tools (electronic and audio journals) influenced the teachers' processes of reflective practice and mediated critical reflective practice. Third, the link between reflection and action or change to practices was examined.

The overarching research questions that guided this study were:

- 1) What methods or combination of methods (written journals, audio journals) are most effective for teachers in obtaining useful reflections on their practices?
- 2) What is the process of reflective practice in which these teachers engage?
- 3) What new knowledge or skills have they developed from their reflections that inform their practices?
- 4) What is the nature of the relationship between reflection and action for these two teachers and/or in what ways does reflection inform their action?

From the analysis of data, an overarching trend of the participants' reflections emerged that differed from initial expectations. Overall, Susie and Mary Ann focused on the *process* of their reflective practices and relationships that led to the emergence of new understandings. They did identify some action-oriented outcomes from their collaborations, but it was the *process* of coming to know their practice that received the majority of their attention during collaborative

reflections. Rogoff (1995) argued that participatory appropriation is a “process of becoming” and this was evidenced by the findings of this study which will be discussed in this chapter.

Data analysis revealed two major findings. First, the use of multiple methods to engage in reflection was found to be critical to encourage and support effective, rich reflection on the part of each participant. Second, teachers who engaged in reflective practice developed new personal and professional knowledge as an outcome of the reflective process. Further, they applied that new knowledge which led to an ability to conceptualize and develop innovations or changes in their professional relationships and classroom practices.

Finding #1. Advantage in Using Multiple Methods.

The design of this research offered Susie and Mary Ann two reflective methodologies that they had not previously utilized: electronic written journals and audio journals. Data that revealed the participants’ preference of method and depth of reflectivity from utilizing each of the new methods will be presented. This will be followed by a summary of the benefits realized by the participants when using each of the methods to promote their initial reflective practice.

The two new methodologies offered them different reflective experiences. The electronic written journals offered them an opportunity to reflect-on-action. These were guided journals meaning Susie and Mary Ann were given reflective questions for response each week (see Appendix K). The guiding questions were developed by me after reviewing the audio journal submissions of each participant and reviewing field notes of my classroom observations for that particular week. For example, during Week 3, I had observed Susie and Mary Ann collaborating as to the “right” content for reflecting with their audio journals. In my field notes that week, I documented this exchange. To better understand their perception of what constituted a reflection,

for that week I developed a question for their response in which I shared this observation from my field notes followed by guiding questions that might further illuminate the observed experience.

During my joint observation with you on Tuesday, there was some discussion about what reflection really is for you. The following is an excerpt from my field notes of that was observation: Susie was musing about the content of her reflections and the open-endedness of the reflections for this research project. Both turned their question to me and asked if they were reflecting on the “right” things. My response was that these are their own reflections, whatever comes up for them is the “right” thing. This led to a conversation between them about the nature of their reflections at the CSC. Previously, it seemed that their reflections had been guided to a great degree by the project they were working on. There had not been an opportunity to reflect openly on whatever came to mind for them. They had been asked to reflect using a specific form created by another faculty. Susie and Mary Ann began to question their knowledge of what reflection really was. There seemed to be some notion that a reflection had to be structured or “about” something in particular. The comment was made that they wondered if the way they were reflecting was the “way they were taught or conditioned to reflect.”

Given this observation, please sit quietly for a few moments and consider the following questions:

How did I learn to reflect?

In what ways has that process changed over the years for me?

Is structure necessary for me to reflect?

What things/situations do you feel are “right” for you to reflect on your practices?

Are you aware of reflecting outside of that structured setting?

By triangulating these data sources (audio journals and observations), these guiding questions served to pull together their experiences of the week and further define their reflective experiences.

However, the audio journals were not guided in any way. Susie and Mary Ann were instructed to respond via the audio journals on any topic that was present for them in that moment of reflection. This method gave them the opportunity to reflect-*in-action*.

Susie’s experience with audio and electronic written journal methodologies. Susie noted that journal writing had been her habit for years and she was “more of a writer.” She described herself as “not a good on the spot thinker...you could say something to me and I would say I don’t know, let me think about it and I would go home and think about it.” Susie stated that she needed time to process what she had observed or what had happened in situations with colleagues and found the electronic written journals were more helpful in processing these moments. She stated the electronic journals “were more my style.” In fact, she said, “I actually love the electronic journals...I will truly miss these [electronic] journals.” She described them as being “very cathartic” and “...they made me put my ideas onto paper and read them and see what I said.” She journaled, “reflecting in these e-journals [electronic written journals] has helped me to think about all of the little moments I reflect about.”

When asked about her need for a structural framework, Susie stated that she did prefer to be “given a deadline...a reasonable amount of time” for responding to reflections. Susie was

given a reasonable timeline for responding to the reflective questions and met that timeline for all 13 electronic journal submissions. Further, she reported,

I need a routine and easier way of reminding me to stay on task...I need something that keeps me on task and drives me, but if it is the small things that happen, I don't feel that the structured process is necessary.

During Week 2, I observed Susie making a shift to her instructional plan to accommodate the presenting interests and needs of the children. Susie had planned to read a book during circle time. While getting the children seated, she observed them talking about a fire they had witnessed on the mountain close to the school. I noted in my field notes that I observed Susie pause, put the book aside and then asked the children to take turns sharing about their experience of the fire. In consulting her audio journals, she did not record a reflection on this moment, but I asked her about this instance in her written journal for that week. Susie stated, "if I'm just doing something that's in the moment, I don't do a formal reflection on it. I just kind of go with it."

On other kinds of program issues, Susie found the written process to be helpful in organizing a plan of action as exemplified in the following excerpt,

For some time now I have been thinking over the process of how we create our portfolios...I would like to have a better, clearer view of the children's progress.

I plan to begin each domain in a 6 month interval, and continue that throughout their time spent in my classroom for the next 2 ½ years before they enter kindergarten...I plan to review those intervals for red flags of no progression or any areas in which I would see that the children might need a little extra help. I am hoping this process will help me, to assess the children much more accurately...to observe them

more closely and give the parents a clearer view of their children's progress.

In summary, for Susie, her preferred reflective methodology was characterized by: (a) written format, (b) a reasonable deadline to offer a measure of structure, and (c) the ability to read back through her thoughts before taking action. As such, using the electronic written journaling format afforded her the opportunity to organize her thoughts, develop a best response to the situation and offered a measure of structure.

When using the audio journals, Susie did not have the same experience. They were not comfortable for her to use as she did not like to hear her recorded voice. Even though she did not prefer the audio journals, she adhered to the structure established for audio journal submissions as outlined in the research methodology. With the audio recorder, she stated "I didn't feel comfortable in the classroom because when I was over here talking [on the recorder] about this [event] something else [another event] was going on over there." The relatively unstructured aspect of the audio recording process seemed uncomfortable for Susie. She stated that she did not "enjoy them [audio recordings] as much because I would forget about them." When I arrived for an observation, Susie would comment that she needed to go get her audio recorder so that she could use it to reflect and this occurred numerous times throughout data collection. She seemed unsure of what she should reflect on without a guiding question such as the structure that was provided in the electronic written journals. She asked me on one occasion "am I reflecting on the right stuff, I don't know if I'm doing this right!"

In some of the early audio submissions, Susie diverted attention from recording her own voice by including the children's voices on the recorder. Employing this strategy enabled Susie to meet the required number of recordings for the week and manage her initial discomfort

when using the audio recorder. Of the 17 audio recordings during the first month of this study, Susie included 6 that involved children. The following is an excerpt of an audio submission in which Susie engaged the children to record with her,

Susie: Alright in the children's own words, this is what is happening today.

[Susie is recording her conversation with the children.]

Susie: So, tell me what is happening today?

Child: Hey, I got a ring!

Susie: Paul, tell me about your outfit, tell me about what is going on.

Child: My outfit, my outfit is beautiful sequins and I am going to marry someone.
I'm pretty.

Susie: You are so pretty, very handsome

In the last two months of data collection, Susie began to record her own voice without the children as she developed an increase in comfort level with the audio recorder. Only one recording during this time frame included the children's voices. The following is an excerpt of one of those submissions,

We had a really bad storm yesterday and the children were real interested and real nervous about the playground. All the mulch is off and it's been moved around.

We've had a big flood in our room. A lot of water came in our room and the kids are very interested. So, we had a long talk this morning about flooding and how we are still safe even though the water came in and we'll take care of the water and we are still going to be safe. So, that's something we talked about this morning. I had a really good reflection yesterday in our meeting. Mary Ann and I reflected about what happened in the meeting and it was very good. It's very good to be able to discuss that with her and to feel better about it. I hope I can get

something else later [another audio submission].

The content of Susie's audio journal submissions revealed that she did reflect in step with the occurrences of her classroom setting (see Appendix N). During the first seven weeks of data collection, Susie's focus as a teacher was on the needs of the children and the learning environments that she created for them. For example, I observed Susie during Week 6 working with a child about which she had significant concerns. I recorded in my field notes, "Susie is concerned about her [the child] healthy transition to a different classroom and has been talking to Mary Ann about this particular child. On that day, her audio journal submission reflected her concerns and observations about that child along with ideas for helping the child be more successful in social interactions. Susie recorded, "she [the child] struggles socially...I am going to try and come up with some strategies to help it be a little easier transition for her." During the eighth and ninth week, Susie focused more on preparing for an early childhood conference and accreditation documentation and she reflected on the time constraints she felt as it impacted her reflective practice. Even with the time constraints, it is important to note that she continued to reflect. During weeks ten through thirteen, Susie was preparing to transition all of her children to kindergarten and receive a new group of preschoolers as well as a new co-teacher. The content analysis of her reflections centered on issues about reflecting with Mary Ann, other colleagues, issues regarding the children and program planning. From this content analysis, Susie illustrated that she did use reflective opportunities to make sense of her experiences as they occurred in the school and her classroom.

In summary, though Susie struggled with using the audio recorder, she initially employed the strategy of recording with the children to overcome her discomfort with the new

methodology. However, as her comfort level with the audio journals increased, Susie did not need to use a diversionary strategy with the children. There was an emergence in her use of the audio recorder as a tool for promoting reflective practice as evidenced by increased ability to record reflections on her own. Finally, the content of Susie's reflections paralleled the ebb and flow of school and classroom activities.

Mary Ann's experience with audio and electronic written journal methodologies. Mary Ann described herself as someone who benefited from talking through her ideas and stated, "my first desire is to reflect with a colleague." For example, she stated,

I've learned a lot from just watching and talking to Susie about dealing with challenging children. You know kids that have anger issues or get frustrated easy... I didn't nearly have the skills that I have now based on talking with her.

One aspect of a reflective method that Mary Ann identified as being important to her was the timeliness of its use. During the initial interview, Mary Ann stated "the hardest part of emergent curriculum is to, while it's happening, get this stuff down and I am really anxious to use the audio journal in the moment with the kids when involved in a provocation." For example, on one occasion she recorded "I've observed children in centers today and I'm so excited about how their play has progressed. I guess I need to note again about how successful small block building has become." Mary Ann stated that the ability to reflect in the moment was very important to her and she "would like to reflect about the kids' experience immediately." On one occasion, Mary Ann did not have her recorder with her during her observation of a child and expressed her need to have it. In her audio submission later that day she recorded,

that's kind of mostly what I have been asking today is about her [child] ability to

connect. I was on the playground from 3:00-5:30 with her today and I wished I had had my recorder, because I saw a lot of positive interactions, positive play, meaningful play.

During the entire study, Mary Ann was experiencing an unusual amount of chaos due to staffing issues as her teaching team was in a constant state of flux. My observations were consistent with Mary Ann's assessment of her work environment. During Week 5, I arrived for a scheduled observation and Mary Ann was not at the CSC. Overnight, her work schedule had been changed to accommodate a coworker who had become ill. A consultation of my field notes showed this change in schedule occurred five times during the thirteen weeks of scheduled observations with Mary Ann. During Week 7, I arrived for a scheduled observation and the day had been so chaotic that she had forgotten about the observation, but was very amenable to my staying. Also, there were additional work requirements in the form of re-accreditation documentation and conference preparation which Mary Ann indicated as stressors in her work day. For example in Week 7, Mary Ann recorded,

I am having to be pulled away for a lot more paperwork than I have ever had to be away from the kids... I'm being pulled away a lot and I feel guilty... I just feel such a conflict... I feel so split.

Her reflections mirrored my field notes as I recorded,

Mary Ann seems very overwhelmed at the amount of paperwork she needs to accomplish along with continuing staffing concerns...that pull [to complete paperwork versus focusing on the children] must be very uncomfortable and conflictive for her...she seems a little distracted today with the children as if she is thinking about what needs to be done

next.

From a review of the overall content analysis of Mary Ann's submissions, eight of the first ten weeks were dominated by reflections regarding staffing issues, curriculum planning, retaining focus, and collaborative reflections with others (see Appendix O). The remaining three weeks of reflection were devoted to observations or issues regarding children and using the recorder as a personal reminder of things to do. From a content analysis of Mary Ann's audio journal submissions, it is apparent that she used this method with its characteristic of timeliness to reflect on the issues that were most important to her in practice.

Portability or easy access was another feature in choosing a preferred reflective methodology for Mary Ann. In one reflection Mary Ann said,

I'm finding I need to have the recorder with me [as opposed to leaving it at work] because I'm driving in the car and I'm going back and forth to work, I'm processing work even during those times...I wish that I had my [audio] recorder.

Mary Ann then began keeping her audio recorder with her all the time and recorded on her travels to and from work frequently. In one of her submissions while traveling, she recorded "it is another morning of driving into work and Susie and I hung out a little while and she gave me some news that I've been thinking about."

In contrast to Susie, Mary Ann did not speak about the need for structure as an important characteristic in choosing a reflective methodology. She stated,

if I have my recorder close by I can easily record my thoughts. The recorder is such a teacher friendly tool that if I made it more of a habit it could work as a reflection tool during even the most chaotic times...if I have my recorder and was

more in the habit of using it I seem to be more reflective during transitional periods.

For example, on one occasion when Mary Ann was driving from work, she was reflecting on maintaining her focus during a short staffed, chaotic week and recorded,

So I went in to work today to stay present to stay focused with the children to continue the joy and happiness of the weekend. To not let the buzz of the Center distract me and to stay focused on what really makes me happy about working with the children. Did that happen today? I feel like it did!

In summary, Mary Ann reported a preference for the audio journal stating “the recorder was much more my speed.” She identified critical features in choosing a reflective method that included being able to speak her thoughts in her own time, portability and quick access for reflecting-in-action.

Mary Ann had a different experience with the electronic written journals. She did not express any discomfort with written journals or her writing skills, rather her difficulty with this type of methodology had to do with time. She noted “to take the time to do them [electronic written journals] was more challenging to me.” She reported that she could not just sit down and type something out; she had to first think about the question. She was reluctant to respond at times when she felt unprepared or rushed. She said,

I felt myself wanting to do them...I owe Stacy some e-journals and it would be Friday night [the agreed upon deadline for submission]. I just am like, no, I’m not in the mood to think about this...I was like, gosh, it’s just not coming.

Mary Ann had a goal to complete the journals during her workday. However, the stressed staffing pattern of her classroom and the demands of her day often left her too distracted to address these questions. I observed this stress in Mary Ann in Week 8 when I wrote in my field notes,

Mary Ann was contemplative about her teaching environment and how the “buzz” [high level of activity], as she terms it, of the workplace interferes with her joy in working with the children...this is distracting to her in her work with the children and takes energy away from what she is doing...her audio journals from last week reflected this. If the time was not right, she felt she was forcing the answer. An example of this is the following excerpt,

While being out four days, I reflect on what needs to be done and on how to catch up. I have wanted to work closer with Kim to help make her transition to Emma’s interim smoother. I have been hoping when things calm down in my personal life, I can get more focused in working with her.

Though she acknowledged she had to “get in a mindset” to do them, she admitted that the electronic written journals were helpful to her in organizing her thoughts. The following entry is an example when Mary Ann was more mentally prepared and had the adequate time to reflect via the written method,

I have noticed that by speaking/writing my reflections it seems that they become more concrete as opposed to just having thoughts about what is happening in my classroom. I feel a sense of more organization. This summer I am reflecting on maintaining classroom structure for lack of staff. By having these set times to

reflect, I can pinpoint problems/concerns and address them timely and effectively (ex: create a strategy to keep Kim on my teaching team.) Without the e-journals or the recorder I may have thought about the situation, maybe mulled it over, hope changes may occur without my influence. With the purposeful reflecting I felt focused on my goal and seized every opportunity to meet it.

Though she originally struggled with the deadlines for submitting electronic written journals, Mary Ann was able to utilize this method to her benefit and submitted all 13 journals as required. This was accomplished by allowing her to respond to the guiding questions when she felt she had adequate time and focus to dedicate herself to them. She identified the optimum time of day for her to engage in electronic written journaling to be Monday mornings so we adjusted the time for submissions to accommodate her need.

Depth of reflectivity generated by the new methods. Susie and Mary Ann responded with differing depths of reflectivity when utilizing the electronic written and audio journals. Each of their submissions was scored using a scale developed by LaBoskey (1994) for determining level or depth of reflectivity (Table 2). From this scoring, it appears that there was a relationship between Susie and Mary Ann's preferred method for reflecting and their depth of reflectivity.

Susie's depth of reflectivity in her written submissions were almost double that of her audio submissions. Based on LaBoskey's scale, Susie's depth of reflectivity in her written submissions was 65.4% as compared to her audio journals at 35.9%. Examples of both written and audio submissions are shown in Table 3 to illustrate the range in-depth of reflection of Susie's responses. For those reflections that were in-depth, the dominant content areas on the written submissions were predominantly about the children (her observations and

Table 2. Percentage scores from LaBoskey scale of journal entries for each participant.

	Audio Journals	Electronic Journals
Susie	-5 = 61.5% +5 = 35.9% 0 = 2.6% Total entries=39	-5 = 34.6% +5 = 65.4% 0 = 0% Total entries=13
Mary Ann	-5 = 26.7% +5 = 73.3% 0 = 0% Total entries=30	-5 = 58.3% +5 = 41.7% 0 = 0% Total entries=13

Note. On the LaBoskey scale, responses scored as -5 are simplistic and certain; they deal mainly with practical issues and firsthand experience. Responses scored as +5 indicate a real struggle with the issues; they show a propensity to consider alternatives and reconsider preconceptions. Those responses that missed the mark or are too difficult to determine are rated 0.

inquiries about their activities), her processes of reflection, and collaborative reflective relationships. Using the audio recorder, the content of Susie's in-depth reflections was overwhelmingly about issues regarding the children.

Mary Ann's depth of reflectivity in her audio submissions was almost double that of her written submissions, the exact opposite of Susie. Based on LaBoskey's scale, Mary Ann's depth of reflectivity in her audio submissions was 73.3% as compared to her written journals at 41.7%. Using the audio recorder, the dominant content of Mary Ann's in-depth reflections focused on staffing/program planning issues and the children (her observations and inquiries about their activities). Using the written journal method, her in-depth reflections centered on the process of

Table 3. Examples of range in reflectivity in Susie's journal responses.

Susie's responses	+5	-5	0
Electronic Written Journals	I realized that this [mountain fire] was something that concerned the kids and it was something that doesn't happen every day. When they hear their parents or friends talk...and hear concern in people's voices, I think it scares them a little...so we had a little session...As they were talking about it, they did seem calm...Children just want to express themselves and be heard, I think that calms them as much as anything.	My practice is a little unorganized and vague at times. I need a routine and easier way of remind me to stay on task as not to lose those moments that I can help the children.	No "0" responses recorded
Audio Journals	I am helping Mary Ann to establish a relationship with this little girl and help her to get a better understanding of her...I am going to come up with some strategies to help it be a little easier transition for her.	The kids are going back to dress up today and they are wanting to dance again with the flowers, so we'll see what happens today	...on this little girl we haven't done a lot of reflection on her as she has not been here but one day

Table 4. Examples of range in reflectivity in Mary Ann's journal responses.

Mary Ann's responses	+5	-5	0
Electronic Written Journals	I am beginning to realize that I reflect all the time about work, my colleagues, the children. I am eager to tap into these reflections as I become more aware of them. It makes me wonder if I become more aware of these unstructured reflections how would that change my work.	Susie and I have talked about introducing her [a child's] parents to me. We are hoping that they feel comfortable with me as her teacher and make this transition as smooth as possible.	No "0" responses recorded
Audio Journals	I'm thinking about what's going to happen in my classroom over the next couple of weeks. Emma's getting ready to go on maternity leave. I haven't heard anything about hiring a full time teacher and that's making me think about what I can plan for this summer.	Susie and I are watching this little girl play with some of the kids...she struggles when they don't want to play the way she wants them to play...she will be in my class here in the next weeks so I am learning some of her behaviors.	No "0" responses recorded

her reflective practice. Examples of both audio and written submissions are shown in Table 4 to illustrate the range in-depth of reflection of Mary Ann's responses.

In summary, for both participants their preferred method resulted in a significant increase in in-depth critical reflective practice. The foci of submissions by both teachers paralleled the ebb and flow of their work environments and tasks at hand (e.g. portfolio development, staffing issues, children transitions).

Value of using alternative reflective methodologies. Each of the participants realized benefits from using their least preferred method for reflective practice. Though Susie did not prefer the audio journal, she stated that,

I was listening back to some of the recordings and I was thinking geez, that's something I would've written on a piece of paper and may or may not have gotten back to, but because it was [audio] recorded it made me think right then and so it kind of helps me to process it right then... to think about the whole entire day or the activities of the day.

As the study progressed, Susie began to see the value of the audio journal to capture her thoughts in the moment. As an example, Susie found this methodology to be helpful to her during a hectic work week when she and Mary Ann found little time to collaborate. Susie expressed, "I did reflect on my recorder a little more than I have been. I just felt the need to do that...it helps me to be clearer when I speak my thoughts out loud." In turning to this alternate method to reflect, Susie was able to clarify her thoughts even in the absence of her collaborative partner.

Even though Mary Ann did not prefer the electronic written journal, she acknowledged it as an effective tool. She stated that "once I get into them I had all these great and wonderful

ideas and thoughts that I didn't have before." On one occasion when reflecting via the written journal, Mary Ann wrote,

I am beginning to realize that I reflect all the time about work, my colleagues, the children. I am eager to tap into these reflections as I become more aware of them. It makes me wonder if I become more aware of these unstructured reflections, would it change my work?

She also credited them with helping her to organize her thoughts. She reflected that,

I had to stop what I was doing and get my thoughts organized and think as opposed to just living in the moment. In that sense they [electronic journals] were organizing for me. They made me do it [organize my thoughts] every single week during a time [at the CSC] that was chaotic.

For Mary Ann, this alternate method gave her an opportunity to take a time-out of sorts and organize her thoughts during work times that were typified by chaotic activity.

For each participant, over one-third of their journal entries submitted via their least preferred method yielded depth in reflectivity as measured by the LaBoskey scale. Susie recorded 35.9% of her audio journal entries at a +5 level of reflectivity while Mary Ann recorded 41.7% of her electronic written journal entries at a +5 level of reflectivity. This indicates that a minimum of one third of each of their entries using their alternate method yielded reflections that revealed a struggle with the issues and an ability to consider alternatives or reconsider preconceptions. Further, without the simultaneous use of both methods from which to learn, there was the potential that one out of three valuable reflective ideas and thoughts could have been lost.

Over the course of this study, the use of diverse methods (electronic written and audio recorder) also helped ensure Susie and Mary Ann incorporated reflective practice into their daily teaching lives across a range of settings and experiences. Prior to using both written and audio journals, these teachers were limited in the number of settings (e.g., office or in off-duty times together) in which to reflect. Now with diverse tools, Susie and Mary Ann were able to broaden the times and places to include their cars, classrooms, playgrounds, and homes. Mary Ann benefited from being able to use the audio journal to reflect while traveling in her car as that was a time when ideas flowed for her. For Susie, she used the written journal to reflect at home when she could better process and express her thoughts outside of the distractions of the classroom and school. For both teachers, the ability to preserve their reflections across a range of settings at the time of their choosing created more opportunities for them to retain and record their thoughts, helping to ensure their thoughts and ideas were not lost while waiting for the right time, tool, and/or place.

In summary, Susie and Mary Ann had preferences for methods that mirrored their individual styles of reflecting. Susie preferred reflecting-*on*-action via the electronic written journals as she indicated she liked writing and to have time to think about her reflections. Mary Ann preferred to reflect-*in*-action to capture the moment of observation with the children. However, she did use the recorder to reflect-*on*-action as she traveled to and from work. The data revealed that when Susie and Mary Ann utilized their preferred method of reflecting they realized deeper levels of reflection a greater amount of the time than they did on their least preferred method. Even though Susie and Mary Ann had preferred methodologies, the access to alternative methods offered opportunities to reflect deeply in multiple settings for each of them.

Additionally, when reflecting without the structure of guiding questions, the dominant content of Susie's and Mary Ann's reflections mirrored the issues that were dominating their classroom settings.

Finding #2. Impact of Collaborative Reflection on Relationships and Practice.

When the teachers' collaborative reflections were put into action, change in professional relationships and practices began to occur. The following descriptions detail the conceptual and practical changes that occurred in Susie's and Mary Ann's professional relationships beginning with their own relationship and then with other colleagues. Finally, data describing emerging changes in professional practices are included.

Impact on the dyad of Susie and Mary Ann. An important outcome for Susie and Mary Ann was the validation of their professional relationship. During the initial interview, they both stated that they placed great value on their time spent in collaborative reflective practice. Of Mary Ann, Susie stated "...we help each other and inspire each other...I value her opinions...I respected her and everything she did." Susie described the relationship they shared as a "rare thing." Of Susie, Mary Ann stated,

...we spend a lot of time talking about work...she's my sounding board constantly of how I feel about what is happening...if I need advice she's the first one I go to about kids and even other things...she's worth her weight in gold that woman.

Their shared reflection together was meaningful enough that each made a commitment to schedule time outside of work, if needed, to review their day and reflect together. Mary Ann and Susie regularly used their off duty time when there were no other opportunities available during

the day. These off duty times were lunch times, on the drive in and home from work, and in social activities outside of work. Mary Ann and Susie talked about these times together and how beneficial they were in getting through their day. Susie described it as “cathartic.” During one observation of their dyadic collaboration in Week 9, I noted “you can feel their tensions leave as they share with each other...these two teachers are really good for each other.”

From the beginning and throughout the data collection process, each of the participants indicated a strong need to reflect with each other. Their participation in this study enabled them to identify benefits from the process of collaborating with each other. These benefits were identified as (a) a validation of their collaborative partnership and (b) a renewed energy level in their work. They also recognized the consequences when they did not have the opportunity to reflect. The following examples illustrate the benefits and consequences they identified.

Even though they valued their collaborations, they each seemed defensive about their relationship and time spent together. It was Susie’s and Mary Ann’s perception that their coworkers might not place the same value on their dyadic interactions and reflections. Further, it was their perception that their time together might be viewed as more social in nature rather than focused work informed by critical reflections on classroom practice. However, I had observed periodically throughout the study that the majority of their off duty conversations together centered on their classrooms and what the children needed. During a lunch time observation in Week 5, I observed their conversation which flowed from issues regarding the children, to de-stressing over the day’s events, to social chat, then back to reflections on the children and classroom events. I noted, “their work with the children is always woven in and out of their conversations [work or social conversations]...this is typical of their observed reflections

together inside and outside of their work setting.” Later that same week I observed and noted that they shared about different children in their classrooms and solicited feedback from each other for ideas in working with these children. When I pointed this out to them, they began to relax and sound less defensive in their tone when speaking of their shared reflections, Susie stated “...it has opened my eyes that what we do is valuable for each other. I mean not only for my own sanity, but as teachers too.” Susie further reflected,

one thing it made me realize is that it [collaborating with Mary Ann] is not just a venting session, that it is a reflection that she and I share...that helps me to realize what I’m doing or what I’m not doing. It doesn’t have to be that formal type of reflection [on classroom practice] and it’s important.

Mary Ann stated,

I guess I became more aware of how we reflect and what we are reflecting about...I felt like we were whining and it wasn’t whining. And how much, you know, that I asked her about what I should do about this thing or that thing, for guidance, for support. I guess I knew all those things, but I became more aware of it [as I reflected on practice with Susie for this research].

From this experience, both Mary Ann and Susie validated their time together as an important part of a collaborative reflective process and acknowledged the mutual support they received from engaging in this process. This realization seemed to affirm for them the importance of their work together as being more than a friendship and their collaborations as an important part of what constituted critical reflective practice.

Susie and Mary Ann acknowledged a renewed sense of energy from their collaborations together. Susie stated, “it [collaborating with Mary Ann] energizes me...if we can kind of talk it over with each other.” Mary Ann agreed saying, “it [reflecting with Susie] energizes me and it is so important to me.” This energizing quality to their reflections was apparent throughout my observations of their dyadic exchanges as exemplified in the following excerpts from my field note documentations,

I can see them using each other for support and for a sounding board...the atmosphere and energy around them when they are together is very relaxed and at the same time energized...they have a very comfortable and easy rapport...their energy together is very fun, stimulating and easy.

There were also consequences of not having each other to reflect with regularly. The consequences they identified were resorting to reflecting alone, difficulty getting through the day as easily, lessening of energy level and an increase in stress level. Susie stated if Mary Ann was not available for her to collaborate with, “I find myself only reflecting to myself. I don’t share or open up a lot [to other colleagues].”

Oftentimes during their work day, there was not an opportunity for Susie and Mary Ann to reflect together and they resorted to quick check-ins during their teaching day. These quick moments did not seem to satisfy their need to collaborate on their teaching moments. During Week 11, I wrote in my field notes a description of a hurried opportunity to reflect in passing and noted the impact on Susie and Mary Ann that day,

Always the same with them, quick check-ins during work time and then on with their day...very little opportunity to just sit and reflect at leisure with each other during work

hours...too bad, it seems to be a benefit to them both as evidenced by their demeanor.

Mary Ann described what it was like for her when she did not get the opportunity to reflect with Susie. She recalled the couple of days that Susie was out of work due to illness. Mary Ann remarked how the lack of reflection with Susie negatively affected her. "Just a few days, Stacy, I need it [reflecting with Susie] that bad and I go back to work 100% better. That afternoon is a lot easier for me if I've had that lunch time with her." Susie had similar feelings stating her energy level "was dampened" by not being able to reflect with Mary Ann.

They each realized a change in their relationship as a result of their reflections together. One of the most apparent changes was in the roles they played out in their relationship. At its origins, they each described their relationship as one where Susie mentored Mary Ann. Susie stated, "she kinda looked at me at first to catch up and to know what to do with preschoolers." Mary Ann echoed this sentiment by saying "it [early part of their relationship] was really almost a mentoring relationship...she helped me re-remember how to work with preschoolers again." Over the course of time, however, this mentoring situation became a relationship of mutual support. As an example, Susie stated "I had a tendency to react when someone says something to me and she [Mary Ann] is real good to calm me down about things." Susie characterized their later relationship as one where they "...bounce ideas off each other and so we help each other and inspire each other like that, so I think its kind of a mutual thing now."

Impact on relationships with other colleagues. At the initial interview, Susie and Mary Ann stated they had reservations about engaging in reflective practice with their colleagues and about the benefits of the collaborative process with others. As a result of their previous experiences, both Mary Ann and Susie indicated a reluctance to share openly with colleagues for

fear of hurting someone's feelings or causing problems within the group. Mary Ann stated, "I need to be able to share my ideas openly and not feel like I am going to offend anybody or if somebody disagrees with me not to get their feelings hurt." They both indicated that collaborating with colleagues involved careful wording. Mary Ann identified that she reflected on different content with different reflective partners. However, with Susie, she could discuss any topic and would discuss broader, more abstract ideas with her. However, with other colleagues, her reflections were typically about specific classroom issues.

In the past, they used their reflective partnership as a benchmark to which they compared their relationship to others and sought to engage in relationships that identically matched the one they shared. From their participation, their new knowledge and processes for reflecting together began to "spill over" into their plans to engage in similar experiences with other teachers in their school setting. For example, during Week 8, I observed Mary Ann putting this reflection into practice as she invited her co-teacher to join her and Susie during their lunchtime in the CSC break room. I observed them talking and reflecting freely with this colleague who responded positively to their invitation. I noted "I think it is possible that they [Susie and Mary Ann] could reflect with her [co-teacher] in the future as there seems to be a level of trust and regard for her."

While she placed great value on her collaborative relationship with Susie, she was also reaching out to other colleagues more than she had previously. Mary Ann reflected "I do value all my colleagues' opinions and I started to realize that when I had some issue, I went to many different people and asked for many people's perspectives." She said "I guess I am more keenly aware of how I collaborate with a group than when I am on my own or with a person one on one." She stated that in a group she realized that she might not speak up as freely as she would

when reflecting with Susie or with someone that she could trust. Mary Ann stated that "...I have gained great insight while sharing with my co-teachers...I have learned in order to create quality learning environments, the teachers have to share and reflect together."

Mary Ann was surprised by how much she reflected with other colleagues and wondered "when I go back to my team [her teaching partner], although I may have gotten a lot of it [team meeting with all preschool teachers], how much did I share." Mary Ann questioned her role in creating reflective partnerships with others and the changes she may need to make in herself to facilitate the development of those professional relationships that she "craves." She noted "I want to make a friendlier collaborative environment for these people and I am eager to hear their ideas."

At the concluding interview, Mary Ann and Susie were asked once again about their perception of reflective practice. Susie offered her own realizations about reflecting with other colleagues and stated her experience in the study changed her thinking about her role in creating reflective partnerships. She realized,

I'm very close to Mary Ann but how can, what can I do to make it better for my coworkers here...it makes me think that I need to try a little harder to think of different ways we can collaborate more, because it's only going to make it better for the classrooms.

When asked if she had learned anything from the research experience that would facilitate new collaborative relationships, Susie expressed a change in her thinking about reflecting with someone other than Mary Ann. She stated "I am realizing that I need to be more open to my colleagues...to approach them and find ways that we can work together for our common cause."

In summary, Mary Ann and Susie had re-conceptualized their idea of reflecting with others and the role they played in facilitating those relationships. From their experience in this study, each was able to move toward the establishment of a collaborative relationship with new teaching partners with enthusiasm rather than anxiety or hesitancy. When talking about working with her new teaching partner, Susie stated, “I feel very excited about Jane [new partner], I mean. I can’t tell you the load that has been lifted off. I’m feeling so excited about this year.” About her new teaching partner, Mary Ann offered, “I love the new energy and the new spirit and the fresh ideas [of her new teaching partner].” As a result of their shared experience, they began to evidence a change in their thinking and inclination to collaborate outside of their comfort zones and to reach out to other colleagues.

Impact on concept of reflective practice. One of the outcomes for Susie and Mary Ann was the change in their conceptualization of reflective practice. In the initial interviews Susie defined collaborative reflective practice to be a process that occurred only in a group setting on a specific project. Mary Ann defined collaborative reflective practice as “...during the semester we will have meetings where we will share our work and like one week it is my turn to talk about what is going on in my classroom.” On individual reflections, Susie and Mary Ann both indicated that they thought about their work constantly, but did not necessarily consider these thoughts to be reflections. Even though both stated in the initial interviews that they valued shared reflections with each other, they each defined collaborative reflection as only being those reflections geared toward specific topic areas studied in the classroom. In their initial definition (during the first interview), they did not include the everyday moments of reflection that typified their relationship or their individual work.

Further, both participants were unsure of the content of their reflections submitted for the audio journals (which were the unstructured reflective opportunities for the participants). As both participants had initially defined reflection to be centered solely on classroom inquiry with specific goals, their reflections on everyday issues and occurrences were not identified as legitimate reflections during the initial interview. Susie questioned me about the “right thing” for her to include in her reflections.

However, as the study unfolded the teachers began to amend their earlier understandings as to what constitutes legitimate reflective practice. For example, during their first four week interview (conducted jointly), Mary Ann and Susie had a shift in their thinking as to the definition of reflective practice. Mary Ann shared that “... reflective practice to me right now is what I’m realizing is that it’s all the time, it’s just so much.” Susie stated that the research experience “has kind of helped me to see that I need to reflect on every aspect of the day on anything that has happened.”

This new idea and evolving definition of reflective process was consistent to the end of data collection as evidenced by statements in their concluding interviews. Mary Ann stated “I learned a lot of ways I reflected that I didn’t plan on...all this thinking going through my head are parts of my reflective practice going on.” Susie stated “this project has given me a personal reflection on myself” in which she was able to examine herself, her motives and actions more closely. “It [participation in this research] made me look at a lot of things that had been going on in the classroom, to look at that and to reflect on that instead of just the project [long term project with the children].” Susie described this aspect of reflective practice as an affirmation of her ideas. Mary Ann echoed the idea that this research process “helped me to see that I need to

reflect on every aspect of the day of anything that has happened” and it “helped me to relax more and think more about the need to reflect on everything.”

Impact on professional practices. Though there was limited data, there was a positive link between collaborative reflections and changes to classroom practices for Susie and Mary Ann. The data were limited due to the participants’ overarching focus on their process of reflecting in collaboration, however changes to practice were identified and noted during observations and included in my field notes. Regardless of method employed, both Mary Ann and Susie indicated these collaborations were a positive influence on their development of insights and ideas that they may not have developed otherwise. Following are examples related to their classroom practices.

Susie reflected with Mary Ann about a particular classroom research project in dramatic play which resulted in the generation of new ideas. Susie stated that “...we were talking about the dramatic play and... she [Mary Ann] was telling me about materials...she told me that’s where you need to concentrate because that’s where you do see the interest from the children.” During Week 7, I observed Susie making changes to the materials in the dramatic play area after this collaboration with Mary Ann. Susie recorded, “I’ve been reflecting about what’s going on with the kids since we have the new costumes and added the flowers [to the dramatic play center]. They have really become interested in weddings.” From Susie’s perspective, these changes enhanced the dramatic play center in her classroom.

Mary Ann wanted to set up a learning environment that would facilitate collaborative partnerships and relationships among the children. During my observation, I witnessed her reflecting with her co-teacher on ideas to change the environment for the children and walking

through the classroom to map out a strategy for putting these ideas into action. Between the two teachers, there was much animated body language and gesturing as they discussed their ideas and related plans that could improve the learning environments for the children.

In one audio journal entry Mary Ann was recalling a classroom visitor who came in to use sign language with the children. Mary Ann has a child in her classroom whose parents were hearing impaired. This child was able to share about his parents and the sign language that he knew with his classmates. In her verbal journaling, she began to “think about other ways to bring the children, other children, in to share their knowledge of what they know and special things they want to share.” In another audio journal entry, Mary Ann noticed a child had made a machine and was able to talk about the machine with his friends. She noticed an interest by the other children about machines and reflected “I really want to run with the machine idea...it’s [focus on machines] something new that we haven’t seen.” Consequently, she made changes to her classroom environment and curriculum plan to accommodate this new interest by adding materials to the learning center which she pointed out to me on my subsequent observation in her classroom. I recorded in my field notes, “Mary Ann commented that she had worked on the room arrangement and thought she was beginning to see the fruits of her labor as the children were eagerly engaging with the updated environments.”

There were also reflections that led to changes in procedures used for classroom documentation within the program. One example was the portfolios developed for each child in the CSC program. During Week 3, in reviewing with me the existing portfolios and describing the process, Susie explained her ideas for improving the process of developing these lengthy and involved documents. Through her reflections on this process, Susie identified a way to make

portfolio development more efficient and effective. Susie wrote “I have been thinking over the process of how we create our portfolios...how we use them...” Susie identified a new way for developing the portfolios that would be easier and better for the CSC. Susie wrote,

I plan to begin each domain in a 6 month interval, and continue that throughout their time spent in my classroom for the next 2 ½ years before they enter Kindergarten. Each 6 month interval will include their progress, samples of journal writings and any projects they may have been involved in. I plan to review those intervals for red flags of no progression or any areas in which I would see that the children might need a little extra help.

She noted that “I am also hoping it will help me to help them [children] to grow much more productively.” Susie not only identified a change of action, but a desired, positive outcome from the implementation. She planned to implement her plan when she began the next round of portfolios.

Overall, Susie stated her participation in collaborative reflections with Mary Ann helped her to make decisions and identify options for actions. Mary Ann credited their joint reflective practice with retaining her focus on her overall job duties during the chaos of her work day and achieving more of her goals because “I spoke these thoughts aloud. I was able to come in and be more goal-oriented...they [goals] didn’t get left by the wayside because they were fresh in my mind because I spoke them aloud.”

Susie and Mary Ann experienced a renewed sense of professional merit in their collaborations together as well as a change in the roles they held in their professional relationship. They had a new view of collaborative reflective practice from their past experiences

working in groups with colleagues which now impacted a renewed commitment to collaborating with others. During the course of the research, their understandings changed as they developed new insights and knowledge of their role in the reflective process in relationships with others. As a result of engaging in collaborative reflective practice, Susie and Mary Ann developed and applied new knowledge and insights to their classroom documentation and environments to affect targeted changes in their overall professional practices.

Chapter Summary

In this chapter, I described two over-arching findings. The first finding showed that no one method could meet the needs of the participants indicating a strong support for the use of multiple methods. Susie and Mary Ann developed a preference for the methodology that offered them the opportunity to reflect in a manner that best met their individual needs. In using their preferred methods, they had greater depth of reflection than they did using the alternate method, but realized benefits in using both. Secondly, when the full depth and definition of reflective practice was operationalized within their dyad, they realized they were able to begin to engage in similar, subsequent processes with others. In addition, their successful experiences as a reflective dyad energized and motivated them to reach out to other colleagues without reserve and with new confidence to develop efficacious reflective partnerships across their school community.

Chapter V

Conclusions, Limitations and Implications

This study investigated the developing inquiry and professional development of two early childhood educators as they engaged in collaborative reflective practice. From their processes of reflection, they were able to construct new knowledge and understanding that led to insights into their practice. These insights were related to their collaborative relationship and the reflective tools that mediated their processes. A brief review of the key concepts that under gird their experience in their collaborative processes will begin this discussion.

Based on the key tenets of Vygotsky's social constructivist theory, knowledge construction is influenced by social interactions (Karpova, 2005). During this study, the participants "advanced their skill and understanding through their participation with each other in culturally organized activities" (Rogoff, 1995, p. 143). Rogoff (1995) described these social interactions involving cultural activities as occurring on three planes: personal (apprenticeship), interpersonal (guided participation), and community (participatory appropriation). The interpersonal process by which the participants communicated and coordinated their efforts is thought of as guided participation. As the teachers coordinated their efforts, they began to construct new understandings from participation in their joint activity of reflective practice and were able to carry forward both new knowledge and processes of coming to know to similar, subsequent experiences. Through this process of participatory appropriation, the teachers developed a system of inter-related experiences that began to contribute to ways they could influence the development of their school community.

From these joint activities and experiences, new understanding or intersubjectivity was developed. Intersubjectivity is defined as “...the mutual understanding that is achieved between people in communication” (Rogoff, 1990, p. 67). So then, intersubjectivity could support more effective communication with others as each teacher was understood from their unique perspective. As the participants’ intersubjectivity developed their ability to articulate perspectives also improved.

Mediational tools facilitated the process of reflective practice. Language was identified as being an important cultural and mental tool playing a critical role in mediating cognitive development (Vygotsky, 1962). Through the use of tools (electronic and audio tape journals), the teachers evidenced reflective practice that could meet the challenges of their teaching profession, energized to put those reflective ideas into action.

A reflective practitioner engages the profession with an open mind to lifelong learning and participates in collaborative exchanges and shared experiences geared toward continuous improvement. Engaging in the reflective process has the potential to lead to knowledge development including “local knowledge”. For teachers, local knowledge is a way of knowing about their own teaching constructed by them through activities such as reflective collaborations (Cochran-Smith and Lytle, 1993). So then, local knowledge is also a position of knowing rather than a type of knowledge that can be constructed as teachers engage in collaboration within their communities of practice.

In this study, the idea of *process* was central to the experiences of the participants. Rogoff (1995) argued that participatory appropriation is a “process of becoming” and this was evidenced by the findings of this study. The experiences of the participants clearly showed the

emergence of understandings related to the process of their reflective practices and relationships. They did identify some positive, action-oriented outcomes from their collaborations, but it was the *process* of coming to know their practice that was the focus of their collaborative reflections and was an unexpected finding of this study.

It was hypothesized that by encouraging teachers to engage in continuous, systematic collaborative reflection their partnership would become more cohesive in their teaching practices and more effective as they increasingly incorporated reflective practice methodologies into their teaching days. Further, through participation in the joint activity of reflective practice, the teachers would construct shared knowledge and skills, not possible when thinking and acting alone. It was also hypothesized that by offering the teachers a method for reflecting that was teacher-friendly and efficient they would engage in more reflective moments throughout their day, rather than making belated or random efforts to reconstruct and reflect upon teaching/classroom moments. It was anticipated that the findings of this study could help promote similar practices in other preschool teachers.

Conclusions

This school setting with its specific challenges and demands led these participants down a different path than I had originally hypothesized. While Susie and Mary Ann developed some ideas for positive changes to their classroom practice, they spent more of their collaborative efforts delving into the aspects of reflective relationships and what it means to be a reflective practitioner. Based upon the findings, conclusions were deduced which include the role of tools and strategies that mediated reflective practice and the identification of the impact of relational and structural aspects of the reflective setting on their professional practice.

Reflective Tools that Mediate Reflection

Susie's and Mary Ann's utilization of a preferred tool helped maintain their sustained reflection leading to the emergence of new knowledge about themselves and their practice. In this study, the combination of electronic and audio journaling appeared to positively affect their depth of reflectivity. As such, they began to make linkages between "local knowledge" and ways to affect change in their classroom practice and school setting.

The use of multiple methods to reflect also provided the teachers an opportunity to expand the cognitive process used to interpret their reflections. Susie and Mary Ann realized that tapping into their reflections by writing and speaking offered dual pathways into their thinking that they would not have accessed using one method alone. It appeared the two reflective methods joined together to produce a more comprehensive reflective process. Thus, teachers who use dual pathways of reflectivity (talk and text) may appropriate new knowledge and have greater depth and scope of reflection not afforded by a single tool.

The use of two methods appeared to increase their opportunities for deep reflection in a variety of settings through the use of two semiotic channels (written and spoken). When used systematically and synchronously, writing and talking appeared to be promising practices for promoting critical reflective practice.

Relational Aspects of the Reflective Setting

The design and implementation of this study contributed to the existing relational aspects of the school setting where this study took place. In particular, as a result of Susie's and Mary Ann's participation in continual, systematic reflective practice with each other, they appropriated new knowledge about themselves and the practice of

reflecting. Ultimately, they began to imagine how to extend their shared experiences with others.

Susie and Mary Ann realized they had different reflective experiences with their colleagues. Understanding the differences in those relationships lent itself to the possibility of creating new collaborative partnerships than they previously considered. While coming to that understanding, they had to revisit existing conceptualizations of their needs within a collaborative partnership and merge that with their desire to participate in contributing to a community of reflective practitioners at their preschool. This process allowed them to consider the notion that collaborative reflection could be an energizing, productive undertaking that included and benefited from participation across a range of professional relationships. This reconceptualization positively influenced their ability to consider the possibility of similar, shared reflective experiences with others in their school setting.

Delving into Susie and Mary Ann's experiences as described in this study offered insight into the ways in which relationships can cultivate depth and intimacy through reflective practice. Initially, Susie had more experience with preschool aged children than Mary Ann and offered her experience as a mentor within their relationship. So, their relationship began with an emphasis on one scaffolding the other as their reflective dialogues took place. Within their dialogues there was evidence that each of them recognized in the other similar philosophies of teaching. As Mary Ann noted, "...a similar philosophy, not all the same but a similar philosophy" was a commonality that drew them together in their work. Susie said, "I trusted her instincts and I've seen her work and I know it is good."

As the perception that Mary Ann's pedagogical skill level began to approach that of

Susie's, their relationship developed toward one of mutual support. This increased reciprocity was evidenced in the shift of their locus of learning from individual to participatory as they co-constructed new knowledge. So, when teachers achieve a certain level of shared expertise, it may contribute positively to their developing partnerships. Further, their joint reflective practice was pursued even during difficult times. Mary Ann said, "...it was a tough day, and just to talk about it... just to tell her feels better, it's a sense of relief... anything Susie is going to do is going to be to try and help me...it validates me." Susie offered, "I respected her and everything she did...we help each other and inspire each other...I value her opinions and she is very good at giving positive feedback and giving me different perspectives."

The evolution of Susie's and Mary Ann's shared learning through reflective practice emerged as a catalyst for considering ways to reflect with others within their school community. Susie and Mary Ann began to imagine ways to establish the foundation for a new system of relationships that would facilitate a larger circle of reflective partners and the promise of new understandings. Through their participation with each other across the thirteen weeks, they appropriated new knowledge and skills that led to a growing confidence in their abilities to reflect. As a result, they were prepared to engage in "subsequent similar activities" with others (Rogoff, 1990). Susie stated, "I would like to be able to share this [reflective relationship] with everybody [at the preschool]" and Mary Ann offered "I want to be able to bring this reflective practice to my team." This emerging shift in their thinking in and interest to collaborate with others has the potential for positively altering their school community.

Susie and Mary Ann were each able to identify situations in which their actions had impeded opportunities to reflect with others. Taking this a step further, they began to

acknowledge change in their actions that were needed in order to facilitate more efficacious reflective relationships with others. For example, Susie stated, “it [this research experience] makes me think that I need to try a little harder to think of different ways we can collaborate more, because it’s only going to make it better for the classroom.” It was through the experiences of this study that Susie and Mary Ann gained new knowledge and insights into their disposition to participate in collaborative reflective practice as well as how they presented themselves as being willing to engage with other colleagues. They began to reconceptualize themselves as able to initiate new collaborative relationships and affect changes in existing ones through this understanding of their role as partners with one another. This belief was highlighted by Mary Ann when she exclaimed,

I do value all my colleagues opinions and I started to realize that when I had some issues and I went to many different people, [and] asked for many people’s perspectives. I didn’t realize how different I behaved collaboratively...and it makes me wonder when I go back to my team, although I may have gotten a lot out of it [team meeting], how much did I share? I want to be able to have the same freedom to share with everyone as I do with Susie. Of course, that will always be a personal relationship but I realize how different that is. And I think, we [me and my colleagues] could share more like that, hopefully, and I could share my ideas more openly.

At the beginning of this study, Susie and Mary Ann were reluctant to engage in reflective practice with others, yet toward the end of the study they were no longer willing to let opportunities be lost due to inaction.

Susie and Mary Ann became aware of and acknowledged that there were other reflective dyads operating within their school setting that were successful in reflecting collaboratively. They perceived them to be operating at different levels of intimacy and vigor than they experienced in their own partnership, but still constructing valuable collaborations. They began to question if collaborative reflections could be beneficial when occurring at different levels of depth or intimacy and the answer that emerged for them was that there could be benefits. In this study, Susie and Mary Ann began to see the value of participating in reflective exchanges with others, even if those relationships were less personal and the practice varied in-depth of reflectivity. As to collaborating with her new teaching partner, Susie went so far as to say, “I feel like I’m there to support Jane [new teaching partner] and she supports everything I do. I mean I think Jane does validate me and...she does value me as a person.”

Structural Aspects of the Reflective Setting

For these teachers, the weekly schedule for reflective submissions as part of the research design (written journals with guiding questions and audio journaling a minimum of three times per week) created systematic and structural expectations. The content analyses of their audio journal submissions revealed that Susie and Mary Ann reflected on occurrences dominating their classrooms during that time. By requiring them to reflect consistently, the teachers were able to respond to the temporal aspects of their reflective settings, thus offering them an opportunity to make sense of the cycle of experiences occurring within their classrooms. The weekly schedule and requirements for reflective submissions combined with myself as an interested reader and potential facilitator of

related discussions further contributed to a framework characterized by accountability and validation of their collaborative reflective work.

Their evolving perspectives and practice led to a reflection of my own about the impact of the research study on Susie and Mary Ann's development as reflective practitioners. It appeared that while the research design created the structure they needed to reflect consistently and collaboratively, my role in the research process provided them with "guided participation" (Rogoff, 1995). As an interested and trusted other I was able to serve as a guide or facilitator in their co-construction of new knowledge. Mary Ann said, "I felt committed to this project and I felt committed to you." Susie interjected, "...you never made us feel pressured...what I felt was an obligation and a commitment that I had given to you that I felt I have to sit down and do this [reflect using the electronic and audio journals]." Throughout the study, our relationship of researcher and participants developed within a collaborative framework created by the research design. Also, this relationship was propelled by Susie's and Mary Ann's developing reflective partnership and my participation as someone who clearly valued their efforts.

These changes to the structure of their work lives enabled Susie and Mary Ann to more consistently and continually reflect regardless of the fluctuations in their work day activities. As a result, they developed an increasing ability to think more deeply and develop a ritual of reflection that became embedded in their everyday work lives.

In summary, the provision of tools, guiding questions and a facilitator may have increased their time devoted to and depth of reflectivity. Susie's and Mary Ann's collaborative reflective practice was supported by both relational and structural features. These conditions created a context from which new understandings about potential

relationships with others emerged as their ability to engage in critical reflective practice with each other developed. As a result, Susie and Mary Ann began to imagine how to engage other colleagues, moving from a peripheral to a more central stance illuminated by their collaborative reflective partnership, and to think more critically about their practice.

Impact of the Reflective Process on Professional Practices

Susie and Mary Ann were able to utilize their joint experiences to develop new understandings that could result in action-oriented outcomes. This type of critical thinking constituted a definite and positive change in the way Susie and Mary Ann had experienced their collaborative reflective practice prior to this study. This change illustrated what Van Manen (1977) referred to as technical rationality, whereby the level of reflective thinking was elevated to action oriented thinking. For Susie and Mary Ann, this signified a change in how they employed their collaborative reflections as they used their evolving “inquiry as stance” (Cochran-Smith & Lytle, 1993) or disposition to life-long learning to reflect critically to affect change. For these teachers, it seems likely that this stance to affect change and its associated knowledge of the value of reflecting with others could contribute to an emerging view of themselves as being able to engage in reflective work in multiple settings with multiple others to affect change across their school setting.

Throughout this study, Susie and Mary Ann reflected with multiple tools and in multiple settings accessing two semiotic pathways to express and interpret their reflections. From these experiences, they engaged in reflective practices from which they appropriated new understandings that had a positive impact on their professional practices. Some examples of this

included ideas to meet the needs of a challenging student, the improvement of portfolio development, and plans to initiate reflective relationships with others. As a result, Susie and Mary Ann began to imagine the possibilities their new understanding about pedagogical practice and professional relationships with others could create. These examples represent how they came to know how to be reflective practitioners, and more importantly, employ new understandings in similar, subsequent reflective activities.

Susie's and Mary Ann's experiences are illustrative of the importance of teachers' acknowledgement of and engagement in reflective practice as it leads to the development of life-long learning. For teachers to be efficacious, the use of multiple methods of reflecting that provide multiple cognitive pathways for thinking, voicing and interpreting the emergence of new knowledge, skills and dispositions seems beneficial. In so doing, teachers may be better prepared to make changes to their classroom practices, reflective relationships with others, and school communities.

In summary, when Susie and Mary Ann engaged in continual, critical reflection, they developed new knowledge about themselves and their practices. To do so, they needed flexibility and multiplicity in their methodologies to reflect *in-action* and *on-action* to allow them the opportunity to access multiple cognitive pathways. With encouragement to use diverse, new tools, Susie and Mary Ann showed signs of the emergence of a disposition to life-long learning from opportunities to engage in in-depth reflective practice from which an idea of their potential to affect change developed.

Limitations

The most apparent limitation of this instrumental case study was the short length of time of the study (13 weeks). The school setting where this study took place underwent much flux and change during the period of data collection. At times, the reflective processes of Susie and Mary Ann paralleled these fluctuations. It would have been of benefit to extend data collection over a longer period of time, ideally one school year, to gain a more complete understanding of the teachers' reflective practices juxtaposed to the temporal aspects of their environment and programmatic ebb and flow.

A second limitation was the selection of participants. These two teachers were known to me prior to this study. I was keenly aware of the impact my subjectivity could have on the interpretation of these findings and must include that possibility as a limitation. However, my previous relationship with the participants offered me instant access and acceptance into their setting thus saving valuable data collection time in developing trust with the participants. So the possible effects of subjectivity seemed to be outweighed by my ease of entering into the natural setting with known participants.

Finally, the submissions of the two reflective methodologies (electronic written and audio journals), while instrumental in promoting the teachers' systematic, critical reflective practice, were difficult to compare. For example, guiding questions were offered for the electronic written journals, but not for the audio journals. While each new method illuminated how a preferred method may promote in-depth reflectivity, it was difficult to compare and contrast the content of the different submissions. The ability to compare the reflections that occurred when writing versus speaking might have

illuminated the thought processes of practitioners, thus identifying another facet to investigate in their reflective process.

Implications for Research and Practice

In viewing reflective practice through the shared experiences of Susie and Mary Ann, it became clear that they benefited from participating in this study. As Bolster (1983) stated "...I know this model [case study research] has the greatest potential for generating knowledge that is both useful and interesting to teachers" (p. 305). If the structure of this research could aid these two teachers in developing the means for reflecting and developing critical reflective practice and efficacious behaviors, a similar structure could benefit other early childhood teachers similarly. Additionally, the positive impact Susie and Mary Ann realized to their classroom practice suggests that collaborative reflective practice should be a part of all early childhood teachers' experiences. As a result, a framework for assisting teachers and early childhood centers to create effective, consistent, collaborative reflective practices is illustrated. The following are proposed actions identified to utilize such a framework in similar early childhood educational settings.

Implications for the practice of collaborative reflective practice in early childhood settings include the reorganization of the school context to insure time, space and methods that promote shared reflective experiences. When teachers are provided short amounts of time and diverse tools, the potential for the development of new knowledge about practice and the value of others' perspectives are realized. It is this dual impact on both the professional and interpersonal domains of teachers' work lives that hold promise and possibility for creating schools as communities of practices (Wenger, 1998).

The study of Susie and Mary Ann's collaborative relationship offered valuable insights into their reflective processes as a dyad. Susie and Mary Ann identified reflective dyads operating in other areas of their school setting that they had observed as being similar to their own collaborative partnership. It could be illustrative to compare the mechanisms of such diverse dyads to better understand how they operated and utilized their collaborative reflective processes to improve their practices. Replication of this study as a comparison study among reflective dyads would yield a more descriptive and instructive view of teachers' processes of collaborative reflective practice.

Susie's and Mary Ann's experiences illuminated the reflective process of two teachers. While an instrumental case study involving two teachers was the design for this study, applying the research questions to a collective case study methodology could offer a different perspective into early childhood teachers' reflective practice. Inquiring into the processes of an entire preschool could offer insights that would add depth and a more three-dimensional understanding of the evolution and impact of reflective relationships in teacher thinking and actions.

Additionally, research surrounding the use of diverse tools that mediate the reflective process is another aspect that would benefit from further study. As was seen in this study, diverse modes for reflecting were beneficial in contributing to the incidence of in-depth reflective practice. While two new methods of engaging in reflective practice were introduced to the participants in this study, research into the multiple methods of reflecting with their associated semiotic channels and ease of use in various settings

could contribute to a growing inventory of mediational tools for critical reflective practice.

Chapter Summary

Throughout this chapter, I have described the impact of collaborative reflective practice on the thinking, actions, and relationships of two early childhood teachers. Included in this discussion are the ways structural and relational features of the school setting (and research design) influenced the participants' ability to engage in continual reflection leading toward new knowledge, skills and dispositions. The use of diverse tools was shown to contribute to the participants' abilities to reflect deeply and critically. Teachers, in particular preschool teachers in university laboratory schools, work in ever-changing, high-demand environments. For Susie and Mary Ann, the creation of conditions and contexts that supported their collaborative reflective process enabled them to reflect more critically and consistently across the study. As their realization of the value of the process of critical reflective practice to inform action developed, they became re-energized and motivated to reach out to others with confidence and to extend themselves into new collaborative relationships within their community of practice. As Susie and Mary Ann so perfectly stated, "it has opened our eyes that what we do is valuable for each other...and we have learned that to create quality learning environments, the teachers have to share and reflect together."

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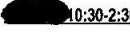
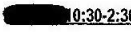
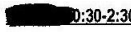
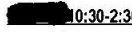
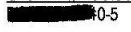
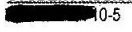
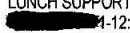
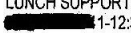
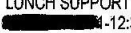
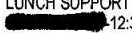
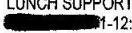
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Appendices

Appendix A. Child Study Center Staffing Schedule

Appendix A. Child Study Center Staffing Schedule

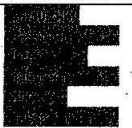
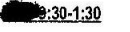
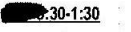
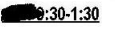
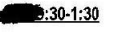
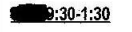
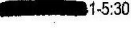
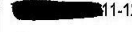
1-4-08 **CRICKETS, FIREFLIES, & KATYDIDS WINTER SCHEDULE: 1-7-08**

MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
	<u>AM 7:30-5:30</u> Classroom 7:30-1 Break 1-1:30 Classroom 1:30-3 Office 3-4 Classroom 4-5:30	<u>AM 7:30-5:30</u> Classroom 7:30-1 Break 1-1:30 Classroom 1:30-3 Office 3-4 Classroom 4-5:30	<u>AM 7:30-5:30</u> Classroom 7:30-1 Break 1-1:30 Classroom 1:30-3 Office 3-4 Classroom 4-5:30	<u>AM 7:30-5:30</u> Classroom 7:30-1 Break 1-1:30 Classroom 1:30-3 Office 3-4 Classroom 4-5:30
<u>E 7:30-5:30</u> Classroom 7:30-1:30 Break 1:30-2 Office 2-3 Classroom 3-5:30	<u>E 7:30-5:30</u> Classroom 7:30-1:30 Break 1:30-2 Office 2-3 Classroom 3-5:30	<u>E 7:30-5:30</u> Classroom 7:30-1:30 Break 1:30-2 Office 2-3 Classroom 3-5:30	<u>E 7:30-5:30</u> Classroom 7:30-1:30 Break 1:30-2 Office 2-3 Classroom 3-5:30	
<u>A 7:30-3</u> Classroom 7:30-1 Break 1:30-2 Classroom 2-3	<u>A 7:30-3</u> Classroom 7:30-1 Break 1:30-2 Classroom 2-3	<u>A 8:30-5:30</u> Classroom 7:30-1:30 Break 1-2 Classroom 2-5:30	<u>A 7:30-3</u> Classroom 7:30-1 Break 1:30-2 Classroom 2-3	<u>A 8:30-5:30</u> Classroom 7:30-1:30 Break 1-2 Classroom 2-5:30
 <u>10:30-2:30</u>	 <u>10:30-2:30</u>	 <u>10:30-2:30</u>	 <u>10:30-2:30</u>	 <u>10:30-2:30</u>
<u>STUDENT ASSISTANTS</u>  10-5	<u>STUDENT ASSISTANTS</u>  10-5	<u>STUDENT ASSISTANTS</u>  10-5	<u>STUDENT ASSISTANTS</u>  10-5	<u>STUDENT ASSISTANTS</u>  10-5
<u>LUNCH SUPPORT</u>  4-12:30	<u>LUNCH SUPPORT</u>  1-12:30	<u>LUNCH SUPPORT</u>  4-12:30	<u>LUNCH SUPPORT</u>  12:30	<u>LUNCH SUPPORT</u>  1-12:30

 **WORKING 8:30-2 Monday thru Friday**

 **WORKING 9-4:30 WEDNESDAY, THURSDAY, AND FRIDAY with a break 1-2**

LADYBUG & DRAGONFLIES WINTER SCHEDULE: 1-7-08

MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
<u>J 7:30-5:30</u> Classroom 7:30-1 Break 1-1:30 Classroom 1:30-3 Office 3-4 Classroom 4-5:30	<u>7:30-5:30</u> Classroom 7:30-1 Break 1-1:30 Classroom 1:30-3 Office 3-4 Classroom 4-5:30	<u>J 7:30-5:30</u> Classroom 7:30-1 Break 1-1:30 Classroom 1:30-3 Office 3-4 Classroom 4-5:30		<u>J 7:30-5:30</u> Classroom 7:30-1 Break 1-1:30 Classroom 1:30-3 Office 3-4 Classroom 4-5:30
<u>K 7:30-5:30</u> Classroom 7:30-1:30 Break 1:30-2 Office 2-3 Classroom 3-5:30		<u>K 7:30-5:30</u> Classroom 7:30-1:30 Break 1:30-2 Office 2-3 Classroom 3-5:30	<u>K 7:30-5:30</u> Classroom 7:30-1:30 Break 1:30-2 Office 2-3 Classroom 3-5:30	<u>K 7:30-5:30</u> Classroom 7:30-1:30 Break 1:30-2 Office 2-3 Classroom 3-5:30
<u>G 1:30-5:30</u>	<u>G 1:30-5:30</u>	<u>G 1:30-5:30</u>	<u>G 1:30-5:30</u>	<u>G 1:30-5:30</u>
 <u>9:30-1:30</u>	 <u>9:30-1:30</u>	 <u>9:30-1:30</u>	 <u>9:30-1:30</u>	 <u>9:30-1:30</u>
<u>STUDENT ASSISTANTS</u> <u>LUNCH SUPPORT</u>  1-12:30  5:30	<u>STUDENT ASSISTANTS</u> <u>LUNCH SUPPORT</u>  1-12:30  1-5:30	<u>STUDENT ASSISTANTS</u> <u>LUNCH SUPPORT</u>  11-12:30  1-5:30	<u>STUDENT ASSISTANTS</u> <u>LUNCH SUPPORT</u>  11-12:30  1-5:30	<u>STUDENT ASSISTANTS</u> <u>LUNCH SUPPORT</u>  11-12:30  5:30

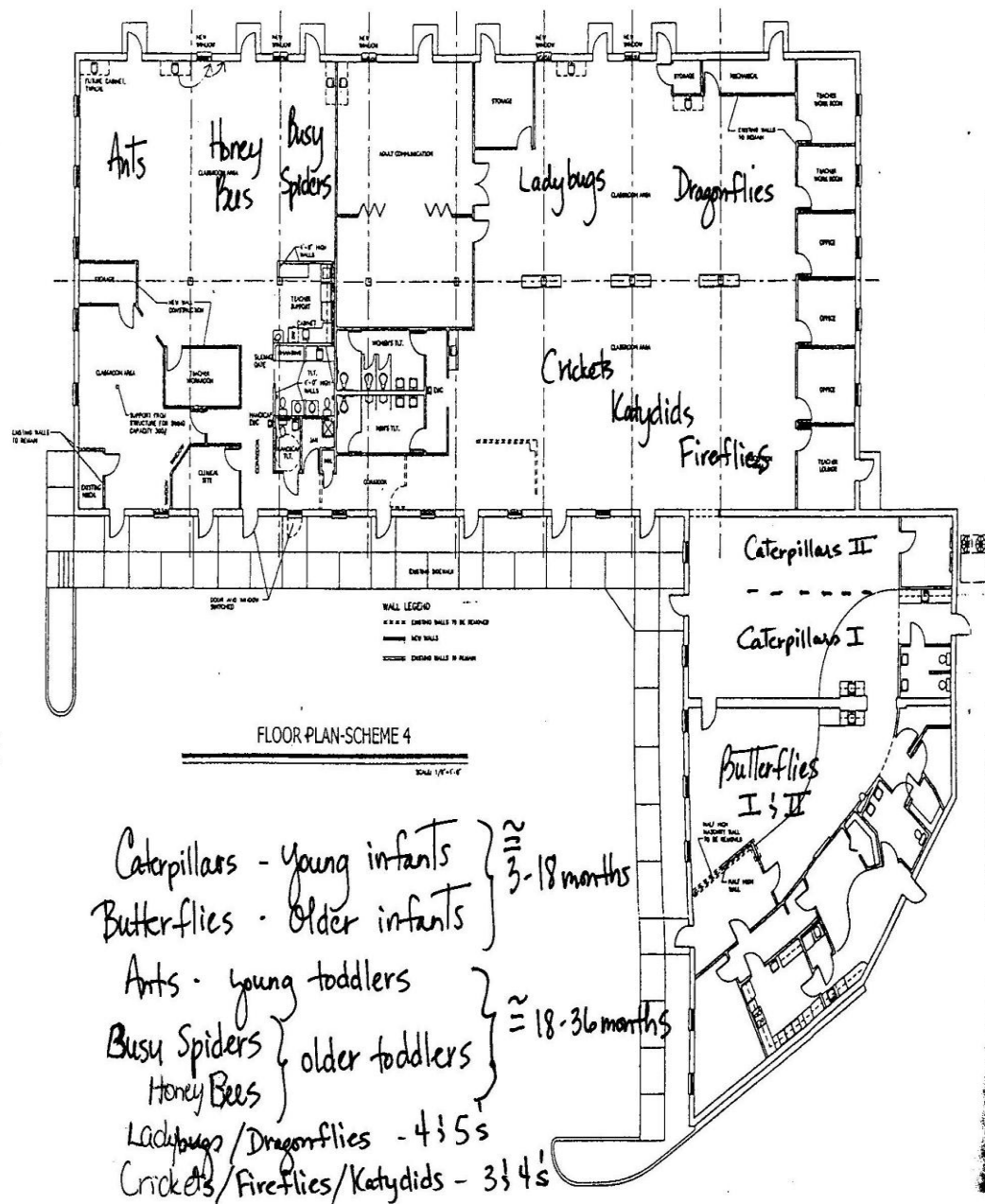
DAYS OFF SCHEDULE FOR WINTER BREAK

WEEK	MON	TUE	WED	THUR	FRI
1-7					
1-14					

ADDED DAY OFF FOR  WORKED ON HER DAY OFF _WEDS. 1-2-08

Appendix B. Child Study Center Floor Plan

Appendix B. Child Study Center Floor Plan



Appendix C. Institutional Review Board Approval (UT)

Appendix C. University of Tennessee Institutional Review Board

THE UNIVERSITY OF TENNESSEE



Institutional Review Board
Office of Research
404 Andy Holt Tower
Knoxville, Tennessee 37996-0140
865-974-3466
Fax: 865-974-2805

05/18/04

IRB#: 6617 B

TITLE: Shared Meaning in Toddler Interactions

Onks, Stacy
Child & Family Studies
830 West Locust St.
Johnson City, TN 37604

Moran, Dr. Mary Jane
Child & Family Studies
115 Jessie Harris Bldg.
Campus

Your project listed above was reviewed. It qualified for expedited review and has been approved.

This approval is for a period ending one year from the date of this letter. Please make timely submission of renewal or prompt notification of project termination (see item #3 below).

Responsibilities of the investigator during the conduct of this project include the following:

1. To obtain prior approval from the Committee before instituting any changes in the project.
2. To retain signed consent forms from subjects for at least three years following completion of the project.
3. To submit a Form D to report changes in the project or to report termination at 12-month or less intervals.

The Committee wishes you every success in your research endeavor. This office will send you a renewal notice (Form R) on the anniversary of your approval date.

Sincerely,

A handwritten signature in black ink that reads 'Brenda Lawson'.

Brenda Lawson
Compliances

Appendix D. East Tennessee State University Institutional Review Board

Appendix D. East Tennessee State University Institutional Review Board



East Tennessee State University

Office for the Protection of Human Research Subjects • Box 70565 • Johnson City, Tennessee 37614-1707 • (423) 439-6053
Fax: (423) 439-6060

December 24, 2003

Stacy Onks
College of Education
P O Box 70685
Johnson City, TN 37614

CERTIFICATION LETTER OF COMPLIANCE

The compliance mandates for education in conducting responsible human subject research were Achieved on December 23, 2003 following your attendance in the ETSU/VA IRB's:

Responsibility in Human subject Research: IRB 101
on December 22, 2003

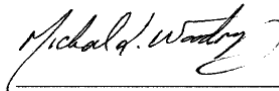
completion of the institutional assessment and each of the three modules located on the OHRP website which address:

- Federal Regulations & Institutional Responsibilities
- Investigator Responsibilities & Informed Consent
- Human protections Program Administration & IRB Responsibilities

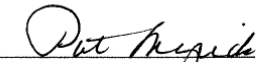
The ETSU/VA course noted above addresses historical background, definitions, regulatory application, IRB organization, authority, the levels and types of review, reporting adverse events (inc. emergency use), the informed consent process and documentation, criteria for approval, the IRB meeting, the ETSU/VA IRB and VA R & D offices, and other local contextual information. An outline of this training session is available upon request.

It is imperative that all key personnel understand the responsibilities involved in an institutional program of human subject protection, as well as the informed consent process. By signing below you certify your knowledge of the institutional assurance and your responsibilities in the responsible conduct of human subjects research.

Investigator
(Credentials Individual)



Vice Provost for Research
Institutional Signatory Official



Compliance Manager
Office of Research & Sponsored
Programs Administration

Copies of your training records will be maintained by the ETSU/IRB Office and, if applicable, by the VA Research & Development Office. The period of certification will continue for three years. If certification is about to end and the credentialed individual has earned continuing education over the last three years, a copy of the continuing education record from a professional meeting or other applicable course(s) must be sent to the ETSU/VA IRB Office for re-certification. A re-certification letter and certificate will be mailed. Continuing education credit may be earned any time between the date certification is awarded and the date it is renewed. If a credentialed individual has not been able to earn continuing education, she/he may retake the current Supplemental Training Component and assessment for continuing education credit and re-certification.

Copy: 25

Appendix E. Informed Consent - Teacher/Adult Participants

Appendix E. Informed Consent - Teacher/Adult Participants

INFORMED CONSENT STATEMENT FOR TEACHER PARTICIPANTS

Collaborative Reflective Practice in Early Childhood Education

INTRODUCTION

This Informed Consent will explain about being a research subject in an experiment. It is important that you read this material carefully and then decide if you wish to be a participant.

This is a study for a project being completed for dissertation research at the University of Tennessee. Information gained in this project will be presented as a published work.

PROJECT OBJECTIVE

The purpose of this study is to observe interactions among teachers and preschool students to determine how teachers reflect on their classroom practices and use those reflections to inform their practice.

INFORMATION ABOUT PARTICIPANTS' INVOLVEMENT IN THE STUDY

For this project, videotaping, audio taping, electronic journaling, and classroom observations will be occurring for a period of approximately 3 – 4 months. The goal of these different methodologies is to attempt to obtain a better understanding of how teachers reflect on their practices in the classroom setting and outside of the classroom setting.

Videotaping intervals will occur during different activities that are part of the typical day at the Child Study Center. The video camera will be positioned unobtrusively in the room so as not to intimidate the children or teachers. The videotaping will be a wide angle view of the children and teachers interacting in the classroom. The intent is not to manipulate the interaction in any way, but to observe interactions as they naturally occur in their daily activities.

Audio taping will occur by giving each of the participants pocket-sized recorders to keep with them during their day. As a reflective moment occurs, participants will be asked to access the recorder and make a brief audio journal entry that will be later transcribed by the Principal Investigator. Electronic journals will be submitted to the PI on a weekly basis with reflections from the weeks activities. Interviews with each participant will occur on a monthly basis and will be conducted in a qualitative format.

Videotapes, audio transcriptions, and electronic journals will be reviewed by Stacy Onks, Principal Investigator, and Dr. Mary Jane Moran, Supervising Faculty to the project. The participants may view selected portions of the videotapes during interviews conducted in a qualitative format to provide insight into reflective practices of classroom teachers.

All research data will be stored in a locked filing cabinet. To protect the identity of the participants and any children whose interactions may be discussed, pseudonyms will be assigned. The pseudonym key will be protected and will be stored in a separate locked filing cabinet. Both filing cabinets are located in Ms. Onks's office on the campus of East Tennessee State University.

RISKS

There are no known/expected risks of discomforts anticipated for any participant in this study. If at any time, any participant becomes distressed by participation in this project, the project will cease immediately.

BENEFITS

The possible benefits of participation is a greater understanding of the reflective practices of teachers in the classroom. This could enhance the teachers' ability to make improvements in their practices in working with the children. There is no

financial compensation for participating in this study.

_____ Participant's initials

CONFIDENTIALITY

The information in the study records will be kept confidential. Data will be stored securely and will be made available only to persons conducting the study unless participants specifically give permission in writing to do otherwise. The key with pseudonyms and children's names will be kept in a secure locked cabinet separate from the videotapes and other data in the office of Stacy Onks. Following the coding of videotapes, the tapes will be destroyed, no later than three years from the date of taping. Following the transcription of interviews with teachers, the tapes will be destroyed, no later than three years from the date of taping. No reference will be made in oral or written reports, which could link participants to the study.

EMERGENCY MEDICAL TREATMENT

The University of Tennessee does not "automatically" reimburse subjects for medical claims or other compensation. If physical injury is suffered in the course of research, or for more information, please notify the investigator in charge (Stacy Onks 423.232.5011~home or 423-439-6942~office).

CONTACT INFORMATION

If you have questions at any time about the study or the procedures, (or you experience adverse effects as a result of participating in this study) you may contact the researcher, Stacy Onks at 423.232.5011 (evening) or 423.439.6942 (daytime). If you have questions about your rights as a participant, contact Research Compliance Services of the Office of Research at 865.974.3466.

PARTICIPATION

Your participation in this study is voluntary; you may decline to participate. If you decide to participate, you may withdraw from the study at anytime without penalty and without loss of benefits to which you are otherwise entitled. If you withdraw from the study before data collection is completed, your data will be returned to you or destroyed.

CONSENT

I have read the above information. I have received a copy of this form. I agree to participate in this study.

Participant's signature _____ Date _____

Investigator's signature _____ Date _____

Appendix F. Informed Consent - Child Participants

Appendix F. Informed Consent - Child Participants

INFORMED CONSENT STATEMENT FOR CHILD PARTICIPANTS

Collaborative Reflective Practice in Early Childhood Education

INTRODUCTION

This Informed Consent will explain about being a research subject in an experiment. It is important that you read this material carefully and then decide if you wish for your child to be a participant.

This is a study for a project being completed for dissertation research at the University of Tennessee. Information gained in this project will be presented as a published work.

PROJECT OBJECTIVE

The purpose of this study is to observe interactions among teachers and preschool students to determine how teachers reflect on their classroom practices and use those reflections to inform their practice.

INFORMATION ABOUT PARTICIPANTS' INVOLVEMENT IN THE STUDY

For this project, videotaping, audio taping, electronic journaling, and classroom observations will be occurring for a period of approximately 3 – 4 months. The goal of these different methodologies is to attempt to obtain a better understanding of how teachers reflect on their practices in the classroom setting and outside of the classroom setting.

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Videotapes, audio transcriptions, and electronic journals will be reviewed by Stacy Onks, Principal Investigator, and Dr. Mary Jane Moran, Supervising Faculty to the project. The participants may view selected portions of the videotapes during interviews conducted in a qualitative format to provide insight into reflective practices of classroom teachers.

All research data will be stored in a locked filing cabinet. To protect the identity of the participants and any children whose interactions may be discussed, pseudonyms will be assigned. The pseudonym key will be protected and will be stored in a separate locked filing cabinet. Both filing cabinets are located in Ms. Onks's office on the campus of East Tennessee State University.

RISKS

There are no known/expected risks of discomforts anticipated for any participant in this study. If at any time, any participant becomes distressed by participation in this project, the project will cease immediately.

BENEFITS

The possible benefits of participation is a greater understanding of the reflective practices of teachers in the classroom. This could enhance the teachers' ability to make improvements in their practices in working with the children. There is no

financial compensation for participating in this study.

_____ Participant's initials

CONFIDENTIALITY

The information in the study records will be kept confidential. Data will be stored securely and will be made available only to persons conducting the study unless participants specifically give permission in writing to do otherwise. The key with pseudonyms and children's names will be kept in a secure locked cabinet separate from the videotapes and other data in the office of Stacy Onks. Following the coding of videotapes, the tapes will be destroyed, no later than three years from the date of taping. Following the transcription of interviews with teachers, the tapes will be destroyed, no later than three years from the date of taping. No reference will be made in oral or written reports, which could link participants to the study.

EMERGENCY MEDICAL TREATMENT

The University of Tennessee does not "automatically" reimburse subjects for medical claims or other compensation. If physical injury is suffered in the course of research, or for more information, please notify the investigator in charge (Stacy Onks 423.232.5011~home or 423-439-7518~office).

CONTACT INFORMATION

If you have questions at any time about the study or the procedures, (or you experience adverse effects as a result of participating in this study) you may contact the researcher, Stacy Onks at 423.232.5011 (evening) or 423.439.7518 (daytime). If you have questions about your rights as a participant, contact Research Compliance Services of the Office of Research at 865.974.3466.

PARTICIPATION

Your participation in this study is voluntary; you may decline to participate. If you decide to participate, you may withdraw from the study at anytime without penalty and without loss of benefits to which you are otherwise entitled. If you withdraw from the study before data collection is completed, your data will be returned to you or destroyed.

CONSENT

I have read the above information. I have received a copy of this form. I agree to participate in this study.

Participant's signature _____ Date _____

Child's Name _____ Date _____

Investigator's signature _____ Date _____

Appendix G. Biographical Questionnaire

Appendix G. Biographical Questionnaire

Name: _____

Date: _____

Date of Birth: _____

Ethnicity: _____

City of current residence: _____ How long? _____

Other places lived _____

Education:

High school: _____ Year graduated: _____

College: _____

Degree completed: _____ Date _____

Major/minor designation: _____

If college not completed, please list courses taken in the area of early
childhood education or related field: _____

Employment history (you may include more on the back of this page if you need to:

Place employed: _____

Position: _____

Length of employment: _____

Job duties: _____

Place employed: _____

Position: _____

Length of employment: _____

Job duties: _____

Appendix H. Myers-Briggs - Electronic Abbreviated Version

HUMANMETRICS

Jung Typology Test

1. You are almost never late for your appointments
☐ YES ☐ NO
2. You like to be engaged in an active and fast-paced job
☐ YES ☐ NO
3. You enjoy having a wide circle of acquaintances
☐ YES ☐ NO
4. You feel involved when watching TV soaps
☐ YES ☐ NO
5. You are usually the first to react to a sudden event:
the telephone ringing or unexpected question
☐ YES ☐ NO
6. You are more interested in a general idea than in the details of its realization
☐ YES ☐ NO
7. You tend to be unbiased even if this might endanger
your good relations with people
☐ YES ☐ NO
8. Strict observance of the established rules is likely to prevent a good outcome
☐ YES ☐ NO
9. It's difficult to get you excited
☐ YES ☐ NO
10. It is in your nature to assume responsibility
☐ YES ☐ NO
11. You often think about humankind and its destiny
☐ YES ☐ NO
12. You believe the best decision is one that can be easily changed
☐ YES ☐ NO
13. Objective criticism is always useful in any activity
☐ YES ☐ NO

14. You prefer to act immediately rather than speculate about various options
☐ YES ☐ NO
15. You trust reason rather than feelings
☐ YES ☐ NO
16. You are inclined to rely more on improvisation than on careful planning
☐ YES ☐ NO
17. You spend your leisure time actively socializing with a group of people, attending parties, shopping, etc.
☐ YES ☐ NO
18. You usually plan your actions in advance
☐ YES ☐ NO
19. Your actions are frequently influenced by emotions
☐ YES ☐ NO
20. You are a person somewhat reserved and distant in communication
☐ YES ☐ NO
21. You know how to put every minute of your time to good purpose
☐ YES ☐ NO
22. You readily help people while asking nothing in return
☐ YES ☐ NO
23. You often contemplate about the complexity of life
☐ YES ☐ NO
24. After prolonged socializing you feel you need to get away and be alone
☐ YES ☐ NO
25. You often do jobs in a hurry
☐ YES ☐ NO
26. You easily see the general principle behind specific occurrences
☐ YES ☐ NO
27. You frequently and easily express your feelings and emotions
☐ YES ☐ NO
28. You find it difficult to speak loudly
☐ YES ☐ NO

29. You get bored if you have to read theoretical books
☐ YES ☐ NO
30. You tend to sympathize with other people
☐ YES ☐ NO
31. You value justice higher than mercy
☐ YES ☐ NO
32. You rapidly get involved in social life
at a new workplace
☐ YES ☐ NO
33. The more people with whom you speak, the better you feel
☐ YES ☐ NO
34. You tend to rely on your experience rather than
on theoretical alternatives
☐ YES ☐ NO
35. You like to keep a check on how things
are progressing
☐ YES ☐ NO
36. You easily empathize with the concerns of other people
☐ YES ☐ NO
37. Often you prefer to read a book than go to a party
☐ YES ☐ NO
38. You enjoy being at the center of events in which
other people are directly involved
☐ YES ☐ NO
39. You are more inclined to experiment than
to follow familiar approaches
☐ YES ☐ NO
40. You avoid being bound by obligations
☐ YES ☐ NO
41. You are strongly touched by the stories about people's troubles
☐ YES ☐ NO
42. Deadlines seem to you to be of relative, rather than absolute, importance
☐ YES ☐ NO
43. You prefer to isolate yourself from outside noises
☐ YES ☐ NO
44. It's essential for you to try things with your own hands
☐ YES ☐ NO

45. You think that almost everything can be analyzed
☐ YES ☐ NO
46. You do your best to complete a task on time
☐ YES ☐ NO
47. You take pleasure in putting things in order
☐ YES ☐ NO
48. You feel at ease in a crowd
☐ YES ☐ NO
49. You have good control over your desires and temptations
☐ YES ☐ NO
50. You easily understand new theoretical principles
☐ YES ☐ NO
51. The process of searching for solution is more important to you than the solution itself
☐ YES ☐ NO
52. You usually place yourself nearer to the side than in the center of the room
☐ YES ☐ NO
53. When solving a problem you would rather follow a familiar approach than seek a new one
☐ YES ☐ NO
54. You try to stand firmly by your principles
☐ YES ☐ NO
55. A thirst for adventure is close to your heart
☐ YES ☐ NO
56. You prefer meeting in small groups to interaction with lots of people
☐ YES ☐ NO
57. When considering a situation you pay more attention to the current situation and less to a possible sequence of events
☐ YES ☐ NO
58. You consider the scientific approach to be the best
☐ YES ☐ NO
59. You find it difficult to talk about your feelings
☐ YES ☐ NO

60. You often spend time thinking of how things could be improved
☐ YES ☐ NO
61. Your decisions are based more on the feelings of a moment than on the careful planning
☐ YES ☐ NO
62. You prefer to spend your leisure time alone or relaxing in a tranquil family atmosphere
☐ YES ☐ NO
63. You feel more comfortable sticking to conventional ways
☐ YES ☐ NO
64. You are easily affected by strong emotions
☐ YES ☐ NO
65. You are always looking for opportunities
☐ YES ☐ NO
66. Your desk, workbench etc. is usually neat and orderly
☐ YES ☐ NO
67. As a rule, current preoccupations worry you more than your future plans
☐ YES ☐ NO
68. You get pleasure from solitary walks
☐ YES ☐ NO
69. It is easy for you to communicate in social situations
☐ YES ☐ NO
70. You are consistent in your habits
☐ YES ☐ NO
71. You willingly involve yourself in matters which engage your sympathies
☐ YES ☐ NO
72. You easily perceive various ways in which events could develop
☐ YES ☐ NO

Appendix I. Interview Questions

Appendix I. Interview Questions

Initial Interview Guide

Tell me about...

What motivated you chose to become a preschool teacher?

What it is like to co-teach with (the other participant)?

How do you define reflective practice within your professional framework?

Process:

Currently, in what ways do you see yourself reflecting on your teaching practices on your own and with other colleagues?

When do you reflect on your practices?

Where are you (physical location) when you reflect on your practices?

How do this process occur for you (can you give me an example)?

What do you do with the information/ideas learned from the reflection?

Content :

Can you describe a typical occurrence for you? And with a colleague?

How does working and reflecting collaboratively impact of change your relationship with your colleague?

Check in question on the research process/participation:

What are your expectations/concerns/questions regarding your participation in this research study

First Four Week Interview Guide

During this four week period, you have had some interesting reflections on your classroom activities and some even more interesting reflections on the process of reflection itself.

Having been asked to engage in reflections on your practices, how do you now define a reflection? What is a reflection to you?

At one observation, you wondered together about how you learned to reflect- Can you share some of your experiences in regards to this learning process?

You mentioned that structure had played an important role in your reflective processes in the past – is structure important for reflection to occur for you? Can you explain this?

You indicated that you both enjoy and benefit from reflecting together. You have been working together for a few years now - can you describe how this process occurred at the onset of your relationship – (did this start informally, etc.) How is this process different for you two now? Can you describe feelings you have when you reflect with each other?

How does reflecting together impact your practices? Your work relationship?

Second Four Week Interview Guide

Tell me about your reflections with each other over the past eight weeks:

When do they occur?

Where do they occur?

What are you reflecting on (content-wise)?

What does it feel like to reflect together?

You are both beginning to collaborate with new team or co-teachers. What does that feel like?

How does it compare to what you two reflect and collaborate on?

Have you shared with each other at all, what you have been reflecting about in your audio and ejournals?

Third Four Week Interview Guide

1. Is the process of reflecting together energizing or draining – with each other, with others?
2. Is there value to you in reflecting with other coworkers (ie-the new work relationship, Susie’s comment during an observation about feeling guarded)
3. Are the work relationships here so damaged that productive reflection could not be achieved – maybe not to the level you have with each other, but could productive reflection happen?
4. How could you see that happening? Is it worth the effort it would take?
5. What is the difference between collaborative reflection and a gripe session?
6. You said others feel you talk about them when you are together, do you still feel this way?
7. Susie shared in a journal that you had all been reflecting as a group to prep for the conference etc. and that it felt like more of a formal setting with a fixed agenda of times. This did not seem to meet the “need” for reflecting as it does when the two of you reflect. What do you need from a reflective collaboration?
8. What is the product of reflecting together? Are you making any changes to your practices – what are they?

Concluding Interview Guide

Tell me how this experience was for you as a duo.

Reflective Process

MA stated she used reflection to maintain/regain focus and it was also used as a “to do” reminder. Susie used the reflection to get the words of the children– tell me about this process for you.

Reflecting with the group – didn’t seem to meet the need that your reflecting together did. What do you “need” from a collaborative reflection?

MA said that you “crave new collaborative relationships” and “I have learned in order to create quality learning environments, the teachers have to share and reflect together” and that you do see yourself consulting with other coworkers more than you realized”, Susie said “I am excited about collaborating with J” – have you learned anything from this experience that could facilitate developing new collaborative relationships?

Method

Talk about the ejournaling and audiojournaling. You each had different ways of using the journaling to reflect.

Was it a hindrance to your work, difficult to remember, helpful, easy, etc. You both reflected as if you were talking to me which is logical, how would it be if you were self-initiating ejournaling and audiojournaling?

Were you able to reflect more deeply with written or audio journals? Reflecting in the moment versus reflecting on the moment?

You both used the term “wonderings” and MA said referred to wonderings as unstructured reflections and pondered on “how to tap into them and how they would change her work” – How are you tapping into your reflections?

Will you miss the “requirement” to ejournal and audiojournal – that is, the imposed structure?

Environment

Has this been (May – July) an unusually hectic or chaotic time at the CSC? I have not experienced this much disruption before.

Susie said she “felt in downhill mode” (with the children) toward the end and it was difficult to remember to reflect – are there times in the life cycle of your classroom that are more conducive to or that motivate you to reflect than other times?

Outcome

Have your reflective collaborations with each other changed as a result of this experience? What about collaborations with other colleagues?

MA said “others are beginning to sense the beauty of our friendship” do you think they also sense the importance of your collaborations together?

MA said that some really good collaborations had occurred for the larger group about a year ago and said “remember all those positive feelings that would go on in the room and I see how that could be so wonderful if that could happen again” – How could you make that happen again?

(MA also said that I have learned that in order

What method of reflecting was most effective for you?

Are there environmental changes that could be made that would enable you to reflect more consistently and effectively?

Can you tell me about the impact of your reflections on your classroom practices?

Can you offer some examples of this?

How has reflecting collaboratively impacted your professional relationship with the other participant?

Appendix J. Audio Journal Guide

Appendix J. Audio Journal Guide

Audio Journaling Guide

Please include the following information in your entry:

Time:

Date:

Describe activity/setting:

Who was involved?

What occurred?

What was your reflection/insight?

Anything else you wish to add

Appendix K. Electronic Written Journal Guiding Questions

Appendix K. Electronic Written Journal Guiding Questions

Please reflect upon and answer the following journal questions in your entry and return to me via email by Monday morning at 8:30am!

E-Journal Reflection for 5/2/08

Please respond to the ponderings below and return to me via email by Monday (5/5) at 5:pm.

When I here the words “reflective practice”, my first impression or thought is:

When I think of how I reflect on my practices (on my own), the visual image I have of my process is:

When I think of reflecting on my teaching practices with colleagues, the feelings I have are:

E-Journal Reflection for 5/9/08 (Susie)

Good morning! The following is the e-journal question for this week. I enjoyed the observations this week!

During circle/sharing time this week, you were reading a book, but the children had questions/observations about the fire on the mountain and a car wreck that some had seen on the way to preschool. What shifts did you make in that activity to accommodate their interests?

E-Journal Reflection for 5/9/08 (Mary Ann)

The observation:

Brogan and friends were playing at the table with floam. There was some problem that resulted in Brogan having a melt down. Angie was attempting to intervene, not quite successfully with Brogan individually. You attempted to support her, but she seemed to want to play it out on her own. You shifted your attention to the table of friends asking them if they knew why Brogan was so upset. What thoughts were you having during this exchange?

From Thursday morning observation:

What thoughts were you having as you moved about the room, straightening centers and getting the day started for the children?

E-Journal Reflection for 5/16/08

During my joint observation with you on Tuesday, there was some discussion about what reflection really is for you. The following is an excerpt from my field notes of that observation:

“Susie was musing about the content of her reflections and the open-endedness of the reflections for this research project. Both turned their question to me and asked if they were reflecting on the “right” things. My response was that these are their own reflections, whatever comes up for them is the “right” thing. This led to a conversation between them about the nature of their reflections at the CSC. Previously, it seems that their reflections have been guided to a great degree by the project they are working on. There has not been an opportunity to reflect openly on whatever comes to mind for them. They have been asked to reflect using a specific form created by another faculty. Susie and Mary Ann began to question their knowledge of what reflection really is. There seemed to be some notion that a reflection had to be structured or “about” something in particular. The comment was made that they wondered if the way they were reflecting was the “way they were taught or conditioned to reflect”.

Given this conversation, please sit quietly for a few moments and consider the following questions:

How did I learn to reflect?

In what ways has that process changed over the years for me?

Is structure necessary for me to reflect? What things/situations do you feel are “right” for you to reflect on your practices? Are you aware of reflecting outside of that structured setting?

E-Journal Reflection for 5/23/08 (Susie)

During one of this week’s observations, you shared that you had an “aha moment” regarding the children’s digital portfolios. Can you share that moment and your reflections on the “aha moment”? What actions have you contemplated/reflected on from this “aha moment”?

E-Journal Reflection for 5/23/08 (Mary Ann)

This has been an unusual work week for you. You have been away from the CSC for three days and had quite a bit of exciting things going on in your personal life. How does a shift or change in your routine impact your reflective processes?

E-Journal Reflection for 5/30/08

From this week's interview, you both talked about the respect and trust that you have in your professional relationship. This seemed to be a key aspect in your choosing to reflect with each other. Susie even commented that "maybe this is a rare thing" – referring to your relationship. Is this a unique work relationship for you or have you had any similar experiences in professional relationships in which you could openly and honestly share and reflect with a colleague?

E-Journal Reflection for 6/13/08

During observation this week, you both mentioned a child that you would be working on transitioning from Susie's room to Mary Ann's room. I understand that this child has some issues that are a concern to Susie. Can you describe the process you two use in transitioning children, addressing their individual needs, and the reflective processes you have as you prepare for transitioning this child in particular?

E-Journal Reflection for 6/20/08

Last week you both included audio journals regarding the transition plans you were considering for C P. From your reflections on this classroom issue, what changes to your plan or practices occurred?

E-Journal Reflection for 6/27/08

There have been a lot of scheduling challenges and shifts this past week. Along with that, plans for looping children are under way and some children are already beginning to leave your classrooms and the CSC altogether. There is a definite feeling of "a change is in the air" along with the feelings of excitement/anticipation that brings.

- 1) How does all of this change to your routine affect your ability to reflect within the structure of this research project (maintaining the audio journals,ejournals)?
- 2) Is there more challenge to reflect now or are you reflecting more often during this period of change?
- 3) Do you think that you need more structure to maintain your reflective processes or the "habit" of reflecting during periods of change and transition?
- 4) Do you feel that the reflecting that you are doing has been beneficial to you during this transition time?

E-Journal Reflection for 7/4/08

This week is a pretty short question, but I think the answer might take some thought on your part.

What changes to your work or practices have you noticed from your reflections? Are you taking action on your reflections?

E-Journal Reflection for 7/11/08

- 1) What are you personally doing (specific actions) with the knowledge or insights you gain from reflecting together?
- 2) What are you as a professional duo or team doing (specific actions) with the knowledge or insights you gain from reflecting together?
- 3) In the interview earlier this week, I asked if you were sharing your audio or e-journals with each other. Both of you indicated that you had not been sharing them with each other. It is not a good or bad thing that you are not sharing your journals. Is there a reason that you have not shared these?
- 4) Given the drama of the preschool meeting this week, describe your feelings towards each other in that moment. What needs to reflect and debrief with each other were present? What are your feelings about continuing to develop new collaborative reflective relationships with new co-teachers?

E-Journal Reflection for 7/18/08

This week has seen continued drama and changes in your work place: the fallout from last week's meeting and the looping up of the new children. In my observations, your conversation seemed to center around the changes you were experiencing.

Describe your reflective process during this challenging week– both those reflections occurring individually AND collaboratively with each other. Some things to think about are the frequency of your reflections during this past week as compared to a typical week (one with less drama and change); when you have been reflecting (time of day); where you reflect (specific locations) and the content of those reflections. Also describe the changes to your thinking or actions that you experienced as a result of your reflections with each other.

After you reflect with each other and you are on your own, what thoughts are you having after your reflections with each other.

E-Journal Reflection for 7/25/08

This week I have observed you reflecting collaboratively with each other and briefly with the larger preschool teacher group. One of our observation periods, involved the two of you reflecting together over your experiences in collaborating with the larger preschool teacher group.

Please compare and/or contrast your experiences in collaborating between the two of you versus your collaborations with the larger preschool teacher group. Please share your description and

evaluation of each of the reflective situation and feelings that you have in each of the situations (with each other vs. the larger group). Include changes to your practices that result from the reflections in each of the situations.

E-Journal Reflection for 8/1/08

With the looping changes and some coteacher changes in your classroom, how have your reflections with co-teachers aided or changed your practices in the classroom? After reflecting with the new coteacher, do you still seek out each other for reflection or has that need been met with other coteachers?

Susie mentioned that she is enjoying working with her new coteacher, but feels the need to be guarded around her right now. My impression was that had to do more with past experiences with others rather than with this new coteacher. You have both had a “collaborative experience” with your preschool group for the conference recently – was this experience one in which you felt “guarded” or were you able to work openly and collaboratively with the group? What shifts or differences in your work do you feel or experience working with each other versus the group?

Appendix L. Emergent Themes and Properties

Appendix L. Emergent Themes and Properties

Properties of Emergent Themes

Children - included any reflection that had to do with the activity of or inquiry about a child or children in the classroom.

Collaborative reflective practice with colleagues - feelings and ideas regarding reflective relationships with other colleagues.

Collaborative reflective practice with MaryAnn/Susie - descriptors of their dyadic relationship.

Ideas for changes to practice - related to any entry in which an idea for a change to practice occurred for the participant.

Learning environment - included any reflection that related to an observation by the participant about the use of or engagement in an environment by the children.

On using the recorder - related to the use of the audio recorder methodology.

Program issues - identification of presenting needs in the classroom and larger preschool.

Reflection on the day - related to a revisiting of the day's activities as a debriefing.

Retaining focus - related to self-talk about remaining focuses on identified goals, in particular, during chaotic work times.

Staffing issues - related to concerns and problems with fluctuation in teaching teams and scheduling dilemmas.

Time constraints and reflecting - related to concerns about being able to reflect consistently per the structure of the research design due to change in schedule and reduction of planning time.

Use of the recorder as a reminder - related to any entry in which the recorder was used as a verbal to do list or reminder.

Appendix M. LaBoskey Scoring Scale of Reflectivity

Appendix M. LaBoskey Scoring Scale of Reflectivity

Score	Sample Criteria
-5	• Responses simplistic and certain • Focus upon practical issues only • Emphasis on firsthand experience as the source of reflecting • Teacher as transmitter of learning/reflection • More concern for themselves in the reflection than with students/colleagues • Short-term view
+5	• Indication of a real struggle with the issues; raises questions; evidence of uncertainty • Propensity to consider alternatives and reconsider preconceptions • Long-term view • Concern for the needs of students/teachers • Evidence of being open to reflection – growth oriented • Teacher as facilitator of reflection • Recognition of the complexity of the reflective process • Awareness of need for action orientation based on reflection
0	Cannot be rated as +5 or -5 because they did not answer the question or because it is just too difficult to assign another score, e.g. the answer has strong feature of both reflective and unreflective responses

Appendix N. Content Analysis of Susie's Audio Journals by Week

Appendix N. Content Analysis of Susie's Audio Journals by Week

Susie's Audio Journal Submissions	Dominant Content
Week 1	Children
Week 2	Children
Week 3	Learning environment
Week 4	Children
Week 5	Children
Week 6	Children
Week 7	Children
Week 8	On using recorder/children/time constraints and reflecting
Week 9	Time constraints impact on reflections
Week 10	Children Collaborative reflective practice with MaryAnn
Week 11	Program issues Curriculum planning
Week 12	No recording
Week 13	Collaborative reflective practice with colleagues

Appendix O. Content Analysis of Mary Ann's Audio Journals by Week

Appendix O. Content Analysis of Mary Ann's Audio Journals by Week

Mary Ann's Audio Journals Submissions	Dominant Content
Week 1	Data erased by participant
Week 2	Data erased by participant
Week 3	Staffing issues
Week 4	Curriculum planning
Week 5	Curriculum planning
Week 6	Staffing/program issues
Week 7	Collaborative reflective practice with colleagues
Week 8	Retaining focus Collaborative reflective practice with Susie
Week 9	Vacation – no recordings
Week 10	Collaborative reflective practice with colleagues
Week 11	Reflection on the day Collaborative reflective practice with colleagues
Week 12	Children Use the recorder as a reminder
Week 13	Ideas for change to practices

Footnotes

Notes

1. A preservice teacher is any student in the preparatory, educational phase of becoming a classroom teacher. An inservice teacher is any teacher having completed their formal education and employed as a classroom teacher.

Vita

Stacy Cummings Onks has always enjoyed reflecting and learning with others long before developing an understanding and appreciation for the work of Vygotsky. Stacy began her college education at East Tennessee State University earning a Bachelor of Arts in Psychology. Her interest in helping and working with others compelled her to continue her education and complete a Masters in Counseling.

After marrying her best friend, Kurt, the two relocated to San Diego, California and she began her first post-graduate full-time position working with adults with disabilities in a community based program. In this program, Stacy realized the importance of collaborating with these adults as they learned new skills to move towards a more independent life in which they found their special niche in the community. From working with these adults, who had a wide range of challenges, Stacy learned the value of collaborating and affirming people for the individual gifts they had to share. During these experiences, Stacy began her life changing reflections on what it meant to be “perfect” and “valued” as she watched these people give their very best every day. These lessons are still prominent in how Stacy approaches her life and work some twenty years later.

After relocating to Tennessee, Stacy worked as a child advocate in Knoxville with children who were at risk. This work renewed her appreciation for children and a commitment to honoring them, their rights as people, and a respect for the beauty of the world as seen through their eyes. This experience was humbling and added to the lessons that continue to impact Stacy’s approach to life.

The halls of higher education were calling and Stacy returned to her college home of East Tennessee State University where she has been advising students and teaching courses for the past 11 years. The energy of the college campus, interaction with students, and the opportunities for life-long learning make ETSU an enjoyable and stimulating place to be. So motivating in fact, that Stacy decided to complete her education with a doctorate in Child and Family Studies. This journey has been fulfilling in many ways, both personal and professional, again adding to the lessons that are guiding her along her life path.