

PRESERVICE TEACHERS' NEGOTIATION OF MIDDLE SCHOOL SCIENCE TEACHING IDENTITY

by

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(Under the Direction of J. Steve Oliver)

ABSTRACT

Learning to teach is a complex endeavor that scholars have begun to explore in new ways. These approaches diverge from investigations exploring the connection between the cognitive dimension (i.e., teacher knowledge and skills) and teachers' practices. Building on the work of situated learning and practice theorists, studies of learning to teach have begun focusing on identity as a relevant construct in exploring teacher learning. Such approaches emphasize learning and identity as inextricably linked and depict learning as a process of becoming. Scholars have noted that forging a teaching identity is an important aspect of entry into the teaching profession.

In this study, I focused on teaching identity but diverged from the more static, developmental perspectives often employed. More specifically, I explored beginning teachers' negotiation of middle grades science teaching identity. I defined teaching identity as how individuals **enact** themselves in the world for the purpose of constructing an adequate representation of the complex **process** of learning to teach. Conceptualizing identity as action-based is imperative as it requires a focus on the socially-situated and personally-bound nature of beginning teachers' work in the classroom. I employed the term negotiate to depict how individuals enact themselves as teachers in an endeavor in which they are agents, but in which

multiple tensions are involved that must be prioritized. In exploring negotiation of teaching identity I employed a case-based inductive approach that utilized various methods associated with narrative inquiry traditions. Methods employed allowed for a tripartite focus on the social, personal and action dimensions and included collection of data from interviews, observations, various written work, and conversations. Data analysis relied on various approaches that were seamed together to construct a narrative and a model of negotiation of teaching identity. Findings include a description of participants' varied ways of negotiating teaching identity. These negotiations are discussed in relation to the development of core teaching identity. Additionally, science-specific and middle grades specific negotiation of teaching identity is explored. Ultimately, implications for teacher education are discussed.

INDEX WORDS: Middle school teachers, Science teaching, Science instruction, Teacher identity, Teaching identity, Professional identity, Preservice teacher education, Beginning teachers, Science teacher education, Middle grades teacher education, Teacher student relationship, Middle schools, Learning to teach.

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IDENTITY

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Chapter 1 – Beginnings

“Teaching is fundamentally a dialogic relation, characterized by mutual dependency, social interaction and engagement, and attention to the multiple exigencies of the unknown and the unknowable” (Britzman, 2003, p. 236).

“Accepting the centrality of borderland discourse to teacher education necessitates the rejection of the theory that either through knowledge of pedagogical or disciplinary content or through isolated and disconnected reflective exercises a young teacher can emerge from a teacher education program ready to begin a satisfying and successful teaching life. It isn’t only about learning content, pedagogical technique, or research strategies for reflecting on practice; it’s also about how to honor personal beliefs, life choices, and experiences that have value and meaning while enacting elements of the professional identity that society demands” (Alsup, 2006, p. 126)

Introduction

I am a middle grades science teacher. Or at least I was. I wonder why I feel such a sense of pride in making this statement?

I loved working with middle grades science students and was a “good” middle grades science teacher. In retrospect I wonder what it means to be a “good” middle grades science teacher.

Thinking back to my own experiences in the classroom, I vividly remember the ways in which I felt pulled in many directions in enacting myself as a teacher. I wanted my students to enjoy learning and feel a connection with me as a teacher. I desired to be a “good” science teacher and engage my students in inquiry in the classroom. I wanted to design instruction and the learning environment in ways that helped students grow, not just intellectually, but as individuals. I wanted to prepare my students for the standardized tests at the end of the year. I wanted parents to respect my work as a teacher. I wanted my colleagues to respect my work and

enjoy working with me. And I wanted to be perceived as a good teacher in my own eyes.

Juggling all of these factors was the most challenging part of my work. Every decision I made about what I was doing as a teacher was driven by various tensions, all of which were relevant to me. At times I left work feeling like I was an awful teacher; other days I left feeling things had gone wonderfully. No matter how I felt when I left on a particular day, I never knew what the next day would bring. Britzman (2003) nicely encapsulated my experiences as a teacher in the following passage on the nature of learning to teach:

Teaching must be situated in relationship to one's biography, present circumstances, deep commitments, affective investments, social context, and conflicting discourses about what it means to learn to become a teacher. The tensions among what has preceded, what is confronted, and what one desires shape the contradictory realities of learning to teach (p. 31).

In reflecting on my own experiences, I realized that part of the reason I still felt such an attachment to my experiences as a middle grades science teacher had to do with the intense identity work in which I was constantly engaging. This work left me exhausted, fulfilled, exhilarated, frustrated, and proud. It was something that waned very little throughout my five years of teaching and led me to question what the process of becoming a middle grades science teacher entailed for others. Many scholars have described the importance of identity work in becoming a teacher (Alsup, 2006; Gee, 2001; Sumara & Luce-Kapler, 1996), emphasizing that forging an identity is "an important part of securing teachers' commitment to their work and adherence to professional norms of practice" (Hammerness, Darling-Hammond, Bransford, & others, 2005, p. 383)

As I explored the literature on learning to teach as well as learning to teach science, I realized that although many scholars had focused extensively on the cognitive dimension associated with learning to teach there were far fewer studies on beginning teachers' identity work (Hammerness et al., 2005; Kagan, 1992; Wideen, Mayer-Smith, & Moon, 1998). This was especially true of studies on beginning science teachers. Of the handful I located regarding science teacher identity, only one focused on beginning middle grades science teachers' identity construction (Proweller & Mitchener, 2004). However, these scholars examined the student teachers' identity construction as a group. I was much more interested in the intricacies of individuals' processes of becoming middle grades science teachers.

In addition to a lack of work focused on subject-specific identity, I also realized that many scholars were focusing on identity development over a considerable period of time (Flores & Day, 2006; Pittard, 2003, April; Smagorinsky, Cook, Moore, Jackson, & Fry, 2004). Others employed identity as a somewhat static construct (Helms, 1998; Varelas, House, & Wenzel, 2005). However, I found myself drawn more to scholarship in which identity was depicted less linearly and more dynamically, as an enactment that is always socially-situated and personally-bound (Boaler, 2002; Brickhouse & Potter, 2001; Carlone, 2004; Lave & Wenger, 1991; Wenger, 1998). I believed these approaches would allow me to construct a rich representation of what learning to teach middle grades science and becoming a middle grades science teacher entailed for student teachers.

In this study, then, I focus on the intricacies of the process of enacting self as a beginning middle grades science teacher. I conceptualize this identity work as a negotiation¹. Thus, I aimed to explore how beginning teachers negotiated their middle grades science teaching identity

¹ This term is defined in greater detail in upcoming paragraphs.

during student teaching for the purpose of constructing more adequate representations of the process of learning to teach. I wanted my work to represent identity as an enactment that was the pivot between the social and the individual (Wenger, 1998) and in ways that neither infused the “individual with undue power” nor “undue culpability” (Britzman, 2003, p. 235). In order to accomplish these goals, I found it useful to conceptualize identity much like Park and Oliver’s (in press) working definition of pedagogical content knowledge (PCK). These individuals described pedagogical content knowledge as individuals’ **enactment** of this specific form of teacher knowledge. Similarly, I conceptualize teaching identity as how one enacts self in the world. To re-emphasize, then, the purpose of my study was to construct a representation of my participants’ negotiation of teaching identity, or their process of enacting themselves as beginning middle grades science teachers during student teaching.

I believed that constructing a representation of this negotiation of the complexities of learning to teach in the world – a world from which the individual’s way of enacting self as teacher is inextricable would be a useful aid when contemplating why beginning teachers do or do not develop teaching identity (in a more static sense), which other scholars have emphasized as critical to beginning teachers’ future success (Hammerness et al., 2005). In addition, I believed constructing a representation of these individuals’ negotiations of self as teacher might inform our work as teacher educators. Such representations would allow us to more fully understand how individuals become teachers and to reconceptualize how we might design teacher education programs in ways that facilitate similar processes of becoming prior to student teaching.

The following research question informed this study: How do beginning teachers negotiate their middle grades science teaching² identities during student teaching? Before proceeding, a few definitions are in order. As I stated previously, I defined teaching identity much like Wenger (1998): Teaching identity is how one enacts herself as a teacher in the classroom. Enacting self in the classroom is not limited to instructional actions, but has to do with any aspect of being a teacher at that particular moment. Although many scholars conceptualize identity as one's sense of self (Alsup, 2006; Helms, 1998), self understanding that has strong emotional resonance (Holland, Lachicotte, Skinner, & Cain, 1998) or the kind of person one is seeking to be and enact here and now (Gee, 2005), I believe these perspectives are problematic for examining beginning teachers' experiences as they learn to teach. For me the limitations of these approaches center on my belief that they do not encourage a focus on the dynamic ways in which beginning teachers negotiate the complexities of the classroom, their personal visions of teaching, and various other factors. Although I certainly developed this more static version of teaching identity depicted above, it happened over many years, making it an inadequate perspective for the exploration of learning to teach during student teaching, which is a more dynamic venture. Thus, from here on, I refer to other scholars' definitions (Gee, 2005 and others previously cited descriptions) of identity as **core teaching identity**. I believe an awareness of core teaching identity, - one's sense of self as teacher or the kind of teacher one is recognized as by self and others - develops over a considerable amount of time. Once again, my focus is on beginning teachers' teaching identity (how they enact themselves as teachers) as a complex, dynamic, and non-linear construct.

² I have selected the word "teaching" rather than "teacher" to depict identity as an active process, rather than an object-like thing.

In addition, the term negotiation must be defined. I have chosen the term negotiation to describe the ways in which beginning teachers make sense of, prioritize, incorporate into action, and respond to the complexities of teaching they face in their work. This term seems appropriate in light of the barrage of tensions that become relevant in student teachers' identity work. Possessing visions of themselves as teachers, reporting to a university supervisor who has certain expectations about what a teacher should be, being recognized as a good teacher in the eyes of their mentor teacher, and getting students to recognize them as teachers are just a few of the factors that become relevant in student teachers' negotiation of teaching identity. All of these factors and more must be either implicitly or explicitly negotiated. My exploration of how beginning teachers participate in this negotiation of their middle grades science teaching identities during student teaching will focus on macro-level negotiations rather than the moment-by-moment negotiations that are always relevant in one's work as a teacher. Thus, I will explore how they prioritize, incorporate, and make relevant or not their experiences, personal vision of teaching, demands of the students, wishes of the mentor teacher, reform agenda of the teacher education program, and other factors throughout their placement, rather than focusing on select, short-lived interactions in considerable detail. Of course, those short-lived interactions or incidents can have a powerful effect on the individual and thus will be recounted as appropriate within the context of the narrative analysis, but they do not represent the primary interest of this study.

In addition to the primary research question already discussed, the following sub-questions also drove the research process. Unlike the primary research question these were continually honed as data were collected and initial analysis attempts required refined analytical conceptions.

- What do middle grades science student teachers make relevant and irrelevant while learning to teach? Why? When? How and why do these relevancies change throughout student teaching?
- How can student teachers' instructional strategies and interactions with students be described throughout student teaching? In what ways do they change? When? What are student teachers' perceptions of their instruction and relationship with students?
- In what ways do student teachers enact their personal teaching vision in their work? Which aspects of this vision are enacted and which are not? How do the aspects of the personal teaching vision being enacted change throughout student teaching? Why?
- What experiences do student teachers identify as significant or problematic and why? How do these change throughout student teaching?
- In what ways do they make relevant certain aspects of the context of their student teaching placement (i.e. students, cooperating teacher, other school personnel, cultural norms of schooling)? How do these relevancies change?
- To what degree do student teachers believe they were successful in enacting themselves as middle grades science teachers? Why?

In order to further explore this complex and non-linear process, I took an inductive (Charmaz, 2006; LeCompte & Preissle, 1993) case study approach (Hays, 2004) that incorporated elements of narrative inquiry (Chase, 2005; Connelly & Clandinin, 1990; Kramp, 2004; Lieblich, Tuval-Mashiach, & Zilber, 1998; Polkinghorne, 1995). The methods employed in this study were selected for two primary reasons: 1. They were intended to help me see the world through the eyes of the participants while realizing the ways in which each individual was culturally bound and socially situated (Charmaz, 2006) and, 2. They allowed me multiple views

(collected in various contexts and formats) of my participants' thoughts, ideas, stories, and enactment of themselves as teachers, which allowed me to triangulate between sources (Mathison, 1988). These methods included open-ended interviews, observation data, written data (reflections for university courses, lesson plans, and other assignments), informal conversations, and recorded conversations between the participants and their university supervisors and mentor teachers. Data were analyzed both during and after data collection using multiple analytical approaches. In the following section, I preview the contents of upcoming chapters.

Preview of Remaining Chapters

- Chapter Two: In chapter two I begin by presenting an outline of my conceptual framework, which was influenced by the work of various identity theorists (Holland, Lachicotte, Skinner, & Cain, 1998; Lave & Wenger, 1991; Wenger, 1998). Next I explore the scholarship that serves as the background information for this study. This scholarship falls into four categories: 1. Literature exploring the nature of the student teaching placement and how student teachers' progress can be described throughout this placement, 2. An overview of the middle grades and science reform agendas, which shape the expectations placed on beginning and practicing middle grades science teachers, 3. Works on learning to teach middle grades science and science and, 4. Literature in which other scholars employ identity as a construct in studying student learning, science teaching, or beginning teachers' learning (including student teachers). Ultimately, I present a critique of the background literature and use this critique to rationalize my approach using a negotiation of teaching identity lens.

- Chapter Three: In chapter three I outline my epistemological framework, present my research questions, provide a more comprehensive rationale for the use of the “negotiation of teaching identity” lens in this study, detail my methodological approach, participant selection procedures, and data collection techniques, provide a description of participants and the setting as well as ethical considerations and my researcher subjectivities, describe my process of data analysis, discuss methodological limitations, and provide an overview of the structures of chapters four, five and six.
- Chapter Four: Chapter four focuses on Lilly Byrd’s case and includes an overview of her teaching identity, a description of how Lilly’s model of negotiation of teaching identity was constructed as well as an overview of this model to be used as a reading guide, a description of how Lilly’s narrative was constructed alongside Lilly’s narrative of becoming a middle grades science teacher during student teaching, and a more complete representation of her model of negotiation of teaching identity infused with supporting examples from the narrative.
- Chapter Five: Chapter five focuses on Stacey Sky’s case and includes an overview of her teaching identity, a description of how Stacey’s model of negotiation of teaching identity was constructed as well as an overview of this model to be used as a reading guide, a description of how Stacey’s narrative was constructed alongside Stacey’s narrative of becoming a middle grades science teacher during student teaching, and a more complete representation of her model of negotiation of teaching identity infused with supporting examples from the narrative.
- Chapter Six: Chapter six focuses on Mandy Fleet’s case and includes an overview of her teaching identity, a description of how Mandy’s model of negotiation of teaching identity

was constructed as well as an overview of this model to be used as a reading guide, a description of how Mandy's narrative was constructed alongside Mandy's narrative of becoming a middle grades science teacher during student teaching, and a more complete representation of her model of negotiation of teaching identity infused with supporting examples from the narrative.

- Chapter Seven: In the final chapter I briefly recap the details of this inquiry and then draw conclusions and implications regarding participants' processes of negotiating teaching identity and the lack of science specific teaching identity negotiation. In addition, I draw more general implications whose scope goes beyond the two aforementioned categories. Ultimately, I discuss limitations of this study and suggestions for further research before making my closing remarks.

Chapter 2 - Conceptual Framework and Literature Review

"We are invited to resign ourselves from the imperatives of finality and conformity, and view our practices as process and becoming. To retheorize our practices in teacher education, then, requires that we attend to the double problem of changing ourselves and transforming our circumstances" (Britzman, 2003, p. 237).

Introduction

As I began designing this study, exploration of others' scholarship was beneficial to my growth. Although at times I felt unable to pinpoint exactly why I had certain intuitions, ideas, and critiques while reading these works, I was able to identify aspects of these studies that resonated with my current vision of this project as well as my experiences as a teacher. As LeCompte and Preissle (1993) suggested, the purpose of qualitative studies is often redefined and developed throughout the course of the inquiry. This was certainly true for me as my ideas have continued to develop throughout this study, especially while writing, discussing these ideas with others, and reviewing new scholarship. The works I have read have done for me what Eisenhart (1998) explained good interpretive literature reviews are supposed to do:

Good interpretive reviews (like good ground swells) would heave up "what we have already learned" (the wall), not settle it; they would reveal previously hidden or unexpected possibilities (i.e., lay bare the wall's supports and components or transform its shape). They would create a new but temporary order (stasis) for those things which were disrupted (p. 394).

Thus, these studies have forced me to refine, reshape, and reconsider both my conceptions of identity and this study. They have helped me heave up my original notions of how to explore my

data and consider how I can create a “new but temporary order” using my data. The review of literature that follows provides the reader with a snapshot into the literature that has been most influential in this study.

This chapter will be organized as follows: I begin by describing my conceptual framework. Although this framework is really the culmination of my thinking based on the works in the background section, I have placed it at the beginning as it currently frames my conceptions of these works. Next, I provide an overview of those studies that helped shape and refine my vision of this study and my own purposes (background information). After the background section, I present my primary critiques of these works as a whole while identifying those studies that adequately respond to these critiques. Further rationale for my use of a “negotiation of teaching identity” lens will be included near the beginning of chapter three as this rationale is interwoven with aspects of my methodology.

Conceptual Framework³

My notion of identity, which serves as the conceptual framework for this study, mirrors new views of practice as a process of learning, or a “social process of negotiation” rather than an “individual problem of behavior” (Britzman, p. 31). The following descriptions of learning elucidate my rationale for defining identity as how one enacts self in the world. First, Wenger (1998) described learning as a process that “transforms who we are and what we can do, it is an experience of identity. It is not just an accumulation of skills and information, but a process of

³ I refer to the theory underlying my study as a conceptual framework, rather than a theoretical framework, because I have used others’ theories to construct an identity framework. Although I employed aspects of others’ theories of identity, I did not select one such theory and utilize it in my work, which I would describe as a theoretical framework.

becoming...We accumulate skills and information...in the service of an identity” (p. 215).

Furthermore, Lave’s (1992, April) description resonates with my own ideas.

Learning is a process of coming to be, of forging identities in activity in the world. In short, learners are never only [learners], but are becoming certain sorts of subjects with certain ways of participating in the world...Subjects occupy different locations, and have different interests, reasons and understandings of who they are and what they are up to (p. 3).

In the upcoming sections, I will briefly describe how my conceptions of identity relate to others’ works.

Defining Identity

At the outset of this study and throughout, I have found myself drawn to the following works in my attempts to define identity (Gee, 1999, 2001, 2005; Holland et al., 1998; Wenger, 1998). These works were most influential in the development of my thinking regarding this complex construct. To begin, Gee defined socially-situated identity as “the ‘kind of person’ one is seeking to be and enact here and now” (1999, p. 13). He also explored the notion of Discursive identity and described it in terms of attempts we make at getting others to recognize us in certain ways (Gee, 2001). Further, he explained that identity can be defined as “different ways of participating in different sorts of social groups, cultures, and institutions” (Gee, 2005, p. 1). Thus, the talk and other symbols we employ in social settings is a presentation of identity.

Originally my ideas aligned with Gee’s conception of identity. However, the notion of *recognition* (who one is seeking to be) seemed problematic to me from a research perspective and in terms of thinking about teachers’ learning. If identity is how we recognize ourselves or

how others recognize us as certain types of people, what happens if there is a disconnect between our own and others' perceptions? Furthermore, I wondered if, during student teaching, beginning teachers would be able to recognize themselves as certain types of teachers. My final concern was that Gee's notion of identity seemed more like a thing and less like an action or a process: It seemed more like core teaching identity than teaching identity (see chapter one). An example from my own experiences learning to teach will help me elucidate my aversion to conceptualizing identity in this way for beginning teachers.

I distinctly remember my preservice teacher education program. Unfortunately, I have a rather negative recollection of my learning at this time. My responses to virtually all of the work I submitted felt contrived at best. I remember feeling like my thoughts were artificial and that I was pulling ideas out of thin air. Although I tried to respond and think about teaching in ways that represented what was valuable to me, my incipient attempts at this were more like floundering and much less like development. Once I started teaching, I felt my work in the classroom drew on very little of what we had done in the teacher education program.

In sharp contrast, my experience of returning for my Master's degree while teaching was highly influential in the development of my core teaching identity. I had been a teacher long enough to have a well-defined sense of who I was as a teacher and how I typically enacted myself in the classroom. As a result, I grew immensely during this time. I spent considerable time, energy, and effort enacting myself as teacher in new ways. I did this in order to be able to recognize myself as the type of teacher I now wanted to be as a result of my studies. My practice changed significantly as a result of the accomplishments within that degree and my perceptions of my experience in the Master's program are extremely positive.

Why did I respond so differently to these two experiences? I now realize that despite three preservice field experiences, I had yet to develop much of my core teaching identity during my initial certification program. It took me a few years in the classroom to develop this core teaching identity. However, as I began to make significant progress in recognizing myself as a certain type of teacher, further education was extremely valuable to me as I was able to find a place within my core teaching identity for the tools and perspectives offered in these courses. I knew where to file these tools and whether or not they were tools I might realistically want to employ. Furthermore, these tools pushed me to redefine my core teaching identity in order to find places for tools that were desirable but for which I previously had no capacity for storage. In addition, because I recognized myself as a certain type of teacher, I was able to question whether or not I wanted to modify what type of teacher I was using the new perspectives from the program. In thinking back to Gee's notion of identity, I believe this perspective helped me expand my ideas of how I wanted to conceptualize identity for beginning teachers. However, I did not feel this perspective would allow me to focus sufficiently on the intricacies of their actions in the classroom or their process of becoming teachers.

Wenger's (1998) thoughts on identity, on the other hand, more closely aligned with my vision of what learning to teach, or learning to be a certain kind of person in social settings entails. He emphasized that identity is "a way of being in the world" (p. 151), which he distinguished from self-image. While self-image is an important constituent of identity, since we talk "about ourselves and each other – and even think about ourselves and each other – in words," (p. 151) Wenger emphasized that identity goes beyond how we talk about ourselves and others. "Who we are lies in the way we live day to day, not just in what we think or say about ourselves..." (p. 151). This perspective seemed much more dynamic as did the following

comment: “identity exists – not as an object in and of itself – but in the **constant work** [emphasis added] of negotiating the self” (p. 151). Clearly, Wenger’s conception is much more focused on identity as process, than on identity as a thing.

Inseparability of Social and Individual

In addition to the ways in which these scholars define identity, their work has forced me to consider the relationship between the social context and the personal dimension in thinking about identity. Holland et al. (1998) explained this relationship as follows: “Identity is a concept that figuratively combines the intimate or personal world with the collective space of cultural forms and social relations” (p. 5). Wenger (1998) emphasized that looking at identity through the lens of social theory allows one to “focus on the person without assuming the individual self as a point of departure. Building an identity consists of negotiating the meanings of our experience of membership in social communities” (p. 145). He goes on to explain:

The concept of identity serves as a pivot between the social and the individual, so that each can be talked about in terms of the other...The resulting perspective is neither individualistic nor abstractly institutional or societal. It does justice to the lived experience of identity while recognizing its social character (p. 145).

In other words, identity is not something [thing] that exists in individuals merely because of their personhood (i.e., it is not a personality trait); nor is identity the type of person one seeks to be and enact [thing]. Instead, identity is the constant negotiation of self within different social contexts.

Identity and Agency

If both the social and personal play integral roles in identity to what degree do individuals have agency in their identity negotiation and to what degree does the social limit how they enact themselves? My ideas resonate with those of Brickhouse and Potter (2001), when they stated that “individuals have some control over identity yet are also constrained by structure and power relations that may limit the kinds of identities that are viable” (p. 966). Despite these constraints, I believe individuals act as agents, enacting self in nuanced ways within the sociocultural realm.

The following story encapsulates my perspective on the role of agency in how we enact self in the world. It is my rendition of one included by Holland et al. in their book *Identity and Agency in Cultural Worlds* (1998). In this book the authors shared an incident that occurred while they were conducting a research project in Nepal. During their study, the authors were interviewing people of different castes and ethnic groups in the same building. This was not typically done in Nepal since members of the lower caste were considered dirty and as having the potential to pollute food in the houses of higher caste members. As a result, lower caste members were not usually invited into the homes of higher caste members. On one particular day, the authors were conducting interviews on the balcony of a three-story house. When one of their lower caste interviewees arrived, the author went downstairs to bring her up to the balcony. However, as the author was headed downstairs the lower caste woman climbed up the vertical outside wall and made her way to the balcony! As a result of this experience, the authors began to realize that identity cannot be understood by employing only a culturalist perspective or a social constructivist perspective. Were these the only analytic lenses used to explore self in world, the authors would have entirely overlooked the “improvisational nature” of the woman’s

climb up the house (p. 15). Although this climb was certainly motivated by cultural “meaning systems” of caste and pollution and was also a product of the social situation and positionalities in which the woman found herself, there was certainly an improvisational nature to what she did. She “devised the solution of climbing up the outside of the house” (p. 15)! Thus, this woman was not acting in the world as an ‘interpretive (contextual) dope,’ as Holstein and Gubrium (2004) refer to it, but as someone who dialogically negotiated cultural meanings and images and social positionalities, in enacting self, or participating, in the world.

Final Note

Before concluding this section, it is imperative to emphasize one additional point made by Wenger (1998): Individuals strive to integrate various forms of identity. And although this is not always accomplished and is not always a conflict-free process, trying to unify our ways of participating in various contexts of the world is part of what it means to be human. It is, I believe, also part of what it means to negotiate one’s teaching identity.

Background Information

Because the purpose of this inquiry was to explore learning to teach middle grades science using a different perspective than is typically employed, it was necessary to review various bodies of literature. These proved difficult to seam together coherently. However, all of these contributed to my work. Thus, these somewhat piecemeal bodies of scholarship will be reviewed in this section and include:

- Studies exploring the nature of the student teaching placement and how student teachers’ progress can be described throughout this placement;

- Literature providing an overview of the middle grades and science reform agendas, which shape the expectations placed on beginning and practicing middle grades science teachers;
- Works on learning to teach middle grades science and learning to teach science; and,
- Scholarship in which others employ identity as a construct in studying student learning, science teaching, or beginning teachers' learning (including student teachers).

The Student Teaching Placement and Teachers' Progress (or Lack Thereof)

The student teaching experience is viewed by most prospective teachers as the “culminating experience” of their teacher education program (Britzman, 2003). Although student teachers often look forward to student teaching believing it will be one of the most valuable aspects of their preservice program (Britzman, 1992, 2003; Eisenhart, Behm, & Romagnano, 1991; Nichols & Tobin, 2000; Pittard, 2003, April; Tabachnick, 1980), it has been described as the experience that “carries with it more tension and conflict than do other parts of the preservice program (Wideen, Mayer-Smith, & Moon, 1998, p. 156). Feiman-Nemser and Buchmann (1985) described one possible reason for the tension and conflict, explaining that preservice teachers' participation in student teaching is a “two-world pitfall:” on the one hand they are students at the university while on the other hand they are teachers in the schools. Britzman (1992) elaborated on this problem as follows: “the circumstance of student teaching provides the contextual arena where the student teacher, as part student, part teacher has the delicate work of educating others while being educated, and of attempting unification in an already contradictory role” (p. 27).

Despite prospective teachers' optimism about their learning during student teaching, the literature on beginning teachers' practices during this experience is replete with disappointing

stories. Those student teachers displeased with their cooperating teachers' practices often feel unable to determine what they want to be doing or to enact their ideals in the classroom in light of these differing perspectives (Smagorinsky, Cook, Moore, Jackson, & Fry, 2004). Furthermore, Cochran-Smith (1991) described student teaching as an experience in which "isolation, practical expediency, and dependence on conventional wisdom" (p. 104) take center stage. Student teachers have been described as becoming disillusioned during student teaching (Cole & Knowles, 1992; Tabachnick, 1980), increasingly tentative of student-centered work due to students' tendency to socialize (Eick, 2002), and more authoritarian throughout the placement (Kagan, 1992). Other scholars have noted that preservice teachers are often willing to discard what they have "learned" in their university courses and ultimately develop orientations towards teaching that align more closely with those modeled in the school in which they are student teaching (Eisenhart et al., 1991; Grossman, Smagorinsky, & Valencia, 1999). Others have noted discrepancies between the beliefs student teachers publicly espouse, their personal beliefs, and teaching practices (Kagan; Wideen et al., 1998). This disconnect between beginning teachers' visions and their actual teaching practices is the focus of many studies (Bianchini & Cavazos, 2007; Crawford, 2007; McGinnis, Parker, & Graeber, 2004).

In exploring beginning teachers' development during student teaching and into the induction years, stage theorists have noted that teachers initially focus on themselves and their teaching (i.e. one's ability to control the classroom, what others think about them as teachers) and eventually become more concerned with student learning (i.e., designing curriculum, finding effective teaching strategies, and assessing student learning) (Hammerness et al., 2005). Ultimately, teachers either tend to become more focused on student welfare and learning throughout their initial years or they change very little and focus on acquiring approaches that

“work” (Hammerness et al.). Descriptions of what happens as beginning teachers venture into the classrooms of and beyond their student teaching placements have furthered our conceptions of what is entailed in learning to teach. But these studies are not sufficiently explicit about the nature of the beginning teachers’ socially-situated experiences and therefore do not increase our power to explain why these disappointing trends are noted. More importantly these studies typically do not identify how we can best support beginning teachers’ work in the classroom. In the following section, literature on the reform agendas, whose perspectives shape much of the scholarship on learning to teach, is reviewed. This leads into a group of studies focused on learning to teach science.

Science Education and Middle Grades Reform Agendas

Within the last few decades the notion of teaching science as inquiry has again become one of the driving foci in the science education reform agenda and in science teacher educators’ work with prospective teachers (American Association for the Advancement of Science, 1993; National Research Council, 1996, 2000). Described as the “quintessential” science experience (Windschitl, 2002) and as the “essence of science education” (Keys & Bryan, 2001), teaching science as inquiry is one of the primary guiding principles of current science teacher education reform measures. As described in the *National Science Education Standards* (1996), “inquiry in the science classroom encompasses a range of activities: Some provide a basis for observation, data collection, reflection, and analysis of firsthand events and phenomena. Others encourage the critical analysis of secondary sources” (p. 33). As a result of this emphasis, science as inquiry tends to be more student-centered - focused on students’ ideas and questions – and less of a

teacher-centered, knowledge-dispensing endeavor (Eick & Reed, 2002). “Activities that have known outcomes are generally not considered inquiry” (Eick & Reed, p. 402).

National science education reform documents also highlight the following characteristics of effective science teaching (NRC, 1996):

- “Understanding and responding to individual students’ interests, strengths, experiences, and needs” rather than responding similarly to the whole group of students.
- “Selecting and adapting curriculum” rather than rigidly following pre-established curricula.
- Encouraging students to participate in scientific discussions and debates, rather than asking them to recite knowledge they have learned.
- “Continuously assessing student understanding” rather than testing students on their recall of factual information at the end of a unit.
- “Sharing responsibility for learning with students” rather than maintaining sole responsibility and authority.
- “Supporting a classroom community with cooperation, shared responsibility and respect” rather than promoting a competitive environment.
- “Working with other science teachers to enhance the science program” rather than working alone. (NRC, p. 52)

Middle grades teacher educators focus on somewhat different criteria in defining quality teaching and outlining the purposes of schooling (Anfara, 2007; Davies, 1995; Jackson & Davis, 2000; National Middle School Association, 1995, 2003). To begin, advocates for middle grades education emphasize serving the “‘whole child,’ challenging students to think critically, to work industriously, to contribute to their communities, to care about others, and to care about their

own physical and mental health” (Jackson & Davis, p. 23). Effective middle level teachers have been identified as individuals who balance being knowledgeable about their students and their content (NMSA, 1995) rather than opting to be “child-centered advocates” like elementary teachers or “professors of academic subjects” like high school teachers (Beane & Brodhagen, 2001, p. 1158). In addition, middle-level educators should:

1. “...have a thorough understanding of the young adolescents with whom they work”
2. “...participate in collegial teaming arrangements”
3. “...act as affective mentors for young adolescents”
4. “...use varied teaching and learning activities”
5. “...use curriculum approaches beyond the traditional separate subject approach” (p. 1159).

Others describe effective middle grades teachers as sensitive to the needs of individual students, especially those with diverse cultural backgrounds. They value, respect, and celebrate the exceptionalities of middle grades students (Arth, Lounsbury, McEwin, & Swaim, 1995).

Furthermore, effective middle level educators have been described as individuals that advocate for young adolescents, partner with their students in order to maximize learning, enjoy young adolescents and the dynamic nature of youth culture, get families involved in the classroom, and serve as positive role models for students (NMSA, 2003). Teachers’ ability to provide a safe environment has also been identified as critical in working with young adolescents (Jackson & Davis).

Although the literature focused on learning to teach middle grades is relatively sparse, many works focus on learning to teach science in ways that align with the science education reform-agenda. These works are reviewed in the section that follows.

Learning to Teach Science

Scholars have repeatedly noted the complexities involved in “preparing new teachers – regardless of the subject matter of specialization or the “kind of teacher” they aspire to be” (Luehmann, in press, p. 2). As a result, one primary research agenda has been to focus on furthering our understanding of those factors that are influential in the teaching practices beginning teachers employ. Are prospective teachers applying what they learned in the classrooms of their student teaching placements? And have teacher educators prepared teachers for their work such that they can implement innovative practices once they enter the classroom? In this section, I review recent studies on beginning teachers’ learning to teach science. In those studies reviewed, scholars approached their work on learning to teach science in three primary ways. They drew links between various constructs (e.g., knowledge, beliefs, personal histories, epistemologies) and practice, applied cultural perspectives for the purpose of understanding the influence of the sociocultural dimension on beginning teachers’ practices, and explored the new meanings beginning science teachers negotiate during student teaching.

Linking constructs and practice. Various scholars have approached their studies on learning to teach by examining what factors (e.g. knowledge, beliefs, life histories, etc.) are influential in beginning teachers’ eventual classroom practices (Crawford, 2007). Although much has been learned about the links between these factors and practice, it is clear that these connections are complex and much less linear than one might hope (Crawford). In a study conducted by Windschitl (2002), preservice teachers’ knowledge, skills, and thinking about science as inquiry in a science methods course were examined, after which the author explored the link between these conceptions and eventual classroom practices during student teaching. He described how beginning teachers who had somewhat developed ideas about scientific inquiry

were able to further develop their knowledge and skills throughout the course-based inquiry projects. However, those students who had reflected more on their inquiry projects and held more advanced views of inquiry after the project were not the individuals who implemented inquiry-oriented practices during student teaching. Instead, prospective teachers who had significant experience conducting authentic scientific research tended to conduct inquiry-oriented practices.

Eick and Reed (2002) also focused on preservice teachers' implementation of science as inquiry in their exploration of the connections between participants' personal histories and their practices. The authors concentrated on two cases (they had 12 participants), which were selected due to the very different personal histories of these individuals, and noted that student teachers with "stronger inquiry role identities" (p. 412) were more easily able to put this role into action in student teaching. Thus, they emphasized that beginning teachers who are "predisposed to inquiry-oriented teaching" (p. 412) benefit the most from science teacher education. These findings corresponded to those of Windschitl (2002) in that those teachers who ended up doing more guided and open-ended inquiry were those who had previous experiences participating in science in inquiry-oriented ways.

Taking a similar approach, Crawford (2007) explored student teachers' teaching of science as inquiry during a year-long secondary science teaching placement. She focused on the knowledge, beliefs, and efforts of prospective teachers trying to implement inquiry practices by conducting interviews, observing their teaching, and conducting a document analysis of their lesson plans. In addition, she interviewed the mentor teachers about their perspectives on scientific inquiry and how they [the mentor teachers] taught in inquiry-oriented ways in the classroom. Using these data she explored commonalities and differences among participants.

Much like the previous studies, she concluded that despite considerable support from a cohort of students and mentor teachers familiar with program goals, the prospective teachers' practices still varied widely and seemed linked to their beliefs as well as their knowledge of how they might go about implementing inquiry in the classroom. One "constraining set of beliefs" (p. 635) noted by Crawford was the prospective teachers' conclusion that the nature of school culture was not conducive to teaching science as inquiry. Ultimately, she emphasized that "the most critical factor influencing a prospective teacher's intentions and abilities to teach science as inquiry, is the prospective teachers' [*sic*] complex set of personal beliefs about teaching and views of science" (p. 636).

Kang (in press) also explored the relationship between multiple constructs in her study on learning to teach. She examined how personal epistemologies and science teaching goals translated into practice during a six week practicum completed in conjunction with a science methods course. Utilizing various sources of data including classroom observation reports, video recordings, lesson plans, self-video reflections, and written responses to essay questions, the author noted that the participants embraced various personal epistemologies and teaching goals, which they translated into action in three primary ways. Some acted on their initial beliefs during this practicum; for others, epistemologies and goals became more sophisticated throughout the field experience; and some taught using less sophisticated epistemologies than they had initially espoused. Of those participants whose epistemologies became more sophisticated, five were able to enact these more sophisticated epistemologies whereas three were not. Ultimately, the author explored factors that might account for the inconsistency between epistemologies and teaching practices and emphasized the need for longitudinal research focused on how teachers' practices change.

Applying cultural perspectives. Authors have also explored beginning teachers' practices using cultural perspectives. In one such study, the authors explored "what happens in schools to beginning teachers who are prepared to enact reform-based practices in...science" (McGinnis et al., 2004, p. 720). Data collection techniques focused on both an emic perspective of school culture, in which participants' perspectives on their teaching within their school culture were the focus, and an etic perspective of school culture, in which K-12 students were surveyed and school principals were interviewed. According to the authors, all five participants in this study "entered the workplace with the capabilities and intentions to enact reform-minded practices" (p. 743). However, these authors found that even though science teacher preparation programs could "send forth beginning science teachers who were reform-minded the primary limiting factor as to the long-term extent and success of the beginning teachers in enacting reform was their perception of their school cultures (principals, teachers, students, student guardians, district curricula, and assessment demands)" (p. 743). Those school cultures that supported and respected reform orientations were those in which beginning reform-prepared teachers were more content and more likely to implement reform-based practices. Wallace and Kang (2004) took a similar perspective in their work explaining that teachers were "reluctant" to make meaningful reforms and that "a set of cultural beliefs permeates school science culture, becomes internalized by teachers, and mediates the implementation of innovative practice" (p. 936-937).

Negotiating new meanings. Taking a slightly different approach, I reviewed one study in which the authors applied Lave and Wenger's (1991) notion of situated learning theory in exploring how one middle grades science student teacher "brokered" between the university community of practice and the school community of practice (Friedrichsen, Munford, & Orgill, 2006). Their purpose was to examine how the participant translated his university inquiry-based

teaching ideas into practice in a different community of practice in which he was positioned as the apprentice. This prospective teacher was placed in a classroom where the mentor teacher was uninterested in inquiry-oriented teaching but gave him the freedom to select how he wanted to teach. In other words, he granted the student teacher “legitimacy” as a chemistry teacher. The authors discussed how the student teacher negotiated new meanings of science as inquiry during this placement. This student teacher came to equate inquiry with using evidence to generate explanations, but did not focus on the tentative nature of science. The authors explained that the participant had to “balance differing instructional goals and classroom practices in the two communities” (p. 540) in negotiating new meanings.

Summary. Looking back at this group of studies, it becomes clear that what is learned in preservice teacher education programs does not transfer to eventual practice as seamlessly as teacher educators would hope: Knowledge of scientific inquiry does not necessarily lead to inquiry-oriented practices in the classroom. The practices teachers employ seem connected to their complex beliefs about teaching and science (Crawford, 2007) or their life histories (Eick & Reed, 2002), both of which are difficult to change (Pajares, 1992). In addition, school culture powerfully influences beginning teachers’ attempts to implement reform-based practices that they were prepared to enact (McGinnis et al., 2004). In light of this complexity, educating or preparing beginning teachers to implement innovative practice seems daunting. How do we get beginning teachers to implement what they have learned? And why are they not practicing innovative reform?

Identity Literature

In thinking about my own teaching experiences, I believed it important to consider the personal nature of teaching in response to questions at the end of the previous section. The argument that learning to teach should not be depicted as an “individual problem of behavior” but rather a “social process of negotiation (Britzman, p. 31) has been made by multiple scholars. These individuals point out that learning to teach is not merely a cognitive process (Wideen et al., 1998), but rather ask us to consider learning to teach as a process that “requires a journey into the deepest recesses of one’s self-awareness” (Kagan, 1992, pp. 163-164) and may involve learning to become someone else (Sumara & Luce-Kapler, 1996).

Thus, in this section, I begin my review of research with studies that point to identity as an important construct in studying learning to teach and the act of teaching. I focus specifically on applications of the identity construct in studies on student learning, middle grades science teaching, science teaching, learning to teach science, and learning to teach in general. Unless otherwise noted, all of these scholars define identity as being recognized by others and oneself as a certain kind of person (Gee, 1999) or as understandings of self (Alsup, 2006; Helms, 1998; Holland et al., 1998)⁴. These studies will be reviewed in four sections: 1. Those studies linking learning and identity; 2. Those studies drawing links between identity and other constructs; 3. Those studies about identity development during preservice teacher education; and, 4. Those studies emphasizing identity formation, construction, and negotiation during the student teaching experience and induction years.

⁴ These definitions align with my description of core teaching identity described in chapter one.

Learning and identity in non-student teaching contexts. I have found the body of literature that explores the relationship between learning and identity to be very influential in my own thinking. Although these works are not specific to learning to teach, they allowed me to conceptualize the ways in which an identity construct might be utilized in my own study. Each of the studies included in this section was framed using a situated learning perspective (Lave & Wenger, 1991). Also called situated activity, this theory was designed to explore “questions about the socially constructed world” and conceptualize “relations between persons acting and the social world” (Lave, 1993). As Barfield (2006) summarized, situated learning theory “focuses on how new members learn to become practitioners through a form of apprenticeship” and is about “how people learn and develop their roles in specific familiar and recognizable institutional communities.” Situated learning theory moves away from a cognitive perspective on learning, in which *what* an individual learns, or internalizes, from some action is primary, to the notion that learning has to do with the ways in which individuals negotiate meaning, or experience the world and their “engagement in it as meaningful” (Wenger, 1998, pp. 52-53), during participation in specific contexts. What individuals understand is not unique to themselves, but is instead part of “broader systems of relations among persons” (Lave & Wenger, p. 53). As a result, “meaning, understanding, and learning are all defined relative to actional [*sic*] contexts, not to self-contained structures” (Lave & Wenger, p. 15). These specific contexts, or systems of relations, enable “becoming a different person with respect to the possibilities” (Lave & Wenger, p. 53). Thus, situated learning theory holds that context and learning are inextricably linked. Due to this connection, situated perspectives ask us to consider “how shared cultural systems of meaning and political-economic structuring are interrelated, in

general and as they help to coconstitute [*sic*] learning in communities of practice” (Lave & Wenger, p. 54).

In addition, this theory does not separate learning from the notion of identity, which seems an especially powerful way of conceptualizing learning. One example of this connection between identity and learning frames a study by Boaler (2002). That author looked at learning, not as acquisition of knowledge, but as integrally linked to practice and identity. The learning students were expected to do in one of the math classes in this study positioned the learners as “received knowers,” which he defined as students that were “required to receive and absorb knowledge from the teacher and textbook” (p. 43). He then connected the identities and practices exhibited by these individuals and concluded that students who had different identities in non-math settings were turned off by the identities this form of instruction was encouraging them to enact. Similar applications of situated learning theory were made by Carlone (2004), who looked at the connection between girls’ participation, learning and identities within school science and the educational activities of school science. She took a more critical approach than Boaler and looked at how the girls participated “within and against the meanings of science and scientist in a reform-based physics classroom” (p. 397). She concluded, much like Boaler, that some of the girls resisted the science learner identities promoted in the reform-based physics classroom because they perceived them “as threatening to their good-student identities” (p. 410).

A few studies looked at the link between learning and identity on a slightly broader scale than the classroom. In the first, Brickhouse and Potter (2001) examined how young women’s identities were related to their experiences in school science and concluded that some schools promoted and recognized certain identities that might not be desirable in the students’ non-school communities. Thus, they encouraged teachers to consider how they could design the

learning environment in ways that allow students to retain identities important to them and their communities. Finally, Brickhouse, Lowery, and Schultz (2000) set out to understand students' identities and how they did or did not overlap with school science identities. Although all of the girls constructed "positive identifications with science," they found that schools and teachers did not "respond to these identities in value-neutral ways" (p. 456). Those girls whose social roles fit the stereotype of what girls should act like were the individuals who had the fewest difficulties "constructing successful school science identities" (p. 456). As a result, the authors questioned what sort of students were being encouraged to participate in high-level science and whether or not these were actually the individuals most likely to engage in science over the long term.

Linking identity and other constructs. In addition to studies that focused on the link between student learning and identity, many teacher educators have also applied the identity construct in their work. One approach scholars have taken in studies that employ an identity construct is to explore the connections that exist between different types of identities (e.g. science identity and science teaching identity). In one such study, the researchers were interested in understanding the influence of science apprenticeships on beginning teachers' science teacher identities during their first year of teaching (Varelas, House, & Wenzel, 2005). They described beginning teachers' difficulty aligning their espoused science identities with their science teacher identities. Although these authors cited Gee's work (2001), in which identity is described as socially-situated, they gathered data regarding participants' science and science teacher identities using four interviews throughout the course of two years. I found this approach problematic as socially-situated identity would only emerge from a careful study of the enactment of teaching and not from interview data alone.

Helms (1998) took a slightly different approach in her work, exploring the relationship between science subject matter and participants' professional and personal identities, which she defined as sense of self. The five participants in her study were experienced teachers collaborating with Helms in a year-long workshop focused on exploring teachers' understandings of the nature of science, as well as the ways in which they implemented these understandings in the classroom. She concluded that teachers in the study made active attempts to connect science to their professional identity as well as their personal identity. Helms explained that an understanding of the nature of the connections teachers make to their subject matter might help teacher educators better understand teachers' pedagogical commitments and by association their professional identities.

Scholars have also explored the relationship between teachers' identities and their practices (Enyedy, Goldberg, & Welsh, 2006). In this study, the authors examined how experienced middle level science teachers talked about their identity (which they operationalized as beliefs, goals, and knowledge) and how this talk corresponded to practice. Motivated to better understand why these two individuals implemented an inquiry-based environmental science curriculum in distinct ways, the authors interviewed participants regarding their identity and then used these comments to craft a "teacher identity portrait." This portrait was ultimately compared to the instructional practices exhibited by these individuals. The authors wondered if the identity portraits they created would explain the divergence in the teachers' practices and found that they did. More specifically, their participants' differing knowledge, beliefs and goals corresponded to their divergent practices.

Identity development during preservice teacher education. In addition to drawing links between identity and other constructs, teacher educators have begun considering how they can

design their programs to aid in prospective teachers' identity development. Luehmann (in press) explored ways in which "identity development" could be used as a "lens to science teacher preparation." Her work builds on that of Gee (2005), which "foregrounds elements of identity development specific to the introduction and consideration of a *new* identity" (p. 8). Ultimately she outlined ways in which teacher preparation programs could help preservice teachers develop new teacher identities before they enter the classroom. Luehmann emphasized that identity, as a construct, is more inclusive than knowledge and skills and more closely connected to one's practice: It allows researchers a way to consider the impact of individuals' collective experiences on professional practice. She described one's professional identity as follows, "more than what a teacher knows and believes about her practice, professional identity includes her professional philosophy, passions, commitments, ways of acting and interacting, values and morals" (p. 7). In addition to describing why identity would be a useful construct to consider in science teacher preparation, she outlined various ways⁵ in which her own preservice teachers were engaging in learning that might encourage them to consider and develop new, reform-based identities.

Focusing on identity as development was also the purpose of Alsup's (2006) study in which she examined preservice teachers' discourses and how they related to the development of a "productive professional teacher identity" during their teacher education program and student teaching. She emphasized that beginning teachers who told narratives attempting to connect multiple understandings of self (self as student, self as teacher, self as women, etc.) were able to progress in developing a teacher identity. She coined the term "borderland discourse" to describe

⁵ See p. 16 of Luehmann (in press) for a weblink describing the Get Real! science teacher preparation program in which students participate in scaffolded science inquiry as learners and as teachers.

these narratives. Ultimately, her purpose was to generate ways to help beginning teachers develop their teacher identities during preservice teacher education.

Identity formation, construction, and negotiation during student teaching and the induction year. Scholars have also explored beginning teachers' identity formation and construction. Flores and Day (2006) studied how 14 beginning teachers' identities were shaped and reshaped in their first two years of teaching. These authors defined identity as: the "ongoing and dynamic process which entails the making sense and (re)interpretation of one's own values and experiences. Becoming a teacher involves...the (trans)formation of the teacher identity" (p. 220). In order to explore these transformations of teacher identity, the authors conducted interviews at the beginning and end of each school year as well as various forms of written data, including short essays written by students describing how their teachers had changed throughout the year. Their description of the ways in which teachers' identities were (re)constructed throughout their first two years included many of the same trends noted by other scholars: teachers' interactions with students became more custodial in nature and instructional approaches became less student-centered and more task-oriented. In addition, most participants emphasized that their preservice teacher education programs had a relatively weak impact on how they approached teaching and viewed themselves as teachers. The authors concluded that teachers' identities were deconstructed and (re)constructed based on the "relative strength of the key influencing context of biography, pre-service programs and school culture" (p. 230).

A similar perspective was employed in a study by Proweller and Mitchener (2004), who explored preservice teachers' construction of professional identities during their practica in urban middle grades science classrooms. Using interview data, written work, and observations throughout the teaching internship, the authors concluded that their 15 participants' conceptions

of what it meant to teach in an urban setting were “relationally constructed through their interactions with and knowledge of the contexts in which urban students live” and this knowledge enabled “the crafting of more inclusive and purposeful modes of science teaching” (p. 1057). Thus, in building relationships with their students, the teacher interns came to better understand students’ feelings of powerlessness and tried to “instill some type of power in them” (p. 1057).

An additional study focused on how one student teacher negotiated the different conceptions of teaching emphasized by the university and in the elementary school in which she taught (Smagorinsky, Cook, Moore, Jackson, & Fry, 2004). The student teacher participating in this study worked with a cooperating teacher whose mentoring approach could be described as “mimetic.” As a result, these authors concluded, there was relatively little opportunity for constructing teaching identity during this experience. Pittard (2003, April) described similar results in her study on how student teachers’ perceptions of self as teacher evolved during student teaching. The participants in her study repeatedly emphasized frustration with finding space to develop their own teaching identity during student teaching and saw the experience as one last hurdle in becoming a teacher.

Finally, and particularly influential in my thinking was a study by Sumara and Luce-Kapler (1996) on negotiation of teaching identity. The authors explored the notion that learning how to teach might involve learning to become someone else and emphasized that some preservice teachers have a relatively easy time merging these disparate identities whereas others, especially those who do not conform to the cultural myths and practices conditioning the teacher education curriculum, find this more challenging. They explored the notion that beginning teachers “negotiate the dissonance between their pre-teaching lives and their lives as experienced

teachers with a ‘fictive’ identity (p. 67), which is composed of what the student teacher has already experienced and of the various cultural myths associated with being a teacher. They suggested that while learning to teach, beginning teachers negotiate at least three conceptions of self: their pre-teaching image of themselves as teachers, the previously described “fictive image,” and the “lived image” that forms during their work with students. Thinking of identity in this way, the authors suggested, could serve as a heuristic for exploring the complexities of learning to teach as well as a springboard for design of teacher education curricula that “call into question the idea that one can maintain an identity separate from the role ‘teacher’” (p. 68).

Although each of the works in the previous section may seem somewhat disconnected from one another, in reality each played a crucial role in the development of my thinking about identity and how it should be applied in a study on learning to teach. In the section that follows, I raise critical questions about perspectives and approaches employed in this background literature.

Critiques and Resonances Regarding Background Literature

In thinking about the purpose of my study, two primary concerns surfaced with regard to the background literature. My purpose is to understand how beginning teachers negotiate the complexities of the world of learning to teach. In this section, I critique two aspects of these works while emphasizing the scholarship that better resonates with my own purposes.

Representation of Relationship Between Social, Personal, and Practice

Although many of the studies in the prior background section of this chapter focused on learning to teach science, few did so utilizing theoretical perspectives that allowed for a representative balance between the social and personal dimensions as outlined by Wenger (1998)

and Holland et al. (1998) (see Conceptual Framework for further elaboration). Based on my previous work in the classroom, I desired to use an alternative approach, since, for me both the personal and social dimensions were always inseparable from how I enacted myself as a teacher. In considering the approaches taken, some scholars approached their work on learning to teach science by exploring the connections between student teachers' cognitive constructs (e.g. knowledge) and practices (Windschitl, 2003) without focusing on the socially-situated nature of these practices. Other researchers combined cognitive and personal constructs (e.g. knowledge and epistemologies with beliefs and goals) and tried to determine the relationship between these constructs and student teachers' practices (Crawford, 2007; Kang, in press). In the previously cited study by Crawford, the author tried to understand not only the relationship between knowledge, beliefs and practices, but also focused on the role one aspect of the social context (the cooperating teachers' own implementation of inquiry) played in student teachers' implementation of inquiry-oriented practices. On the other hand, Eick and Reed (2002) focused primarily on the personal dimension in their study on the relationship between student teachers' personal histories and their practices. However, much like Windschitl, these authors placed little emphasis on the social context in which these practices occurred or how this social context influenced what these beginning teachers did.

Some of the studies I reviewed on identity had similar imbalances regarding the ways in which the social and personal dimensions were represented. Most specifically, in Varelas et al.'s (2005) study on the relationship between beginning teachers' science identities and their science teacher identities, the authors used four interviews as their sole source of data in describing identity, which they defined using social theories of identity (Gee, 2001 and others). In another case, Flores and Day (2006) approached a study on beginning teachers' identity transformation

over the first two years of their teaching careers. However, much like Varelas et al., their primary source of data was written and interview data. Thus, although both studies emphasized the social nature of identity, no observations were employed, making it difficult to adequately explore the social dimension.

Other authors approached their work with greater emphasis on the social dimension but focused less on the personal. For example, in McGinnis et al.'s (2004) exploration of what happened to reform-prepared beginning teachers once they began working in schools, the authors placed considerable emphasis on the ways in which the beginning teachers responded to the social context. Similarly, Friedrichsen et al. (2006) focused on the new meanings of inquiry negotiated by a science student teacher during his student teaching placement. Much like McGinnis et al. these authors emphasized both the student teachers' meanings prior to, during, and after student teaching based on oral and observation data. My study differed from both of these in two important ways: To begin, in exploring beginning teachers' middle grades science teaching identity negotiation I considered my participants as agents rather than individuals who were almost entirely constrained by the context (Holland et al., 1998; Holstein & Gubrium, 2004) in which they taught. This perspective diverges from the cultural approach utilized by McGinnis et al. Second, rather than focusing primarily on the negotiated meanings of scientific inquiry, as Friedrichsen et al. did, I emphasized identity, which allowed me to explore meanings that became relevant to participants, but also encouraged me to think about social factors and other personal factors (other than meanings of science as inquiry) that were also pertinent to them.

New views of practice further elucidate the need to adequately focus on both the personal and social dimensions in considering individuals' practices. Rather than asking, are beginning

teachers practicing **what** they learned or how do their **practices** [noun] link to their knowledge, beliefs, life histories [more nouns], new perspectives of practice push us to consider practice as “an emergent phenomenon rather than an already-established way of reasoning and communicating into which students are to be inducted” (Cobb, Stephan, McClain, & Gravemeijer, 2001, p. 121). In other words, practice can be viewed as a **process** of learning. This perspective shifts the focus from **what** was learned as a thing that should be implemented to practice as a learning process, which is always a socially-situated, personal endeavor. According to Lave and Wenger (1991), the perspective on practice taken in the works cited in the previous section emphasized learning as “internalization” which

does not just leave the nature of the learner, of the world, and of their relationship unexplored; it can only reflect far-reaching assumptions concerning these issues. It establishes a sharp dichotomy between inside and outside, suggests that knowledge is largely cerebral, and takes the individual as the nonproblematic [*sic*] unit of analysis. Furthermore, learning as internalization is too easily construed as an unproblematic process of absorbing the given, as a matter of transmission and assimilation (p. 47).

Thus, Lave and Wenger focused on how practice continuously evolves within the world, pushing us beyond thinking of learning as a primarily cognitive activity that can be measured in terms of “acquisition and assimilation” (p. 52). However, they did not suggest that we focus solely on learning as a social practice as this perspective eclipses the person, much like some of the previous studies that employed cultural perspectives. Instead, practice should be thought of as “participation in social practice,” which suggests a very “explicit focus on the person, but as person-in-the-world” (p. 52). Thus, practice is a process of learning to be in the world. As such, our explorations of beginning teachers’ practices might allow for alternative interpretations by

employing these new, action-oriented, socially-personally bound perspectives. I believe such perspectives will allow for interpretations that further our understanding of the nuances of beginning teachers' struggles to reconcile "conflicting beliefs about what they believe is desirable...and what is possible within the constraints of their preparation and the institutions in which they work" (Brickhouse & Bodner, p. 471).

Those studies that depicted the balance between the social and the personal dimensions in ways that best aligned with my desired approach were those studies focused on students' learning as integrally linked to practice and identity (Boaler, 2002; Brickhouse, Lowery, & Schultz, 2000; Brickhouse & Potter, 2001; Carlone, 2004) as well as a few studies on practicing teachers' identities and how they linked to practice (Enyedy, Goldberg, & Welsh, 2006). In all of these studies, the personal and social dimensions were nicely balanced with the action dimension (practice). In addition, in many of these works practice was redefined in ways that aligned with new perspectives on practice described above, rather than considering practice a thing that one does. For both of the previously stated reasons, these works better resonated with what teaching had been like for me and with the purposes of this study.

More Focus on Dynamics and Complexities of Learning to Teach

Although scholars' purposes in conducting research vary widely, in reviewing the studies on learning to teach it seemed there was an abundance of literature focused on linear change over time (typically development, sometimes construction) (Hammerness et al., 2005) while there was a dearth of studies that explored the complex, nuanced, non-linear process of learning to teach. For example, in many of the studies on identity, the authors focused on how conceptions of self changed over time. Both Smagorinsky et al. (2004) and Pittard (2003, April) noted that student

teachers seemed unable to construct their teaching identities during student teaching. Furthermore, Luehmann (in press) emphasized thinking about identity development as a way to prepare beginning teachers to take on new identities prior to work in the classroom. Flores and Day (2006) took a similar approach in looking at how beginning teachers' professional identities changed over the course of their first two years in the classroom. These approaches left me wondering how a more concerted focus on the intricate process of learning to teach might inform our conceptions of teacher development. When scholars claimed no development was occurring, I wondered if a different lens might reveal that identity work *was* happening, work that might not be discernible if looking for linear change. Sumara and Luce-Kapler (1996) offer a similar perspective and outline a "three identity" approach as a heuristic for understanding the complexities of learning to teach (p. 68). They described the process of becoming a teacher as one of "negotiating identities while learning to teach" (p. 65), rather than focusing on its developmental nature. This perspective resonated with my own experiences in the classroom and provided me with a powerful way of conceptualizing my own study.

In addition, to a focus on change over longer periods of time, in much of the literature previously reviewed scholars approached their work using the perspective "Are the beginning teachers practicing what they learned in teacher education?" (Crawford, 2007; Eick & Reed, 2002; McGinnis et al., 2004; Windschitl, 2003). Much like a development, or change over time, lens this perspective also focused less on the dynamic, complex nature of learning to teach. In such studies, scholars reduce their focus on what learning to teach entails (the process), making it difficult to identify important nuances of this process. Instead, they look for a particular product. This approach, although useful in its own rite, makes it difficult to focus on the nuances of learning to teach that may be relevant to beginning teachers and may be informative to teacher

educators. As a result, I took a more open approach in my work in an effort to construct a more representative depiction of learning to teach middle grades science.

In light of the background literature examined here, I believe my study will be able to contribute and advance current research. The study reported here is framed in ways that diverge from many of the recent works of the extant scholarship. Although, in the previous section, I have touched upon some potential contributions of the perspective that informs this study, I have compiled a more comprehensive list detailing the utility of this approach. This rationale for the use of “negotiation of teaching identity” as a lens for exploring learning to teach can be found near the beginning of chapter three.

Chapter 3 – Methodological and Analytical Considerations

Introduction

This study explores how beginning teachers learn to teach middle grades science during student teaching. In it, I shift my focus from the cognitive dimension to one that is more personally and contextually bound: a negotiation of teaching identity lens. Focusing on the nuances of each student teacher's negotiation of middle grades science teaching identity is intended to allow us insights into learning to teach that might not be visible using cognitive or developmental approaches.

This chapter is composed of the following sections:

- Epistemological Framework
- Research Questions & Sub-Questions
- Rationale for Use of Identity Negotiation Lens
- Methodology
- Participant Selection
- Data Collection
- Description of Participants & Setting
- Ethical Considerations
- Researcher Subjectivities
- Data Analysis

- Methodological Limitations
- Preview of Chapters 4, 5, and 6

Epistemological Framework

Originally I identified a social constructionist epistemological frame (Crotty, 1998; Gergen, 1999), but realized this epistemology was focused on individuals' joint construction of meaning in the world whereas my interest was primarily to understand my participants' perspectives. I was interested in constructing an interpretation of their experiences, of which I was certainly a part. However, I did believe that my work with my participants resulted in co-constructed meanings. In addition, I do not believe it is possible to ignore my interaction with them in considering their constructed realities. Thus, I decided to take a step back from social constructionism and provide a more general description of my epistemology that seemed a better fit to the ways in which I thought about the nature of knowledge in this study. My epistemological perspectives are explored in the section that follows. The questions I ask, the ways in which I attempt to answer them, the conceptual frame with which I work (identity theory), and what I consider valid are all inseparable from my epistemology. As Crotty (1998) explained, our epistemology "has crucial things to say to us about many dimensions of the research task. It speaks to us about the way in which we do research. It speaks to us about how we should view its data. We will do well to listen" (p. 65).

My work is driven by a constructionist (Crotty, 1998) epistemology. From a constructionist perspective, meaning does not exist in the world or in objects waiting for us to discover it. Instead, meaning is constructed: "actual meaning emerges only when consciousness engages with [objects in the world]" (Crotty, p. 43) and interprets them. Thus, from a

constructionist stance, meaning is neither objective nor subjective, but constructed: “we have something to work with” in constructing meaning, but the meaning is not there to be discovered (p. 44). In this particular study, the thing with which I will be working and constructing meaning are my participants’ negotiations of teaching self during student teaching.

Crotty included a simple example that nicely elucidated a constructionist epistemology in his text. A professor of linguistics was teaching a class one morning and had written a list of five authors’ names on the board at the front of the room, one below the other. After the last name, he wrote a question mark as he was unsure whether or not he was spelling the name correctly. At the end of his first class he turned

around and noticed the list of names he had intended to be an assignment for his students and decided to draw a square around the list of names as well as write p. 43 on the top right corner of the box (Figure 1). As he began his second class, he informed students that the box of names was a religious poem, much like what they had been reading in class and asked them to interpret it. Students played

along suggesting that perhaps the form of the poem looked like a cross or an altar and then finding similarities between the names on the list and many Biblical characters with whom they were familiar. After a few minutes, the linguistics professor cut off students’ interpretations and

p. 43

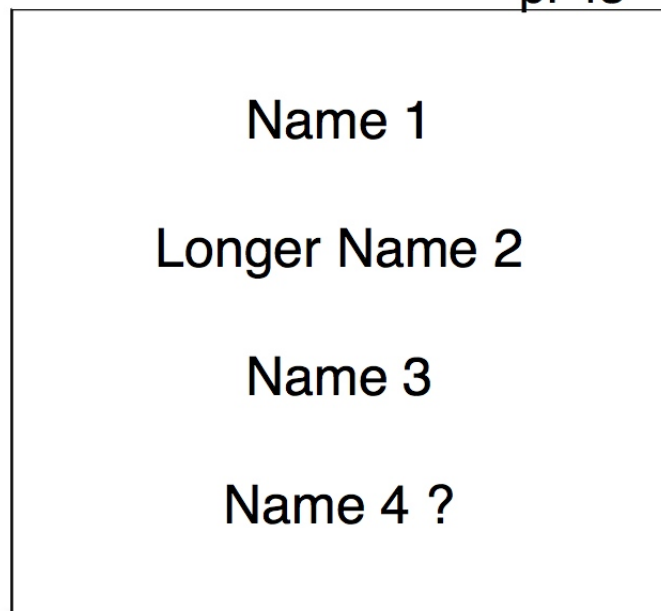


Figure 1: Image from Crotty text.

asked them how they recognized a poem when they saw one. He explained that he “invited” students to “address the list on the board with ‘poetry-seeing eyes,’” which then encouraged them to “detect particular significances in the object as a poem” (p. 47).

What connections can be drawn between a constructionist epistemology and the previous example? It exemplifies that although we might think there is a distinct meaning to discover, in actuality the meaning of all objects is highly dependent on the way in which we interpret them. In other words, “there is no true or valid interpretation” (Crotty, 1998, p. 47). Instead, “there are useful interpretations” and “there are liberating forms of interpretation” (Crotty, p. 47). In addition, to the nature of interpretations previously described, a constructionist epistemology acknowledges that the researcher-participant interactions affect both the meanings I construct as well as those constructed by my participants. Thus, throughout this study my decisions and interpretations have consistently been a product of this epistemological frame.

Research Questions

One primary research question informed this study: How do beginning teachers negotiate their middle grades science teaching identity during student teaching? It was used as a guide in conceptualizing learning to teach middle grades science and focused, rather than limited, this inquiry. In addition, the following sub-questions drove the research process. Unlike the primary research question these were continually honed as data were collected and initial analysis attempts required refined analytical conceptions.

- What do middle grades science student teachers make relevant⁶ and irrelevant while learning to teach? Why? When? How and why do these relevancies change throughout student teaching?
- How can student teachers' instructional strategies and interactions with students be described throughout student teaching? In what ways do they change? When? What are student teachers' perceptions of their instruction and relationship with students?
- In what ways do student teachers enact their personal teaching vision in their work? Which aspects of this vision are enacted and which are not? How do the aspects of the personal teaching vision being enacted change throughout student teaching? Why?
- What experiences do student teachers identify as significant or problematic and why? How do these change throughout student teaching?
- In what ways do they make relevant certain aspects of the context of their student teaching placement (i.e. students, cooperating teacher, other school personnel, cultural norms of schooling)? How do these relevancies change?
- To what degree do student teachers believe they were successful in enacting themselves as middle grades science teachers? Why?

⁶ In this study, preservice teachers' relevancies can be described as those aspects of student teaching that they regularly and/or emotionally emphasize in our conversations. For example, Lilly frequently spoke of her desire to be respectful as a visitor in the room of her cooperating teacher and described ways in which she modified her desired actions in order to be respectful. This is one of Lilly's relevancies.

Rationale for Use of Negotiation of Teaching Identity as a Lens in Studying Learning to Teach

Because I have taken a very different approach than most of the scholars studying teacher learning, I briefly describe the benefits I believe a “negotiation of teaching identity” lens offers us.

1. *This lens portrays learning to teach as the **dynamic, complex** venture it is, rather than a more static, linear process.* Emphasizing core identity (which takes years to develop) and linear progression (towards pre-determined *outcomes*), inadequately represents student teachers’ learning experiences in the classroom. Thus, identity development and identity construction lenses may limit our interpretations of what **is** happening while beginning teachers learn to teach since these perspectives encourage us to interpret experiences and events at the macro-level, linearly, and somewhat statically.
2. *This perspective encourages the researcher to focus on identity as the **pivot between the social and the personal*** (Wenger, 1998). Rather than under- or over-representing the way in which context is relevant in learning to teach, which results in deficit or dopey⁷ perspectives of teachers’ learning, this lens shifts our emphasis on context from a researcher-driven perspective⁸ to one in which relevant aspects of context are determined through the experiences and stories of the individual learning to teach.
3. *This lens is **not separate from practice** and, as such, is not another construct to link to practice.* Because teaching identity is defined as the way in which one enacts self in the world, practice is naturally part of the identity construct. Instead of trying to figure out

⁷ Contextual (interpretive) dopes (Holstein & Gubrium, 2004)

⁸ One in which the researcher decides prior to the study what aspects of context he/she will explore/include in the inquiry.

what constructs are linked to practice, inevitably painting an incomplete picture and offering little explanatory power, it allows us to take a closer look at all of the ways in which beginning teachers enact themselves as teachers as well as why. Perhaps this type of interpretive lens will allow us to rethink how we approach teacher education.

Methodology

I have not selected a formal methodology (as denoted by Crotty, 1998), but have instead taken an inductive (Charmaz, 2006; LeCompte & Preissle, 1993) case study approach (Hays, 2004) that incorporates elements of narrative inquiry (Chase, 2005; Connelly & Clandinin, 1990; Kramp, 2004; Lieblich, Tuval-Mashiach, & Zilber, 1998; Polkinghorne, 1995). I made this decision in the spirit of Crotty's description of a *bricoleur* (1998): I mused over the "objects" (methods) available in order to "see what possibilities" they had to offer (p. 50). My focus was on what I could make of these methods and what they would "lend themselves to becoming" (p. 50). Thus, as Smith (1992) suggested, I attempted to move away from being a researcher who was "too enamored of procedures or methodology in which the researcher has inserted a set of procedural rules between himself or herself and the interpretation" (p. 104). Instead, I tried to acknowledge my own instincts, intuitions, and curiosities and elucidate these for the reader. In the paragraphs that follow, I describe the ways in which case study approaches guided this study as well as pieces of narrative inquiry traditions. Before doing so, however, I provide a rationale for identifying this study as inductive, despite outlining a conceptual framework (Holland, Lachicotte, Skinner, & Cain, 1998; Lave & Wenger, 1991; Wenger, 1998).

Although inductive approaches are not typically driven by theory, I believe my inquiry can and should be considered inductive as my conceptual framework was constructed and

reconstructed throughout this study. During data collection and analysis, I continued to question what deserved my attention in the research setting, how aspects of my conceptual framework might better focus my work, and in what ways I wanted to reconceptualize the theory I was utilizing in order to better construct representations of beginning teachers' learning. In essence, my conceptual framework was co-constructed in my work with participants and during data analysis, making this study inductive in nature.

Methodologically, this study most closely aligns with case study approaches (Hays, 2004) as I closely explored the experiences of my three participants separately in order to focus on their unique negotiations of middle grades science teaching identities during student teaching. Thus, data were collected in ways that allowed me to produce in depth descriptions and interpretations of my participants' processes of learning to teach (Hays). In addition, my methodological choices aligned with those of case studies in that my ultimate goal was not to generalize, but instead to discover the uniqueness of each participants' experiences, which I believed would allow me to generate alternative explanations and interpretations of some well-worn problems associated with learning to teach. Inquiries utilizing case study methodologies are typically bounded in some way. In my study, I bounded my data collection by my participants' relevancies. Thus, I initially made the decision to collect only data arising directly from the experiences of my participants, rather than interviewing cooperating teachers and university supervisors. As a result of focusing on experiences that were relevant to my participants, I was unsure exactly what data collection opportunities would become available throughout this inquiry. Although I outlined general data collection procedures, if other opportunities became available, I took advantage of these. For example, prior to this study, I was unaware that the

science education majors would be presenting a video segment in their university reflections course. However, when Lilly told me of this presentation and invited me, I decided to attend.

This study was also shaped, to a lesser degree, by the traditions of narrative inquiry (Chase, 2005; Connelly & Clandinin, 1990; Kramp, 2004; Lieblich, Tuval-Mashiach, & Zilber, 1998; Polkinghorne, 1995). To begin, my relationship with participants can be described as somewhat personally involved (Kramp, 2004). I wanted to be available to support my participants during their student teaching placement, if they desired. As a result, I became quite close with one individual. This sort of relationship aligns well with both my epistemological frame and traditions of narrative inquiry. The following comment by Holstein and Gubrium (2004), regarding the difficulty of collecting and analyzing data on social context, elucidate my second reason for employing a narrative inquiry approach:

Given that ‘it depends’, how does one deal analytically with social context? A key point is to avoid the presumption that context is an objective set of circumstances that stands apart from, and works its magic over, social actors who, as a result, are cast as ‘interpretive (contextual) dopes’. We would be better served to look at how context is used by actors themselves. But, because context is experienced as part of a full-blown, lived reality, it is virtually impossible to delineate where, when, or how its manifestations begin and end...context is never a settled matter (pp. 299-300).

Clearly, maintaining a balance between the social and the personal dimensions, both of which were critical to my practice-based perspective on identity (Wenger, 1998), was a challenging endeavor. As a result, I decided to elicit narratives in my work with participants whenever possible as such approaches advocated “pluralism, relativism, and subjectivity” (Lieblich et al., 1998, p. 4). In addition, Connelly and Clandinin (1990) emphasized that narrative continually

tries to give an account “of the multiple levels (which are temporally continuous and socially interactive)” (p. 4). Thus, in eliciting stories from my participants, I was able to explore the relevant social aspects of the experience while gaining insight regarding their commitments, desires, emotional responses, and other aspects of the personal dimension.

Finally, I found myself drawn to narrative inquiry approaches as many researchers have made a case for linking narrative and identity (Connelly & Clandinin, 1990; Lieblich et al., 1998; Sfard & Prusak, 2005; Wortham, 2001). Some authors talk about narrative *as* identity (Sfard & Prusak) and others portray narrators’ autobiographical representations as a means by which self is constructed (Connelly & Clandinin; Lieblich et al; Wortham). Thus, by telling others “a coherent story that foregrounds a certain perspective or direction” about experiences that have occurred, narrators might represent themselves in specific ways that allow them to redirect their life (Wortham, p. 5). Although I do not entirely agree with these perspectives⁹, I do agree with the general perspective that narrative approaches are perhaps one means by which we can begin to gain insight regarding how individuals enact themselves in the world (identity). Narratives allow us access to individuals’ interpretations of experiences, how they make context relevant, and what experiences are most significant to them. All of these were valuable in furthering my insight into my participants’ teaching identity negotiation.

Participant Selection

In this study I worked with three middle grades science student teachers. I used a maximum-variation approach in selecting participants (Mertens, 1998) as I wanted to better

⁹ If identity is the way in which we enact self in the world, then action is a critical component of identity. Narratives would not fully depict one’s identity. However, they may allow us insight into the ways individuals interpret their social setting and actions in nuanced ways.

understand the ways in which individuals with different backgrounds in the sciences and different experiences with learning to teach would negotiate their middle grades science teaching identities. I selected two individuals from the secondary science education program and one from the middle grades education program. In order to increase the variation of my group of participants, I selected one undergraduate and one graduate student from the science education program as I wanted to work with individuals that had varying backgrounds and experiences with science. The graduate student had already completed a Bachelor of Science degree when she decided to teach. On the other hand, the undergraduate was completing a degree in Science Education, which required less science coursework than that completed by the graduate student.

Whereas the two participants in the science education program had taken significant science coursework and had thought extensively about teaching the subject matter of science, they had spent considerably less time thinking about how to work effectively with students of the middle grades. On the other hand, the participant from middle grades education had spent much of her time thinking about how to effectively teach middle grades students and significantly less time learning science or considering what effective science instruction might entail.

In addition, all of the participants selected were moderately to highly regarded by the professors in their teacher education programs. The science education students were identified by their science methods professor as individuals who had been successful during their practica and were likely to have positive experiences during student teaching. In addition, I spoke with the middle grades program coordinator in selecting the middle grades education student. We agreed that Mandy was the best participant based on the other individuals currently student teaching in science classrooms. I believed the participants' potential for success would allow me to focus on

aspects of middle grades science teaching identity negotiation that were relevant to students who were most likely to be successful in the classroom, according to their university professors.

I believed these individuals' negotiation of middle grades science teaching identity would vary considerably due to the unique program structures in which they had been enrolled and their varied life experiences especially those with science. Taken together, studying the student teaching experience of these participants would allow me to explore the intricacies of learning to teach middle grades science on an individual basis. However, I also thought my diverse group of participants would allow for the identification of similarities that emerged across the group, in turn allowing me to explore aspects of negotiating middle grades teaching identity that may be generalizable to a larger group of people.

Because my participants were completing various degree programs and student teaching in different locations, I will describe these individuals in more detail after a description of the methods of data collection.

Data Collection

The methods employed in this study were selected for two primary reasons: 1. They were intended to help me see the world through the eyes of the participants while realizing the ways in which each individual was culturally bound and socially situated (Charmaz, 2006), 2. They allowed me multiple views (collected in various contexts and formats) of my participants' thoughts, ideas, stories, and enactments of themselves as teachers, which allowed me to triangulate between sources (Mathison, 1988). Although it is often assumed that methodological triangulation, or any form of triangulation for that matter, will cancel out "the bias inherent in any particular data source, investigator, and...method" (Mathison, p. 14), this is not my

intention. I do not believe it is possible to eliminate researcher subjectivities¹⁰ from data collected or methods employed. Thus, my use of methodological triangulation is intended to help me collect diverse, rich, complex data in order to construct a picture of how preservice teachers negotiate middle grades science teaching identity. Combined, the methods employed helped me remain focused on both the personal dimension and the sociocultural context, mirroring this emphasis in my conceptual framework.

Figure 2 depicts the methods employed in this study alongside the research sub-questions. Each of the methods was intended to assist my exploration of all of the questions. These methods as well as the ways in which they were valuable to this study will be described in more detail following the figure.

*Written Assignments, Reflections and Other Documents (Extant Texts)*¹¹

All of the participants were required to complete written assignments for their university supervisors or the professor of the university reflections course. I collected these even though I did not solicit this work. Given the difference in the programs in which the student teachers were enrolled, two participants produced assignments conforming to one set of requirements and the other produced something different. Thus, I describe those texts the two science education students completed first and then those submitted by the middle grades education student.

Science education students. Both of the science education majors were enrolled in a reflections course that met once a week for three hours throughout student teaching. In this class,

¹⁰ I agree with Dr. Judith Preissle that the word bias is problematic as it assumes there is an unbiased state. Instead, in this study I find myself trying to **elucidate**, rather than eliminate, my subjectivities and the ways in which my personal experiences influenced my research design, implementation, and interpretation of the data.

¹¹ (Charmaz, 2006)

Research Question	Method(s)
How do beginning teachers negotiate their middle grades science teaching identities during student teaching?	
<ul style="list-style-type: none"> What do middle grades science student teachers make relevant and irrelevant while learning to teach? Why? When? How and why do these relevancies change throughout student teaching? How can student teachers' instructional strategies and interactions with students be described throughout student teaching? In what ways do they change? When? Why? What are student teachers' perceptions of their instruction and their relationship with students? In what ways do student teachers enact their personal teaching vision? Which aspects of this vision are enacted and which are not? How do the aspects of the personal teaching vision that are enacted change throughout student teaching? Why? What experiences (episodes, specific interactions, events, etc.) do student teachers identify as significant or problematic and why? How do these change throughout student teaching? In what ways do they make relevant certain aspects of the context of their student teaching placement (i.e. students, cooperating teacher, other school personnel, cultural norms of schooling)? How do these relevancies change? To what degree do student teachers believe they were successful in enacting themselves as middle grades science teachers? Why? 	<ul style="list-style-type: none"> Written assignments, reflections, and documents (accessed through WebCT, received hard copies, or given e-copies by participants or supervisors) Open-ended interviews (audio-recorded & transcribed) Field observations (audio-recorded & partially transcribed) Informal conversations (phone & in person) (field notes recorded) Conversations with university supervisor and/or university supervisor & mentor teacher (audio-recorded & transcribed)
Figure 2: Overview of Research Questions and Data Collection Methods	

students often utilized a **WebCT discussion board**, posting comments, frustrations, stories, and reflections throughout their student teaching experience. I was granted permission from the professor of this course to log in to WebCT and access my participants' reflections (both required and self-initiated), responses to peers, and assignments. Although these postings were self-initiated, both participants posted and responded to peers' postings periodically throughout

the semester. In addition students were required to write pre- and post-student teaching **reflections on the NSTA science teaching standards**, a **video reflection** and presentation of their video in the reflections course, and a post-student teaching **reflection** about **influential events** during student teaching. Reading both the required and self-initiated reflections and responses to peers was useful. Often I had observed during the period on which the individual was reflecting. This allowed me to identify differences between participants' interpretation of what happened and my own. In addition, I was able to understand what sort of events and experiences were highly significant to them since they wrote self-initiated reflections as they desired or as they had something particularly relevant to share with their classmates. Students in the science education program were not required to submit lesson plans as part of their program requirement.

Middle grades education student. The middle grades education major was required to submit weekly reflections throughout student teaching to her university supervisor. In addition, she was asked to submit formal lesson plans for her three-week unit as well as reflections for each of these days. These lesson plans helped me enrich my understanding of what the student teacher was doing with students when I was not present and allowed me opportunities to ask follow up questions about the lessons in the interview.

*Open-Ended Interviews*¹²

I conducted three interviews with both of the science education majors and two with the middle grades education major. The middle grades major and I were not able to find a time for what would have been the second interview. These interviews ranged in length from 45-90 minutes. In these interviews I tried to elicit as many stories as possible (Chase, 2005), rather than

¹² (Charmaz, 2006)

focusing on abstract visions and ideas. I told participants at the beginning of each interview that I was more interested in specific experiences and stories than in more abstract responses and structured questions in a way that encouraged this sort of response. However, this was not possible in all instances as I often wanted participants to explain why they believed something was relevant or significant to them after they relayed a story to me.

For each interview, I used a “general interview guide” (Patton, 2002, p. 342), or a list of general themes and questions I wanted to explore during the course of the interview. However, I tried to allow the conversation to travel in the direction of the participants’ relevancies as much as possible, which meant I often did not ask all of the questions included on my guide. I found it interesting that one of my participants, Mandy, naturally seemed to speak more abstractly and generally, rather than using specific stories. In addition, Lilly often apologized if she thought she was getting “off-topic.” Stacey, on the other hand, talked almost non-stop and I seldom asked her questions. My interviews with Stacey can better be described as unstructured (Connelly & Clandinin, 1990) than open-ended.

In the initial interview, the conversation was focused primarily on the student teachers’ teaching visions, previous experiences with children, science, or school that were relevant to them, and the ways in which they saw themselves as individuals and teachers. Questions asked of participants were virtually the same unless I asked a follow-up question of participants. In the second interview the questions I asked participants varied considerably as I encouraged them to share stories that were significant to them at that particular time in their student teaching experience. In addition, I asked them specific questions based on comments from their initial interview, observations of their teaching in class, or comments from written documents. The focus of the third interview also varied by participant in the first half of the interview and was

more similar in the second portion. In the first half, I asked questions similar to those in the second interview. However, about half way through, I asked participants a more standardized list of questions focused on their response to their cooperating teacher, university supervisor, students, and student teaching experience. The general interview guides are included in the appendix.

A few additional notes about the way in which these interviews were conducted are worth sharing. First, I attempted to keep the interviews as conversational as possible, which meant I had to balance my interests and questions with those of the participants. I certainly improved in this regard throughout the research process. In addition, I realized I had a tendency as an interviewer to make evaluative comments in response to participants' comments and stories. As I became aware of this, I pushed myself to steer clear of such responses and instead probed for more information or tried to make non-evaluative comments.

Field Observations

I observed student teachers between 6 and 10 times throughout their student teaching experience. While observing, I took detailed field notes using my computer and tried to capture what sort of events transpired, how the student teacher interacted with students and presented herself throughout class, what students were doing and how they were responding, and other details that seemed relevant or significant at the time. These observations were also recorded using digital audio media. This allowed me access to verbatim classroom dialogue when necessary. Although each audio recording of these observations was not transcribed in full, as I analyzed my data I was able to return to these recordings and transcribe portions that became relevant to participants' negotiation of teaching identity.

Informal Conversations (Phone and in Person)

Anytime my participants and I engaged in informal conversations, I recorded field notes during or immediately after these talks. At times, it was impossible to take field notes during the conversation as I was talking with the participant in person or was using my cell phone in a location where I had no access to pen and paper. However, as soon after these conversations as possible, I tried to recreate the conversation in my research journal. When I was able to take notes during the conversations, I focused on writing down particular phrases (e.g. One day on the phone Lilly mentioned that today she had “sacrificed her first lamb”) that stood out to me and then recreated the remainder of the conversation after it was finished. Again, these conversations were beneficial to my data collection process as they were typically initiated by my participants rather than by myself, were more informal than the interviews, and were more focused on what the participants were thinking than on my own set of questions. I believe these data were a nice addition to my more researcher-focused interview data as they allowed me to understand the personal relevancies of my participants more fully.

Conversations With the University Supervisor or the University Supervisor and Mentor Teacher

I also asked that participants audio-record their conversations with university supervisors throughout this study. I was not present for these meetings, but did transcribe them verbatim¹³ shortly after each conversation was recorded. I was interested in collecting these data in order to gain a sense of whether or not the ways in which my participants talked about what was relevant with their supervisor was fairly well-aligned with what they made relevant in their conversations with me and in their written reflections. Additionally, I wondered how the nuances of the

¹³ Transcription conventions described in more detail in Data Analysis section.

particular programs (science education and middle grades education) would shape these meetings and participants' foci during them.

Table 1 depicts the actual data collected for each participant.

Description of Participants and Setting

In the sections that follow I describe my participants as well as the general characteristics of the setting in which they student taught. In these descriptions I focus on participants' background information, their relationship with university and school personnel, as well as their relationship with me. Furthermore, I describe the demographics of the schools at which each taught.

Lilly Byrd: Graduate Student of Science Education

I e-mailed Lilly over Christmas break to see if she might be willing to participate in my study. Lilly was one of the only science education graduate students whose placement was at a middle school. Lilly responded to me in less than a week, explaining that she would be excited to speak with me about my study. (None of the other individuals I e-mailed ever responded to my message.) We arranged a meeting to get acquainted with each other. At this time I explained to her what her participation would entail if she decided to participate. When she arrived for our meeting, we both realized we knew each other quite well from an astronomy class we had taken together a few summers ago. We had been fairly close and were excited about the possibility of working together. I explained my study to Lilly and asked her to think about whether or not she

Table 1: Data Collected for Each Participant

Participants	Interviews (up to 3)	Participant Initiated/ Informal Conversations		Observations in the Field		Lesson Plans (not required to be submitted by science education students)	Conversations with University Supervisor	Participant Initiated Postings to WebCT		Required Reflections	
Lilly Byrd	3	15	Phone Calls	8	Audio & Field Notes	16 (Does not include plans for initial unit)	2	2	Reflections on Significant Moments	1	Reflection on NSTA Standards (prior to ST)
		3	Informal Conversations							1	Video reflection
		1	Letter to Program Coordinator	2	Video Taped for Lilly			4	Responses to Peers’ Comments on WebCT	1	Reflection on NSTA Standards (after ST)
				1	Attended University Course (oral video reflection)					1	Post reflection on influential moments
Stacey Sky	3	5	Informal Conversations (in person and via gmail chat)	7	Audio & Field Notes	None	2	4	Reflections on Significant Moments	1	Reflection on NSTA Standards (prior to ST)
										1	Video reflection
		1	Phone Call	1	Video Taped for Stacey			6	Responses to Peers’ Comments on WebCT	1	Reflection on NSTA Standards (after ST)
										1	Post reflection on influential moments

Participants	Interviews (up to 3)	Participant Initiated/ Informal Conversations		Observations in the Field		Lesson Plans (not required to be submitted by science education students)	Conversations with University Supervisor	Participant Initiated Postings to WebCT	Required Reflections
Mandy Fleet	2 (first and last only)	2	Brief e-mail responses to my post study questions	6	Audio & Field Notes	13	2 (w/ Riley) 1 (w/ Riley & Mr. Tucker)	NA	20 (13 during the 3- week unit she planned; 7 while she was teaching using Mr. Tucker's lessons & mimicking what he did)

wanted to participate for a day or two before committing. She contacted me the following day to say she wanted to work together.

Lilly obtained a B.S. in geography a few years before participating in my study. Upon completion of her undergraduate degree, she decided to go into teaching and was completing her certification coursework at the graduate level. She student taught in an eighth grade earth science classroom in a rural middle school that I will refer to as Stoney Hill Middle School.

Approximately 1,200 students attend Stoney Hill Middle. The school did not make AYP¹⁴ the previous year. The demographic break down was as follows: 85% Caucasian, 10% African-American, with a small Hispanic population. Of these, 48% were eligible for free and reduced lunch.

Lilly had worked with another teacher at Stoney Hill Middle, Mr. Radon, during her site based methods and practicum. Her cooperating teacher for the student teaching placement, who will be referred to as Mrs. Trahern, had taught at Stoney Hill Middle for a number of years but was teaching science for the first time in many years. Lilly had a wonderful rapport with Mr. Radon during her practicum, but found it more challenging to connect with Mrs. Trahern. Whereas Mr. Radon had a highly student-centered, somewhat noisy classroom, Mrs. Trahern conducted her science class more traditionally. Students were typically silent, seated in rows, working on bookwork or worksheets. Although Lilly was not extremely close to Mrs. Trahern and seemed a bit intimidated by her initially, their relationship improved throughout student teaching. Lilly ran errands for Mrs. Trahern and helped her as needed, even if it meant doing something outside of school time. One night she called me and told me she was leaving the post

¹⁴ Adequate Yearly Progress as outlined in *No Child Left Behind*

office after mailing Mrs. Trahern's mortgage payment. She also mentioned that she picked Mrs. Trahern's son up from school on multiple occasions.

After Lilly started teaching (about a week or two into the placement), she taught almost every day (with the exception of one or two days in which Mrs. Trahern needed to give a benchmark exam) until the end of the placement. Although initially Mrs. Trahern tried to give Lilly some ideas about what she might want to do, this quickly stopped. Lilly planned on her own with little help from Mrs. Trahern, who she felt had little to offer her in terms of teaching science. Mrs. Trahern asked Lilly to submit lesson plans to her even though the science education program did not require her to do this. Throughout student teaching Lilly wrote detailed lesson plans and submitted these to Mrs. Trahern prior to teaching.

Throughout her placement, Lilly was observed by Tammy, her university supervisor from the science education department, as well as by Dr. Smith, the science education program coordinator. Tammy was a doctoral student in the science education program in which Lilly was enrolled. Lilly felt her relationship with Tammy was unhelpful to her growth. However, she was always very respectful and tried to learn as much as she could in these meetings, despite her frustration.

Lilly and I became good friends throughout our work together. She became very accustomed to having me in the room and seemed to almost enjoy the days in which I observed, asking me questions throughout the course of the class, coming to the back of the room to chat with me when she was frustrated or when students were working on something, or just sharing a funny story or smile across the room. In addition, Lilly contacted me regularly by phone and we have stayed in touch regularly since the end of the data collection phase of this study (both by phone and in person). This relationship is mutual as I now contact her for support in writing my

dissertation. The following is the way in which she described our relationship in our final interview (I had not asked her to talk about our relationship. Her response was unsolicited). She had also told me multiple times during phone conversations that I should not be paying her to participate in my study as she did not know what she would do without our relationship.

Lilly: I don't know what I would have done without you. Anyone I have spoken to I'm just like she was...sent from...

Me: What was it that was helpful to you?

Lilly: You gave me comfort. And it was comfort that I didn't have from anyone else. I mean, some people have friends in this program. I have [friend's name]. She's my friend, but I don't call her up and say, "Oh my God, they made me cry." No one really understands. You were able to. I could call you and tell you what happened and even if you didn't say...you always said the right thing. No matter what it was. I mean I knew that I could call you and you would make me feel better. You were the first person I called. I didn't call my mom. I didn't call [boyfriend's name]. I called you. You were able to relate.

One final note, Lilly has a job teaching sixth grade earth science at a local middle school for the upcoming school year.

Stacey Sky: Undergraduate Student of Science Education

Stacey began her student teaching placement in one location but was highly dissatisfied with her cooperating teacher and the school after the first week and requested to be placed in a new setting. After multiple requests, considerable persistence, and locating her own cooperating teacher, the program coordinator agreed to reassign her, and she was placed with a new teacher, who will be referred to as Mrs. Stephanie Haugh, at Stoney Hill Middle School (Lilly's placement was at the same school). Stephanie taught seventh grade life science and had been a teacher at Stoney Hill teaching science for approximately five years. (I use her first name in my talk about her as this is how Stacey referred to her.) Although Stacey was initially quite happy

with her placement in Stephanie's room, she became increasingly frustrated with their relationship throughout student teaching. She often talked negatively about her and was especially frustrated with the constructive criticism Stephanie sent her via e-mail. After student teaching she returned to visit the students in Stephanie's class and was told by Stephanie that she should not return again.

Stacey taught and planned almost every day (except for the few days she went on field trips with students and Stephanie stayed at school to teach) of her student teaching placement. She and Stephanie did talk periodically about instruction, but, according to Stacey, seldom collaborated in planning together. Stephanie asked Stacey to give her lesson plans, but Stacey mentioned that she did not do this very consistently throughout the placement and that it was, perhaps, disrespectful on her part not to fulfill this request.

Stacey's supervisor, Mrs. Mary Sieber had various and extensive experiences in the schools, having been a principal and a teacher for many years. Stacey told me multiple times that Mrs. Mary was like a grandmother to her and that she really enjoyed working with her because she was positive and liked her style of teaching so well. Mary did ask Stacey for lesson plans, but only wanted to see what she had planned for the day she came to observe.

Stacey and I had a comfortable relationship, but we were not extremely close. Stacey did contact me one time via phone to vent about a meeting she had with her cooperating teacher and supervising teacher regarding her attendance. We also chatted for about an hour one day during her planning when she was upset about this same issue. However, this was the only time we talked for a long period of time outside of the formal data collection activities. Stacey was always very willing to allow me to observe in her classroom. She never expressed any sort of reservation when I asked if I could come on a given day.

Stacey has not yet applied for teaching positions. After finishing student teaching she was unsure whether she should apply for teaching jobs or return to graduate school to pursue a degree in counseling. At this point, she believes she will go into counseling rather than teaching, but is still undecided.

Mandy Fleet: Undergraduate Student of Middle Grades Education

Mandy student taught in an eighth grade earth science classroom in one of the highest achieving districts in the state, which I will refer to as Heavenly Middle School. Only 16% of the 1,000 students at Heavenly Middle were eligible for free and reduced lunch. The demographic makeup of the school is comparable to that of Stoney Hill Middle. Heavenly Middle satisfied the requirements for AYP and was also awarded the Platinum Award for the greatest gain in students meeting and exceeding the state standards.

University students who are seeking a degree in the middle grades education program have to identify two concentration areas (i.e., subjects in which they will be endorsed to teach middle grades students): Mandy's areas were social studies and science. Mandy's cooperating teacher, who will be referred to as Mr. Tucker was well-renowned in both the community and state for his work as a teacher and had won multiple, notable teaching awards. Mandy completed her practicum with Mr. Tucker the previous semester and because he was satisfied with her work, she was able to continue working with him for her student teaching placement. Mandy believed Mr. Tucker was the epitome of good middle grades science teaching and emphasized this to me, her university supervisor, and Mr. Tucker on multiple occasions. She told me multiple times that she had a great relationship with Mr. Tucker.

Mandy taught and planned considerably less than Lilly or Stacey. Although she taught some each day, she typically watched Mr. Tucker teach what he had planned and then mimicked his approach. This was true for almost the entire 12-week placement with the exception of her 3-week unit. When Mandy was planning, she had access to Mr. Tucker's resources and frequently used many of his ideas in what she did in the classroom. In addition, she and Mr. Tucker sat down every day prior to teaching during her 3-week unit in order to go over what she had planned. During these meetings he typically gave her additional ideas and told her what he thought she should reconsider prior to teaching. While she was teaching, Mr. Tucker's presence was almost always felt. He found ways to entertain students, corrected mistakes she made in front of the class, clarified instructions for students, reprimanded their behavior if needed, and operated technology that Mandy was utilizing in her lesson.

Her university supervisor, named Riley, was a doctoral student in the middle grades program. Riley formerly taught middle grades social studies and language arts in another state before returning for her doctorate a few years ago. Riley and Mandy had a comfortable relationship with one another: Mandy felt comfortable with Riley and believed she was reasonable and knowledgeable as a supervisor. Riley described herself as having a weak background in science and mathematics and explained to Mandy that she [Riley] would be Mandy's toughest critic because she would really want to make sure students could understand and relate to what they were learning in science. Mandy was required to submit formal lesson plans to Riley as well as written reflections for each of the lessons planned and implemented during her three week unit.

I knew Mandy quite well prior to her participation in my study. I had been the teaching assistant for a middle grades science methods course she took the previous year. This certainly

played a role in my interactions with her throughout my study. She often said, “Yes, ma’am” to me when we were having what I perceived to be informal conversations. In addition, there was always a less friendly feel to our interactions than those I had with Lilly and Stacey, neither of whom had taken this course or knew me as a teacher. Although I tried to alleviate Mandy’s fears that I was judging her during observations, I feel certain based on comments she made and on our interactions that she felt the need to act differently with her students when I was in the room than when she was alone with them. Mandy never called me to talk about her experiences during student teaching. We only talked on the phone to schedule dates and times for my observations. Scheduling observations in Mandy’s class was somewhat challenging as she always felt she needed to check with Mr. Tucker before giving me permission to come. As a result, I observed fewer times in Mandy’s class than I did in other participants’ classes.

Mandy also has a job teaching sixth grade earth science at a local middle school for the upcoming school year.

Ethical Considerations

I realized that asking student teachers to participate in my study would add a number of tasks to a plate already full and, as a result, carefully considered reciprocity, or what I was giving and what I was taking as a researcher (Glesne, 2006). The following are the ways in which I believed my participants would benefit from their interactions with me:

- The student teachers had an opportunity to reflect on questions that might spur them to better understand themselves and their experiences.
- I was willing to listen attentively to their ideas and concerns and encouraged them to call me anytime they needed or wanted to talk. Thus, I served as a support if needed/desired.

- I focused a portion of my interviews on topics that were relevant and pressing to them, allowing them to vent and work through frustrations.
- I paid each participant a stipend of \$100 at the end of the study in order to compensate them for their time.

Researcher Subjectivities

One of my subjectivities is my belief that the world is highly complex and that an exploration of it should be done in a way that does this complexity justice. Another of my subjectivities is that I strongly believe teacher education has the potential to be effective. Although I believe certain individuals become effective teachers more easily than others, I also believe that teacher education can facilitate this process. However, as it currently exists I do not believe teacher education always lives up to its potential. An additional subjectivity that was relevant is my vision of what good middle grades science teaching should look like. Although my study has caused me to rethink this, I certainly possessed such a vision when I began this study and reminded myself many times that I was not evaluating participants' work, but was instead trying to explore their learning process as middle grades science teachers. Finally, an important subjectivity is my desire to help participants and individuals in any way possible. Although I tried not to offer advice, but instead listen and support, I did, at times, offer ideas or positive evaluative comments if this seemed necessary in order to minimize the impact of my presence in their classroom. For example, Lilly was always concerned that she was an "awful" teacher and asked me frequently if I thought she was doing "horribly." I decided that in order to make her feel more comfortable with my observations, I should offer some positive feedback.

This was also true of my interactions with Mandy, who was very concerned that I was judging her.

In order to monitor my subjectivities, I have collected multiple forms of data (written responses not intended for me, naturally occurring talk between participants and university supervisors and mentor teachers, and participant-initiated talk). All of these provide opportunities to explore beginning teachers' relevancies and thoughts on learning through a different lens than my own. These various forms of data contributed richly to my study. In addition, I wrote the majority of interview questions prior to the interviews, which allowed me to reflect on the role my subjectivities played in the questions I asked better than I could within the context of the interview. Finally, I kept a research journal throughout this study and used it to jot down intuitions I had, memos regarding questions, particular events, and experiences, and reflections on my own actions while collecting data. I often questioned whether or not I should have asked a participant a particular question, responded to their comments in a specific way, or given them feedback when requested.

Data Analysis

My process of data analysis began during data collection as I believed this was one way to improve the quality of my data (Ezzy, 2002) as well as my conceptions of the negotiation of teaching identity in which my participants were engaging. I transcribed each interview as well as the recorded conversations with supervisors and mentor teachers verbatim and included anything that was verbalized during the conversation, either by the participants or by me, in the transcription. I inserted brackets in my transcription where sounds that were audible and related to the conversation were made (e.g. laughter, tapping on the desk for emphasis, etc.). I was

responsible for all transcription and believed this was an important first step in becoming familiar with my data. As I mentioned previously, I did not transcribe the audio-recorded class sessions I observed. Once data were transcribed, I entered them and conducted the initial phases of my analysis using HyperResearch 2.7, which is qualitative data analysis software that enables coding of data by selection of text, reporting on coded data, and memoing.

Once data were entered into HyperResearch, my data analysis can be described as a six step process. Throughout my analysis, I struggled in considering how to emphasize both the social and the personal dimensions. The following quote by Wenger (1998) was beneficial to my work: “In everyday life it is difficult – and largely unnecessary – to tell exactly where the sphere of the individual ends and the sphere of the collective begins” (p. 146). My analysis initially resembled that of the hermeneutic circle (Crotty, 1998), as I extensively explored the meaning of the parts in order to more fully conceptualize participants’ process of teaching identity negotiation. In the second phase of analysis, I focused on the remaining half of the hermeneutic circle, focusing my energies on the whole of participants’ experiences in order to gain insight into parts that might provide opportunities for the most useful interpretations. This analytic approach aligns well with the case study methodology as data are typically taken apart while the researcher looks for relationships that can ultimately be reassembled into a story (Hays, 2004). Although I have outlined my analysis in a linear, step-by-step fashion, the actual process was much more iterative and cyclical than I am able to fully depict.

1. Initially, I focused on **the nuances of the personal dimension** by using “initial coding practices” (Charmaz, 2006, p. 48) on all of the data and memoing extensively (Ezzy, 2002). I followed Charmaz’s suggestion to “preserve actions” during initial coding and attempted to use gerunds rather than nouns in my initial coding. For example, Lilly

described to me in our final interview that she always wore her hair up in a ponytail because she did not want to be perceived as some sort of sexual weirdo in the eyes of her students and colleagues. She wanted them to know she was all about business. As I coded this section, I titled the code “becoming asexual in eyes of students” rather than “hair in ponytail.” This helped me focus on the processes that were relevant to these beginning teachers. For the three interviews, I also did line-by-line coding to increase my focus on the idiosyncratic nature of these individuals’ ways of talking about students, responding to the social setting, thinking about teaching and learning to teach, etc. Charmaz suggests this line-by-line approach is important as it “frees you from becoming so immersed in your respondents’ worldviews that you accept them without a question” and fail to “look at your data critically and analytically” (p. 51). I agreed with this perspective and found this approach encouraged me to focus on the intricacy of participants’ language use, rather than thinking more generally about what they were saying. This initial phase was also important in helping me identify specific incidents that might be of interest later in the analytical process.

2. Next, I explored Gee’s (1999) six building tasks. These encouraged me to consider “what social goods (e.g. status, power,... or identities) are relevant (and irrelevant) in this situation? How are they made relevant (and irrelevant), and in what ways?” (p. 94). Thus, **I switched my focus to the social dimension** and thought about major aspects of the social dimension that were most relevant to all of my participants but in nuanced ways. Although I employed a case study approach, I believed identification of these broader social categories would allow me to more fully explore the intricacies of each individual’s negotiation of teaching identity. These major aspects of the social dimension

were inferred from the codes created in the initial phase of analysis and included: being seen as a teacher, positionalities (ways in which they positioned themselves and were positioned by others), and relationships with students.

3. I then re-read and re-coded my data in large chunks of text that reflected the most representative, idiosyncratic ways in which my participants' talked about, responded to, enacted self regarding these three major social aspects. Portions of these passages were then seamed together into a narrative that **pulled the personal and social dimensions back together**. These narratives depicted the nuances of teaching identity. However, they did not sufficiently elucidate negotiation, or the process. As Polkinghorne explains, in narrative analysis, "the researcher's task is to configure the data elements into a story that unites and gives meaning to the data as contributors to a goal or purpose" (1995, p. 15). I realized my narrative had not yet accomplished this goal or purpose.
4. It was at this point that I re-read another of Gee's (2001) works. In it he introduced the notion of D-identity, or discursive identity: D-identity is not something "some institution creates and upholds" and is not something "one can achieve all by oneself." Instead, the power that determines D-identity is the "discourse or dialogue of other people" (p. 103). Our discursive identities, then, are bids we make at being recognized in a certain way by others. I realized this analytic step would allow me to focus explicitly on the personal dimension as socially-situated. In addition, it encouraged me to think about the bids my participants made at being seen as certain types of people and teachers as well as how others did or did not accept these bids at a certain type of person and why, all of which were relevant to negotiating self as teacher. Furthermore, this approach helped me focus

more consciously on the **temporal dimension**: Had these discursive identities changed over time? I realized some had and others' had not and wondered why.

5. At this point, I wrote a response to my research question for each of my participants, but found I was still unable to adequately represent process, or negotiation of teaching identity, coherently. Each time I started writing, I found myself running into difficulty presenting a cogent, focused picture of these individuals' negotiation of middle grades science teaching identity. The complexity of their experiences made it difficult to know how to depict this messy process. At this point, I realized I had **lost focus on the notion of improvisation, or agency**, which was originally such an important part of my thinking about negotiation of teaching identity. As a result, I could not seam together individuals' socially-situated ways of enacting themselves into a coherent process as I did not have a conception of what drove this process. This became apparent when I tried to describe how Lilly negotiated her teaching identity: I noted that she started by trying to fit into others' ways of doing things and that eventually she was able to move away from this adopted model to some extent. However, I did not understand why or how she was able to do this. Why did she not continue in this way?
6. Finally, I revisited Holland et al.'s (1998) idea of improvisation, or agency. I found their notion of "**tools of agency or self-control and change**" (p. 40) critical to my understanding of participants' negotiation of teaching identity. The authors focused on two processes in thinking about how individuals direct "attention away from the extremes of cultural determination of behavior on the one hand and situational totalitarianism on the other" (p. 40): First, they emphasized the creation of improvisations that "come from situations in practice" (p. 40). Second, they asked us to consider how individuals

appropriate these improvisations as tools “for the next moment of activity” (p. 40) and explained that as these improvisations were used repeatedly, they could become “tools of agency or self-control and change” (p. 40). This was the final piece in my analytical puzzle as it allowed me to ask **what caused the socially-situated personal actions to proceed in the way they did**. I revisited my narratives and identified a few such tools, which allowed me to create a model for each participant’s negotiation of teaching identity in a way that effectively represented the data.

These models serve as a way in which to focus the reader’s understanding of the participants’ experiences learning to teach middle grades science and are intended to elucidate participants’ process of learning to be a middle grades science teacher, rather than their learning outcomes.

Methodological Limitations

There are several methodological limitations that deserve attention prior to the analysis chapters. First, the quality and amount of data collected for each participant varies significantly. I certainly have a much richer, more complex set of data for Lilly than for any of the other participants. As a result, it was much easier to create a representative model of her negotiation of teaching identity than it was with the other two participants. Despite this limitation, I also believe the varied richness and quantity of data is an important part of these individuals’ stories of learning to teach.

In addition, because I tried to elicit stories and ask questions in my interviews that were reflective of individuals’ relevancies, I did not use the same interview questions for all participants. Especially in the second interview, questions varied considerably. However, because I tried to emphasize the participants’ agendas and priorities rather than a pre-constructed

research agenda, I believe this variety was important. In addition, such an approach aligns well with a case-based methodology (Hays, 2004). At times I found myself wondering why I had not asked one participant the same question I asked another and wished, in retrospect that I had. However, due to my emphasis on the individual experiences of negotiating teaching identity, I believe it was more important to focus on the nuances of the personal than it was to standardize my interview questions for participants.

Furthermore, because I wanted to focus on any aspect of the student teaching experience that was relevant to my participants, this study allowed me to produce fine-grained portraits of these individuals' experiences. However, because I was reluctant to limit what might become relevant to my participants during student teaching, I have a much less detailed perspective on certain factors and incidents, which might have ultimately been beneficial. For example, it might have been useful to know more about the specific experiences my participants had with learning to teach science as inquiry in their university methods courses. In order to address this to some extent, I attempted to ask follow-up questions of participants as they shared narratives that included relevant aspects of their experience in order to increase the richness of data collected.

Preview of Chapters 4, 5, and 6

How does one depict a complex, dynamic process of learning to teach in a way that is palatable and digestible? Too many clues about the ending provide the reader with no incentive to read the story: Too few make it difficult for the reader to make sense of the intricacies. In crafting chapters four, five, and six, I wrestled with ways in which to focus the reader without sharing too much of my analysis prior to the narrative. Before proceeding to the analysis chapters, I describe the structure and content of these chapters.

In chapters four, five, and six, I begin with a description of participants' teaching identities (or general ways of enacting themselves as teachers throughout student teaching). Although this snapshot view may paint a static image of identity, I believe it provides the reader a useful overview in considering the model of negotiation of teaching identity that follows. Next, I describe the ways in which I constructed participants' models of negotiation of teaching identity to provide the reader with a clearer sense of how the analytical approaches used are specific to each narrative. In addition, I present an overview of the model. This overview will be useful to the reader in considering my participants' negotiation of teaching identity while reading the narrative. In addition, I briefly describe the ways in which each narrative was constructed. The final portion of each chapter includes a more complete version of the model depicting the participants' negotiation of teaching identity. I have infused supporting examples throughout these models in order to err on the side of specificity and clarity.

It is important to clarify how the components of the analysis chapters contribute to the purpose of this study. My purpose is to construct a representation of negotiation of teaching identity. In creating this representation for each participant, I emphasize that both negotiation and teaching identity take on different meanings for each of the different participants. For example, Lilly's teaching identity is very different from Stacey's. In addition, what negotiation entails for Lilly is quite different than Mandy's negotiation. Because of this, the components listed above are intended to convey both a sense of participants' teaching identities as well as depicting what negotiation looks like for them. Thus, the overview of teaching identity provides insight into how these individuals enacted themselves as teachers. Although I was concerned this would depict identity statically, I believed this general description would be useful to the reader. The narrative accomplishes what neither the model nor the overview of teaching identity can do

alone: It depicts negotiation of teaching identity. In other words, it conveys how participants enacted themselves as teachers as well as what negotiation entailed for them. Ultimately, the model allows us to explore negotiation more deeply. Thus, these three components make for a powerful analysis of my participants' negotiation of teaching identity.

In each of the narratives that follow, I have tried to use the **participants' words** (verbatim) as a primary source. However, in order to maintain a coherent story line this was not always possible. Thus, I used multiple fonts to depict different voices. To begin, text that is in “this font” depicts participants' exact words, taken verbatim from interviews, written documents, classroom observation transcripts, and other available sources. Text that is in **this font** is my authorial voice depicting the participants' thoughts or words. I intentionally tried to eliminate as much of my interpretive lens as I could when using my authorial voice to depict participants' thoughts or words. Typically, these words are as close to what participants actually said or wrote as I could make them. Of course, there is necessarily some interpretive element in employing this voice. Next, text that is in this font is a description of what I saw happening in the field, what we talked about on the phone or informally in other locations, or what I was thinking: It is the narrator's voice. Periodically, the words of university supervisors, mentor teachers, or students are included in this font.

Chapter 4 - Lilly Byrd's Tale of Negotiating Teaching Identity: I've Spent Hours Working Not to Become That Type of Teacher!

"A concern with the dialogic...allows us to move beyond the conversation itself to attend to the conditions of its production...A dialogic understanding, then, acknowledges... multiplicity: the ways talk, practice, and understanding are mediated by difference, history, point of view, and the polyphony of voices possessed by those immediately involved and borrowed from those who become present through language. This perspective on the dialogic...allows us to move beyond dualistic perspectives and to focus, instead, on the polyphony of forces that interact, challenge, beckon, and rearrange our practices and the positions we take up in teacher education" (Britzman, 2003, p. 237).

Teaching Identity

In describing Lilly's teaching identity, I will emphasize the instructional component and the interactive (ways of interacting with students) component separately. Initially, the instructional component of Lilly's teaching identity can be described as primarily teacher-centered. Near the beginning of student teaching, she answered questions for students, planned classes in ways that positioned her at the front of the classroom, told students how to do everything they needed to do, and generally gave students the information they needed. Although she began incorporating more visual and hands-on activities, the ways in which she used these approaches encouraged little talk or response from students. It was apparent early on that Lilly had few pedagogical tools at her disposal. For example, she frequently gave notes or went over worksheets without writing any information down for students. This unintended omission caused her to repeat herself extensively. Yet, as she progressed as a student teacher her teaching identity changed: She began asking students more and different quality questions and began allowing them to work in small groups in order to complete tasks. Typically classes at this phase included

a section of teacher-centered notes during which time students said little and copied extensively and an activity phase, in which students participated in a hands-on, visual, or group activity to explore further the information conveyed in the notes. During this phase, Lilly typically employed at least two or three different instructional activities during class. Later during student teaching, Lilly's teaching identity changed dramatically. She became considerably less teacher-centered, structured activities in ways that allowed students to construct knowledge about the required curriculum, and served as a facilitator for student learning rather than as the primary source of student learning. In addition, at this phase she was much less concerned with her mentor teacher's opinions, preferences and ways of doing things.

The interactive component of Lilly's teaching identity also followed a somewhat progressive, linear path. Her interactive teaching identity was always calm and unexcitable. However, throughout student teaching, her teaching identity became less strict and more personable. She became less custodial in her interactions with students. Throughout student teaching, she was friendly with students, but always as a teacher who cared about their learning and their lives, not as a friend who was interested in their personal life.

In the following section, I will describe a model of Lilly's negotiation of teaching identity. This model is my representation of her negotiation. The primary purpose of this model, then, is not to depict teaching identity so much as to consider the nature of Lilly's negotiation. Because negotiating one's teaching identity is extremely complex, this model depicts the general characteristics of her negotiation.

The Model

Lilly's model is the most complex of the "negotiation of teaching identity" models that were created. She was the only participant whose teaching identity underwent significant change throughout student teaching. The teaching identities of the other two participants were more static, facilitating the creation of their models.

To understand Lilly's negotiation of teaching identity I utilized Gee's (2001) conception of discursive identity, or D-identity, which can be defined in terms of the bids individuals make to be recognized as certain types of people. This analytic approach proved an effective tool in representing Lilly's negotiation of teaching identity since being recognized in a particular way was a predominant focus of hers during student teaching. This approach helped in crafting Lilly's model as it directed focus on whether or not, how, and why her prioritization of these D-identities changed throughout student teaching. As she changed the ways in which she prioritized these D-identities, I realized the need to re-examine her negotiation of teaching identity: Were different factors becoming relevant as she enacted herself in the classroom? If so, why? If not, why not? Thus, by focusing on these different D-identities a more representative portrayal of her negotiation of teaching identity throughout student teaching resulted. However, this analytical technique was insufficient to depict the full conceptualization of her negotiation. It began to feel increasingly imperative to explore what facilitated her changing emphasis on these D-identities throughout student teaching. Holland et al.'s (1998) notion of "tools of agency," which is defined in terms of the improvisations that people use repeatedly (from one moment to the next) and which ultimately become tools of self-control and change, aided the creation of this model. More specifically, these tools allowed me to interpret Lilly's experiences in a way that represented the

dynamic nature of negotiation throughout student teaching. Before describing the model it is important to note that this model is not intended to account for every decision or thought that was influential in how Lilly enacted herself in the classroom, rather it is intended to portray a macroscopic view of the relevance of the personal and social dimensions in Lilly's negotiation of teaching identity. In the section that follows, I lay out the key pieces of Lilly's model, which are intended to serve as an heuristic for the reader. The way in which these pieces work together as well as the evidence I have used in constructing this model are elaborated in more detail following the narrative.

The following is a preview of Lilly's negotiation of teaching identity model that is intended to serve as a guide for reading the narrative that follows.

- Three primary D-identities are useful in considering Lilly's negotiation of teaching identity during student teaching: First, she makes bids at being recognized as a *respectful visitor* in the room of her cooperating teacher. Second, she consistently makes bids at being recognized as a *teacher* in the eyes of her students. The bids for this D-identity can be distinguished from that of *good teacher* in that these were solely for the purpose of conveying to students that they should see her as a teacher. Third, she tries to be recognized as a *good teacher*. These three D-identities are all relevant throughout her student teaching experience. However, they do become more or less relevant at different times. The *good teacher* D-identity is particularly important in understanding Lilly's negotiation of teaching identity, since Lilly's bids at *good teacher* are seldom made solely based on her personal vision of *good teacher*. Instead, she typically holds her personal vision of teaching in dialogic tension with aspects of the social context (i.e., students' response to her, cultural norms of schooling, and expectations of other school personnel) in negotiating her teaching identity.

- Lilly has **two tools of agency** that mediate how she negotiates teaching identity: confidence and a love for learning and growing. The love for learning and growing tool of agency is important in considering the dialogic tension she typically maintains between her personal vision and the social context in negotiating teaching identity. She utilizes this tool to redefine, expand, or clarify her personal teaching vision based on students' response to her. In addition, confidence plays an important role in her negotiation of teaching identity. As her confidence increases she makes decisions about and enacts her teaching identity in ways that align more closely with her personal vision of teaching, whereas when she lacks confidence these decisions and actions are based more on expectations of others or the way in which she believes students will respond. Lilly's confidence is built throughout student teaching, primarily by students' response to **her** as the **type** of teacher she wants to be. In other words, she does not often emphasize gaining confidence when students respond well to an **activity**. Instead, her confidence increases when students have fun during an activity, which aligns with the type of teacher she wants to be. Thus, she does not typically talk about activities that work or do not work in absence of her vision of the type of teacher she wants to be.

The Narrative

There are multiple stories that could be told regarding Lilly's experiences learning to teach. Why is this the story I have decided to tell and how representative is this story of her negotiation of teaching identity? The analytical approach outlined in chapter three depicts the process used in crafting this narrative, which I believe to be one in which the most relevant aspects of Lilly's experiences negotiating teaching self were my primary focus. Thus, this

narrative is a product of analysis and reflects the relative importance of findings from the initial stages of data analysis.

Before proceeding to the narrative, it is also important to note that the events in this narrative are arranged chronologically, with a few exceptions. By arranging events and experiences in this order, I was able to emphasize what was relevant to Lilly's negotiation of teaching identity at particular moments and to seam these into a coherent whole. Experiences or reflections were only conveyed out of chronological order in instances like the following: Near the end of the narrative Lilly described a wonderful lab on sediments in which students participated as well as her reflections on this lab. This experience was placed near the end of the narrative, rather than a bit earlier in the story when it actually occurred as a conversation she had with Dr. Smith seems to have been influential in her reflection on this experience. Thus in instances like this, the **experiences** in the narrative are arranged out of chronological order with the order in which these experiences occurred in the field. In addition, comments in the initial interview were not arranged in the order in which Lilly conveyed them to me since my questions guided the order of her responses. In the final interview, I incorporated Lilly's stories about student teaching from the initial portion of the interview into the narrative based on how they transpired in the field (with the exception of the event previously described). I believe these measures, in addition to an iterative process in which I continuously returned to the data to question my arrangement of data or what I had emphasized in the narrative, allowed me to construct "the story" of Lilly's negotiation of teaching identity. It is important to note that although a narrative arranged chronologically inherently allows for a focus on development (change over time), my primary focus in this study was on process, or negotiation of teaching

identity. Whether or not this process led to the development of core teaching identity is addressed in the final chapter.

Figure 3 depicts the fonts that are utilized throughout this narrative.

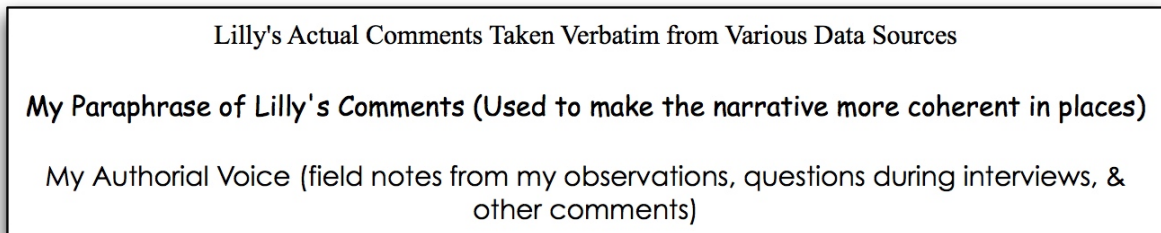


Figure 3: Fonts Utilized in Narrative

It was my lifelong dream to be a meteorologist - to be a weather woman. That's how I started off in geography. But it wasn't what I expected. It was too abstract: too much computers, too much just sitting in your room thinking about things. I need more personal interaction. And then I started to have a real passion for understanding how the earth changed: why mountains form and why rivers change their paths and how that carries sediments to this, which can make that.

Actually my sister and I went to California after my sophomore year. My dad promised us that he was going to take us out to California and it never happened. So we made him feel guilty and he gave us money and we went: just the two of us. We started in LA, went to San Diego, Joshua Tree Forest, the Grand Canyon, Death Valley, and Yosemite and we experienced all of that. And when I came back, I had a completely different perspective on geography. It took that to think about how amazing Earth's processes are. I was able to really see how amazing it is.

I can't believe I'm about to start student teaching! I'm so looking forward to learning and growing as a teacher. Although I feel confident in myself as a person, I am nervous about my confidence as a teacher. If you were going to tell somebody about yourself what would you say distinguishes you from other people? I think I'm very open-minded. I try to look at the whole perspective, - rather than just this is my opinion; I'm going to stick to it; I don't want to think beyond that. I think that makes me an interesting person because I really listen to what people say. That will be helpful in a classroom because you need a bunch of different perspectives to get everybody involved and I'll learn in the process, too.

I didn't have an epiphany about becoming a science teacher of any sort... just the more I went through the process of trying to achieve the goal of being a science teacher, the more I thought about the positive aspects of becoming a science teacher. What would you say the positive aspects of becoming a science teacher are for you? Well, you've run outside! There are times where I'll be outside and I'll look at the moon and think, "Wow, it's really cool that I know why it's this shape." I constantly reflect on my surroundings to understand the world around me better. I guess this sounds kind of like an oxymoron, but even if I'm not thinking about science, I'm constantly trying to look at how things work. "Hmmm, I wonder how that waterfall started?" Just little things like that. So science is a big part of my everyday life. I try to think about some little parts' role in the holistic view. This has been true ever since I began my degree in science. I think that sometimes people just stay in their little bubble and don't think outside of the box. There's just a lot more going on. Of course everybody's important, but, we are this earth, inside of this solar system, inside of this universe, which could

have even multiple universes and there's so much around that. I think it's very important to think about how great that is.

Making these connections to the bigger picture is very important to me.

People naturally want to understand the world around them. And I guess that's my drive: I want other people to understand how everything interacts. School can be very redundant and just another day. You just have your little self and do your little thing. It doesn't have to be that way. It can open your eyes to what really is out there. If you make it fun then you think about it.

This was something the teachers at the Montessori school did well in their work with students. It was amazing! **What the teachers did** was based on my view of

what I want to do. **The students** were doing similar things that middle school science students do and they were 6, 7, 8, and 9 **years old**. The teacher would start with the Big Bang and they really had a holistic approach. Everything had a part. That was a great experience!

Anyhow, there were no worksheets. Everything starts with a concrete thing. Like say you're doing math. If they're working on addition, they'll give you two beans and another two beans and then you actually get to count it rather than just memorizing. Everything you get to see up front. And then it becomes an abstract thought in your brain.

The lady in charge of the Montessori school is actually holding a workshop in a few weeks entitled "Earth Elements." It will focus on helping kids learn to see connections between everything: the Earth, the sky, and the atmosphere. I'm planning to attend and can't wait to get more ideas and hope to get students to

think about and see how everything fits together! I'll take any learning opportunity I can get!

So if you were to describe what you want to be like as a middle school science teacher... I want it to be fun and that's the bottom line. I think that's why most behavior problems happen. I want it to be constant. I don't want it to stop. I want it to always be, "Wow! Ok. I want to think about that but I need to think about this now." I just want it to be fun. And you said that's going to be hard for you initially. Why? Because I don't know exactly how to make it fun and not chaotic.

I'm excited to be working with middle grades students. Nothing really stands out to me about my own experiences in middle school, but I did have a very influential chemistry teacher when I was in high school. She was that teacher where you could go up to her and say, "I feel like crying. I can't do my work." And she'd be like, "Here, have some coffee and then do your work." You know and that's when I first really was able to understand down to the smallest molecule to this big picture. That opened my eyes to the world of science. I was able to connect it in that class. The hands-on experiments were what allowed me to connect it: "Oh that's what a chemical reaction really means." You can see that this and this reacted to this. I can actually see it. So, she did a lot of hands-on.

So, I guess that made you understand it? Because I remember distinctly a high school chemistry class where we did lots of hands-on activities and I was a good student and I would leave thinking, "I don't really know what that was supposed to be about." I got the right results, but... You didn't get it? Right. Can you

think about anything specific about them that really helped you understand them? You know, I don't...now that I know what inquiry based experiments are...I don't really remember. I would be interested to look back on them, but I think she gave us a lot of independence. I mean we never really made lab reports, but we had to formulate our own hypothesis. A lot of it was more of an independent kind of study. So you did know exactly why you were conducting this experiment. I want my students to be introduced with a problem and come up with a solution independently, rather than being given explicit information to apply.

Anyhow, getting back to middle school, I think I like working with middle school students because at this age you still have more of an impression on your students and can really influence them for their future. Have your interactions with the students here confirmed what you're thinking? Yes and no. Because they're going through their pubescence. It's an odd age. So you can have a role. You just have to be very careful in helping them mature and become their own person. I think they're more confused about themselves in middle school than they are in high school. They may not understand the joy of learning or respect. That can kind of flash out at **the** teacher. I definitely have experienced that with some boys. [laughs] Do you want to tell me about that? [laughs] Last semester, I was being observed in Mr. Radon's class, and there were these two boys: They weren't screaming or cussing. They were just being disrespectful. I'd ask a question and **their response** would come out sarcastic or they would say the same answer over and over again. And you just have to breathe and chill. Later on I thought about it and **realized** that's just them. They want to have the attention on them and not on me. So it wasn't personal, it was just wanting to be in the

spotlight. This experience really stands out to me, because I realized it's not all peace and love in the classroom [laughs].

That does remind me, though, that I want to be sure my class isn't quite as chaotic as when I did that activity in Mr. Radon's class last semester. I did a lab where they were cleaning up an oil spill and I had to turn out the lights. I didn't know what to do. And I turned out the lights and it worked for a split second and I'll never forget that moment. So you turned off the lights, they were quiet for a split second and then? And then it was like, "Why is she turning out the lights? How old are we?" I needed to tell them something and nothing was getting them quiet and I cannot scream and I was like "Oh my gosh, what am I going to do?" So I just turned out the lights and I was like, "Look, you all gotta be quiet. I have to tell you what to do so you can get something out of this." And then it was quiet. Your university supervisor told you they were learning a lot, so what made it so that you didn't feel like they were learning? Because it was chaos! I mean some of the groups weren't taking it as seriously as they should have. Give 8th graders a tinfoil pan with sand and water and gravel and oil and a bag of goodies like toothpicks and cotton balls. It was a really cool experiment. But it was too much. It was almost like I gave them too much freedom. And even though they learned, I felt like I didn't have control and that's why I got upset. I remember looking over and this girl who even told me before I taught my lesson, "Oh you're teaching tomorrow. I'm going to listen to everything that you say." I mean a really sweet girl. I look over and she has this entire soap bottle just going like this [hands squeezing soap bottle all over the pan with lots of soap coming out] and it was just this huge soapy mess. Someone I didn't think would be the trouble-maker and I had to say, "Ok, thank you. You're done." This was my first

experience with this type of activity and it completely bombed!! Middle grades

students associate labs and hands-on activities with free time.

I did have a really cool experience working with a middle school student last semester during my practicum. There was a girl who was very smart, quick and, on top of her game. And the class took a moon phase quiz. And she got her quiz back and did awful - got maybe one [question] right. After class she came up to me and said, "Ms. Byrd will you please meet with me tomorrow? I really want to go over this with you." I didn't administer the quiz and that meant so much to me because she wanted me to help her. Had you taught that unit? No, I didn't have anything to do with it but she wanted me to help her. So I met with her the next morning and we went over it and it was a great positive interaction. She was probably one of the closest students that I had because we had this one-on-one interaction and I taught her something that she didn't understand. And that was really rewarding.

This reminds me, I've been thinking a lot about how I can send the message to students that I'm their teacher not their friend or their buddy. I think it will be less distracting if I wear my hair up in a ponytail. I'm here for business. Every day I observed Lilly she wore her hair up in a ponytail.

I'm also a little nervous about something Dr. Smith reminded us today in a meeting, especially since I have just spent a good bit of time in a Montessori school. He reminded us that we need to be very reserved in how we express our affection to students. And I'm a very warm person so I have to remind myself to keep that to myself. I can't show too much emotion and I'm worried that I'm going to cross a line that I'm not

supposed to. That's my main concern, especially coming from the environment that I was in, which was very open arms. At the Montessori school you didn't have to worry about your boundaries or what you said. Here it's completely closed arms. I feel like I have to be like this [folds arms]. If I were going to help students, my personal instinct would tell me to put my hand on their shoulder to let them know that I'm here to help. But I feel like I shouldn't do that because I don't know what their boundary is. I don't want to make them feel uncomfortable or seem yucky [laughs]. I'm not like that! You know? I have to be very conscious about that. **I certainly don't want them to think I'm some sort of** sexual weirdo.

So do you assume because Dr. Smith told you that, that's the way you need to be? Well, I mean I'm not going to hang all over students or anything, but I think that if I have my own classroom and you get to know me as a teacher you'll know that if I put my hand on your back I'm here to let you know that I'm here. So it just takes time.

I hope everything goes well during student teaching. Today, one of my first days here, Mrs. Trahern had a sub and wanted me [to sit] in the back. I was bored out of my mind. The students were doing work at their seat and I couldn't take it. I have to be like this [moves hands to show activity]. Just sitting there for hours does not work. I spent probably half the day planning. I don't even know if I'll be able to use it, but I went for it [laughs]. We're talking about the atmosphere and the worksheets they're doing are about the Coriolis effect. I wanted to find something visual for them to see what the Coriolis effect is, so I talked to Mr. Radon and **got a great idea that** I thought was cool. I found something else **where you** put flour on a globe and then you spray it with red food coloring in water and it shows the dispersion and how it's not straight. So I'm excited about that. I spent a lot of the day thinking about how to

demonstrate Coriolis. I would like to do **the demonstrations** I found tomorrow, but I don't know if I'll be able to.

My cooperating teacher and I don't seem like we're the best match for each other. I don't know if she feels very secure with me being in front of the class yet. And I don't know if it's me or if it's her. **The other day when the substitute was here she wanted the substitute to teach the students rather than me.** And I didn't know if it was me personally and that she was just [thinking] I shouldn't be in front of the class or if she just wasn't ready for me to do that...just through experience, because she's had a lot of mentees. So she told you today, "there will be a sub here and he'll be up there and you just hang out in the back?" Yeah. And I took it personally and I know that was kind of silly but I told her, "It's ok." She was like, "No, you're to observe this week." So I'll probably be glad in the long run. She probably, I mean I'm sure she knows best.

Another thing that I've been thinking a lot about is a conversation I had with Mrs. Trahern a few days ago. I'm not sure if what I want to do with the students is going to work in Mrs. Trahern's classroom because she told me she doesn't do a lot of group work, - pretty much never. Thinking about yourself and who you just told me you really wanted to be what are you thinking about that? I'm starting to wonder if it's going to be a problem. So, I don't know if she'll advise me to do seat work if I'm being observed and is more open-minded to me doing group work when I'm not being observed by my supervisor or not. So do you see yourself trying to talk with her about what you want to do in the classroom? Um, I don't know. That's kind of why I made a lesson plan

today. I'm going to just put it on her desk just to see what she's going to take. ...,because she's going to teach tomorrow. It's not like I'm going to do it. I tried to keep it pretty reserved. It was more just demonstration. They are going to stay in their seats, but I mean, I've only been here a couple of days, but I haven't seen any demonstration. It's been mostly walking around with the book going over what's important. So, I'm not really sure yet.

Well, Mrs. Trahern did end up using my lesson plan, even though she didn't want me to teach what I had planned. Mrs. Trahern did ask me to plan a review game today. I was excited about it and told her I wanted to lead it. She agreed. I think this was a hard decision for her. She seems to be having a hard time giving up control.

Lilly called me today on the way home from school and shared the following: I sacrificed my first lamb today. Mrs. Trahern left the room to go to the office. As soon as she left, students started talking. I asked a student for his agenda, which is the book Mrs. Trahern signs when students misbehave, and immediately the rest of the class got quiet.

I've been thinking a lot about how to conduct class. I really don't want to yell at students. Mrs. Trahern will probably be a good role model for me in this regard. She's very light spoken and I haven't heard her scream or anything like that, so that's a good model. I've started trying this out when I'm working with students. When I need their attention, I ask them calmly and then wait patiently for them to get quiet.

Although it usually takes them a little while to get quiet and focus up front, they usually do so in a reasonable amount of time. I'm still wondering if this passive approach will work or not. I maintain aggression is not the solution for me.

Finally, Mrs. Trahern is starting to let me get more involved in class, but she's not very organized and always changes her mind at the last minute, which is frustrating. She told me she wanted me to teach Section 3 tomorrow, on natural disasters and mentioned that I might want to use an article on Hurricane Katrina. This didn't make much sense to me. Why would I teach them about hurricanes when they haven't even learned about thunderstorms? I went ahead and planned a lesson on natural disasters, but did not focus on Hurricane Katrina. While I was teaching it, Mrs. Trahern was running errands and was constantly in and out of the classroom. I wish she would let me know how I could improve, but she doesn't offer me any feedback. I wish she had more resources to share with me. I don't really feel like she has too much to offer me in terms of my learning. Student teaching is a big deal to me and she's not taking it as seriously as I am.

I was at a meeting today with Mr. Radon, who was my cooperating teacher during my practicum. I loved working with him. He's a great teacher. Seeing him today made me wonder what I should do because I really want to get ideas from him, since he has tons of great resources, but I really don't want Mrs. Trahern to

feel like I want stuff from him and not from her. As long as I don't go out of my way to get resources from him, I think it will be ok. I just don't want Mrs. Trahern to feel badly.

I watched Mrs. Trahern talk straight from the book and ad-lib as she went along. I decided I should try this. However, it didn't go very well for me. I don't think it's a good idea for me to do this: I don't have the confidence and experience to do this yet. I ended up second-guessing myself in front of the class, which just looked bad.

I had a positive experience with one student who is often in ISS today. He had a great day in class and was really good. After class, I told him that he had done a wonderful job in class and that he could do this same thing every day. Although he acted like he didn't like my compliment, who doesn't like to be told they're doing a good job?

I'm also thinking a lot about my role in terms of teaching the class. I think I'm especially aware of this because of my experiences at a Montessori school last summer. There are a lot of differences between public schools and the Montessori experience. So how would you compare what you saw happening at the Montessori school with what happens here in more of a public setting? It's night and day. It's really different. How so? Well, not that in a public school setting you're

necessarily a dictator, I think that you can control that, but you are definitely the starlet.

Everything's revolving around the teacher. And in a Montessori setting it's revolving around the learning. It's not, "Ms. Lilly, or Ms. Byrd. What am I going to do next?" I've had to adjust to being that center. It was really weird at first. I've had to really adjust. And I mean it's important because that's what they're used to.

The following is a description of a class Lilly taught on weather a few days later. Student comments appear in this font. **I began class today by asking students to keep a weather log for the next week.** She asks them to record what they see each day and informs them that they can look outside or use the Internet. They proceed to fill out the first box together as a class. Students are seated in rows and facing the front. She opens a weather website and informs students that the temperature is 62°. Students write the temperature in the box for Tuesday. Then she tells them that they need to draw a picture of what the weather looks like today. Well what does it look like? Lilly calmly goes to the back window and opens the blind. Students look over their shoulders from their desks but cannot see out the window. She tells them to draw clouds.

A day or two later, Lilly leads class with students seated in rows facing the front. Ok, so imagine this is the Earth. She grabs a globe from the front table and moves it to a desk in the front row so students can see from their desks. And here's a glacier. She puts a piece of paper on the globe. As Earth gets colder, the glacier gets bigger and it's going to start covering more areas of the land. As she says this, she moves the paper down from the North Pole towards the Equator. So if you look up here, are

we going to have land like we do or are we going to have ice if it gets colder? Ice. The interglacial period is when Earth's global temperature warms, the glaciers melt and sea level rises. So when the ice melts where does the water go? Into the ocean. Very good, Dan. She talks about areas that were once dry but will be covered with water during the interglacial period. Are we in a glacial period or an interglacial period right now? Students shout out various answers. We've been in one [an interglacial period]...it started about 10,000 years ago. She then shows a video clip from the Discovery Channel with many impressive images related to what they just talked about.

A few days later I had students read an interesting story about asphalt in America, which relates to our unit on rocks. I thought that would be a really cool journal to have them think about, because it's something they see every day. I mean it's asphalt. It's what you see.

Oh, speaking of rocks, at the beginning of the 1st period I didn't have those rocks with me and I kept on going like this [moves hands to indicate she's trying to grab something or pick something up]. They were working on their tests and I ran back there [to the storage closet] and was like, "I need granite and feldspar and quartz." It was really weird. Like I kept on going, "Who's confused?" Because I mean I was even confusing myself because I couldn't grip it. When all I needed to have was a rock and minerals for them to be like, "This is a rock, it's made out of this." When you just read it, it doesn't really make sense. And I guess it's just how it works in my brain. So I was thinking about how it would make sense to other people. And that was kind of a boring lesson, but just more visual things than just reading it. Cause I know I don't grasp that. I have to picture it. Just like the moon phases. Until you actually see how it changes. So I guess

that's what I'm trying to do: I'm trying to have them see that. I observed Lilly on this day and during class a student asked her a question that she did not know how to answer. She responded: **That's a great question. I don't know the answer to that.** Mrs. Lawrence, do you know the answer to that? You know, I used to know that, but I can't remember either.

Although I think an important part of being a teacher is teaching students in ways that don't shock them. I also want them to feel positively about their experiences in my class. But I am so boring! I know I said earlier that I didn't have a boring bone in my body, but I'm definitely boring. Wait, wait, wait, wait! Why are you boring? I mean, I've seen kids like, "Oh my God, I'm not going to do this." But, I don't know if it's me or if it's the work. Cause like when I planned that boring lesson I thought, "Gosh, this is so fun" because I liked the material. And obviously when you're 14, you don't care. But to me the material is really exciting, and of course how you present it. But I think to them **fun** means getting up and doing something. That's the way that I've interpreted it, because if they get to get up, it's a lot more fun. So your sense of fun and their sense of fun are different? I mean, I agree it's a lot more fun to get up and do something. But I guess that's the older person in me: I like learning about global warming.

I've decided to stop class a few minutes early a few times this semester to ask students what they think about how class went. This has been a really good way to check the pulse of the class. I want to have a good relationship with students

and their ideas and opinions are important to me, but I also want to have a well-managed classroom.

Just when I thought things were going better, I had a run in with some students after class the other day. Students were just really off this day. They weren't focused or nearly as productive as I hoped they would be. I kept some of the students who were the worst after class to sign their agendas. This did not work out as I had planned. It was disastrous having four frustrated problem students in the same room. The students all ganged up on me and wouldn't listen. I told them to get out their agendas so I could sign them. Students did this slowly and argued the whole time. One even refused to give me her agenda, claiming that it was at home. I then asked her for her phone number and she said she didn't have a phone and that her dad was in jail. I pressed her again and she repeated the same answer. I wonder if this is true. How awful! I was about to lose it and one student in particular kept arguing. I finally told him in a frustrated voice: Honey, I'm not arguing with you. I'm your teacher. I felt like crying after this confrontation. I think the worst part was that I did not feel like I had control because I was just taken to this point where I didn't know what to do, like I couldn't make a good choice. For me this was a chaotic situation because things were so crazy that I did not know what to do next. And then I had to continue teaching. So, I got over it. And I didn't cry!

At the end of the day Mrs. Trahern and I talked about what happened. I have really started appreciating my relationship with her. Even though I wanted to give up and really wanted her to step in, she didn't. If she had I would have lost my authority in the future and things probably would have gotten worse. Her silence gave me the authority to do what I needed to do. I never had another episode like this. It just kind of had to happen, I guess. I realized that sometimes I shouldn't let them have a chance to talk, because that's Montessori. It's like giving them a choice. It just doesn't work sometimes. Give me your agenda. Point blank. Just give it to me. If you have a problem with it then come to me after school.

I really wish I felt like things were going well consistently. Things seem good one day and not as good the next. It's just great to have someone to talk to. Tammy, my university supervisor, shared some really good ideas that I'm sure I'll try. She also asked me if I had anything else I wanted to talk about other than the lesson today. I told her that even though things don't feel great, I have learned so much. There's nothing like being here. I mean I feel like I have so much more to learn. I'm so excited to see how I'll be in years, because it's amazing how much I've learned in weeks. I mean I feel like a completely different teacher. I was also talking to her about what felt frustrating during class today. I guess I'm very self-critical. I was sure she was going to be like: "this is wrong. This is bad." I guess I was finding the bad things. Like when Christen [a student] was asleep, I was thinking, what can I do? I mean she didn't feel good. And I didn't want

to make her uncomfortable, but I also didn't want the rest of the class going, "Why does she get to sleep and I don't?" And I had to be fair about it. And I guess that's hard. **I think that's why I felt so frustrated with class the other day. It felt so chaotic!** What are the things that you want to have control over to make it not feel chaotic? Um, I'm still figuring that out. I think that's one of the hardest parts about teaching is it's all about what you think is ok and what is not ok. And that's what drains me is going should I call them on that, or should I just not worry about it. Is that being fair or is that not being fair?

Molly came to my class to videotape a lesson that I could show to my peers in the reflections course. I really wanted to be sure students were on their best behavior and after the warm-up told them [in an extremely calm, non-teacher-like tone]: You will notice Mrs. Lawrence is here. She's videotaping you guys. This is going to very important people. If you say something silly and foolish, very important people are going to see. I would make good choices. I can take it to the office. So please make good choices.

I don't want to be an authoritative teacher. I want my students to have a good experience in my class and to feel comfortable talking to me. However, I do want them to see me as a teacher, not as a friend. How do I find this balance? After watching the video of my class today I was so dissatisfied with it that I decided I would have Molly come to tape me again on a different day. It was awful watching myself give notes the whole time. I can't believe how boring I was. I am horrible at giving notes and I'm never doing that again. I had an interesting

experience in class the other day that seems related to this. I think it shows the other side of who I'm trying to be with my students.

I was going to allow students to work with a partner to answer a set of questions, which is something I haven't done very often. I told students that they could work with the person behind them to answer the questions. Students kind of grumbled about this, so I said: Ok, let's take a vote. How many of you would like to answer these questions on your own? 2-3 students raised their hands. How many of you would like to work with a partner? Does it have to be the person behind us? **I thought about this question for a second and then asked them:** How many of you would like to pick your partners? Almost all of the students raised their hands. Ok, I've never tried this with you guys, **but I'll give you 10 minutes to work with the partner of your choice. You need to be talking about the questions on microclimates, not about the Valentine's dance. If you do a good job, I'll be able to let you pick your partners in the future.** Students get up and move to sit next to their partner. They begin working fairly productively. Lilly comes back to my corner of the room and says with surprise: **They're doing it! This was really encouraging to me. Even better, one of my sweetest students came up to me at the end of class today and told me that class was really fun!** Lilly was on the verge of tears as she shared this snippet with me.

Do students see me as their teacher? I'm still not sure about this. I think when I have my own classroom it will be different, because I'm still kind of seen as not really their teacher. I mean I am, but it's not set in stone. I guess they kind of still see me as..., or maybe I still see myself and that comes across to them, as a college student. I've tried to maintain the same sort of interactions with those students as Mrs. Trahern had when she was teaching. This has not worked out exactly how I expected. I know that Mrs. Trahern's able to joke around with them, and so I figured that I would be able to do that, too. But, it's kind of kicked me in the butt. Like especially in that last class. In the last class it worked out really well 'cause they thought I was really fun, but now sometimes they don't realize that no means no. It's different with each of the classes. That third period class, you wouldn't have believed it was them today! "Yes ma'am. I'm finished. What do I do now?" It was just like clockwork. And Mrs. Trahern was gone the whole period. And she came in and they were just working diligently. In the third period it's always kind of like a roller coaster. And then this class [fifth period], they get away with whatever. Because I know that Mrs. Trahern did that. And so I kind of carried on like that because I didn't want to change it. So what do you see them getting away with? Most of the other classes weren't joking around like that near the end of the period. And they joke around more with me, which I liked in the beginning and now I don't really like. Yeah? How come? Because I think they're seeing me more as a friend than as their teacher. And with some of the students it works but with some of them it doesn't.

I think things might have taken a turn for the better today. I think today opened their eyes, because I really like this unit and I was able to communicate differently than I was in other units. They liked that and asked me questions. That was the first time I've had

someone ask me some type of question that was really related. And I really liked that. So I hope that that will continue.

I think students are responding better to what we're doing in class than they were previously. Although they aren't great everyday, they seem to be better behaved more often, look bored less often, and remembered what we're learning. They're doing really well on graded assignments and students who were not responsive in class at the beginning of my teaching are starting to participate. I'm trying my best to provide visual, hands-on experiences. I don't know if it's just time or when I'm on my own timescale how I'll play things out differently. Like, I would love to spend a long time on weather. I know they are still on weather [points at another teacher's classroom], cause that's something that you really can watch and really can understand. Cause it's in front of you. You know? Like you'll see physical changes and it will make more sense. But I still think that that's what science is. So, you don't feel you can do that because? I mean, I think that that is coming across, but I could be completely wrong. But I think that they were used to another way of learning and I didn't want to just throw **out** this other way. And it's, it's hard. It's hard to plan that. You know? I mean I told myself I'm going to plan one hands-on activity a week, 'cause I couldn't plan an activity like I'm doing on Thursday every day. I wouldn't sleep. And I'm already not. So, it just wouldn't happen. I would go crazy and broke. I guess some days you have to just take notes and read. I am constantly thinking about school. I don't know if there's a time when I'm not. I think that's good.

I can't believe how much I still have to learn. I left my reflections class really frustrated tonight. An assistant principal from a local school came and talked to us and he told us that one of the keys to success as a beginning teacher is not to smile for the first two months. I wrote that down and underlined it twice. I left my reflections course feeling really frustrated.

Also, one of the girls in my reflections class was saying how she likes to put the higher level kids with the lower level kids and have them help them out. I should try to do something like that. I don't know if I'll be able to do that now. I think that would make Mrs. Trahern a little nervous. She made groups and I'm sticking with those. She did that. I'm not going to change that. Oh, so they have set groups that they get into? Yeah. She went through them and like gave them groups. So I'm not changing that. I don't know if she would want me to or if she would even care. But I'm just not.

Today, I learned what makes me feel uncomfortable as a teacher. I was teaching a lesson on microclimates; I didn't even realize microclimates were important until I looked at the state standards! These standards provide an excellent framework for teachers. At first I didn't understand the purpose of always planning according to standards. Now, I can't imagine planning without them. Using the standards, I know I am teaching the students the skills and content they need to know. **Anyhow I was telling my class:** You can adjust your temperature in your house with your thermostat. You can also add humidity. Does anybody have a humidifier? A few students respond that they do not.

My boyfriend has a humidifier. Female student says, "Oooh," quietly. Lilly repeats: My boyfriend has a humidifier. It adds moisture to the air. I had never heard of one, but he has allergies and so if you put it in your house it can add moisture. As I was getting ready to leave after observing her in class this day, she stopped me and explained that she was uncomfortable with her mention of her boyfriend and explained that she wished she had not done this. I did not even want to say that! **That felt weird. I'm not ever going to mention his name again.** He's my boyfriend and it's like kind of gossipy sounding. If he were my husband, that would be different.

I've thought a lot about how personally involved I can be with my students in other contexts as well. My goal is not for them to see me as a friend, but to see me as a teacher and to respect me. However, I do want them to respond positively to me. I want them to know that I care. That's something that really bothers me about my peers in the reflections course. It seems like there are two sides of the room: One emphasizes that you need to be mean and strict when working with students and the other emphasizes the need to have caring relationships with students. I definitely fall into the caring relationship camp. However, I do think that I have to balance caring with being consistent. Follow through with what you say. I have found myself able to do this by approaching behavior problems in a positively assertive manner. I express disappointment rather than anger if the class or individual students act inappropriately. I discuss [negative] situations with problem students and explain why

specific behavior is unacceptable and does not meet expectations. I talk with the students to find out the reason why they act inappropriately. Although it takes extreme discipline to remain calm in any circumstance, I think it's paying off. Some students who were unresponsive and unproductive in class have started improving: like one of the female students. She was extremely unorganized and usually failed to pay attention or complete her work in class, but once I began working with her and encouraging her to do her work and do her best, she started working a lot harder. She even came to me and asked me if I could help her find a place to store her work because she didn't want to lose it.

On a negative note, I can't believe this meeting we had the other day. The 8th grade teachers all got together and made a bunch of rules that needed to be followed. They had a big meeting about it. I told myself I needed to be more, what's a good way to put it, more, I don't know, not sophisticated, but I guess I need to be more strict is I guess a good way to put it. I need to be more rigid. Yeah? Cause I mean I kind of feel like I'm maybe too free-flowing. I don't know if that makes sense. I know when I was observing Mrs. Trahern there never really seemed to be like, "Ok you're tardy." So I just kind of kept on going on with that and that was nipped in the butt, "Like you have to close the door when the bell's supposed to ring and sign their agenda if they're late." So I've had to change that. And they can't go to the bathroom in between classes. They have to go during class. How do you feel about that? I think it's stupid [in a whisper – we're sitting outside in the school courtyard]. But, you know, whatever. Were there any other teachers that weren't excited about it either? Well, I mean, Mrs. Trahern really wasn't. And when we first started doing it I was like, "I think

this is stupid." And later on I came back and **to talk to Mrs. Trahern about it** I was like, "I'm sorry. I really had no reason to say that." Because some of the teachers just wanted it to be more organized.

I guess teaching every day is hard and just dealing with what happened last week - about, "well we have to change this now." Learning how to deal with politics. I did not handle that very well. That was shocking to me. I had to call my mom and talk to her about it. And she's like, "Lilly, you've got to keep your mouth shut." And I was like, "but that's so stupid. I have to walk 14 year olds to the lunch room." She's like, "Yeah. You have to." And I'm having to learn to deal with it. It sounds silly, but I just think there's other ways to deal with that. And you have to...you have to.

Do you feel like there might be an environment that might be a better match in terms of your vision of what you want to be doing? Well maybe. But, you still have to go along with everybody else. I don't know if that will be different anywhere. I really don't. Because you have to have rules because some people don't follow them. So, that's reality. Even though I wish it wasn't.

I've noticed recently that I've had to differentiate when it's appropriate to be part of the student conversation and when it's not. You know, like I don't want to know too much information, but I also want you to know that you can talk to me. And I had to really think about that in perspective: They're talking. It's loud enough that I can hear. Should I join this conversation? And then I **would** usually opt not to. What's personal? What's too personal? Where **do I** draw the line? Even some of the other student teachers, they said they would talk to the students about their boyfriends and girlfriends. I mean I don't really want to know. I never

even read a note. I know some teachers read notes. I don't want to know. I don't care. I mean, if you're hurting yourself that's different.

I'm still struggling with how to keep a well-managed classroom. I feel like a lot of my energy is dedicated to managing my class well. Today in class students were decorating the covers of their mineral journals. I just felt like this class was chaotic and I'm not sure whether or not I feel ok about how it went. I don't really know what I could have done to make it feel less chaotic. I probably should not have gotten the stencils. That caused more distraction by having somebody at somebody else's desk and [pause] I mean I guess, yeah, they should have been sitting at their desk just working on their journal. So why do you say that? Well other classes today were able to work on their journal and just kind of casually talk to people around them. And then this period there was a lot more movement, but they got the work done. So there's kind of a different way to think about it. I do want it to be fun. And we're not doing rocket science. We're making a journal, you know? It's fun to do: color and talk to your friend. I like to do that. So I didn't want to be real stringent like: You need to be sitting down working diligently on writing/drawing a mineral." You know? So I didn't want to be real rigid...it just was kind of a social hour in my class. [laughs] Are you ok with that? Yeah. I'm fine with that. I mean it wasn't a big deal.

But I guess I still kind of was the starlet, because I had to be in control. I wanted to know that I always had their attention and I think that maybe I need to learn how to kind of let that go without them being crazy. I don't know if I can. I was constantly worrying. I need to know that if something happens I can tell them they need to stop. It can't get too out of my fingertips. I don't want to be a bad teacher. I don't want to be known as the teacher who just lets her kids do

whatever. You know? And that's what a bad teacher is in your mind? Yeah. [laughs]. I mean if they just let their kids do whatever - don't have control over their children. I think you should be able to have control of your classroom. And I guess I'm always worrying about losing that. And I don't even know if I have it...

I've had some other interesting things to think about recently, also. People are starting to make comments about how I wear my hair. Everyone has started asking me to wear my hair down. And I even had a teacher ask me: Mr. Mackey he was like, "Why do you always wear your hair up? Do you wear it down when you're at other places?" And I'm like, "Yeah." And he was like, "Well do you just feel like it's inappropriate?" And I was like, "Yeah." I don't want to distract students and I want them to know that I'm here to focus on learning.

Also, I've started to feel better about being able to interact affectionately with students. I have started realizing that this very affectionate side of me is able to come out since I established Ms. Byrd's not a sexual weirdo, you know? It really is all about just like feeling comfortable. I've never had anyone look at me like, "Why are you putting your hand on my shoulder?" or something. I never had a feeling that someone was like, "Get off of me." And you know who needs affection and who doesn't. There's some kids who if I got near even to say get up...it was like just don't even go there. But in the very beginning I was very conscious of never crossing anyone's barrier. And then once they got to know me better and just kind of know me as a person then I was able to show that other side. So...I didn't ever feel like, "Oh my gosh." They think that I'm trying to...

One thing I feel sure about is that I want to establish a safe learning environment for my students. A positive learning environment needs to be established in order for students to feel comfortable discussing and expressing ideas. I attempted to develop a positive learning environment by modeling the respectful way of listening to other peoples' ideas. I would carefully listen to students' ideas and encourage the students to listen to their peers' ideas as well. I learned how middle school students believe making fun of other students is "cool." Because I want students to feel comfortable in my class, I had to deal with the issue of students hurting other students' feelings directly.

An episode that took place in class today made me feel more confident in myself as a teacher. There was a class-clown, Bozo, who made fun of other students during class. One day we were having a discussion after we tested ten different objects to decide if each was a mineral or non-mineral. A girl in my class was explaining her evidence for ice being a mineral. Bozo responded to her answer with an unkind comment, and the whole class laughed. I asked Bozo to go to the hallway, which he was not happy about, complaining the **whole way** out the door. I discussed with the class that I do not tolerate students making fun of others or hurting other students' feelings. I asked the class to think about how they feel when someone makes fun of them and if they want to make others feel that way. Once the students began working independently, I addressed Bozo in the hallway. I explained to him that even though he was attempting to be funny, it was not humorous, but rather unacceptable behavior. I explained that people could be affected for a long time by mean things that people say. I asked him to think before he speaks and to exercise respect in my classroom.

I was glad to learn I practice what I preach involving people's feelings. I want my students to always feel comfortable in the classroom. I proved to myself that I would not overlook circumstances that may jeopardize a positive learning environment. Although Bozo took a week to get over me calling the shots, we eventually developed a positive relationship. Some students have tested me multiple times, but as soon as the students understood that I respected each of them, respect was actually reciprocated.

My opinion on my relationship with Mrs. Trahern has changed since the beginning of our time together. I know at the beginning I was saying, well I need feedback and she hasn't given me any. And **now** I kind of like that **she hasn't**. Our relationship isn't like, "I can't believe she said that. How could she say that about me? Why would she think that? Is she constantly judging me?" I don't feel like that, which is really nice. I feel comfortable.

[in a whisper] Planning wise I'm going to **Mr. Radon**. I've gone to him just asking if he had materials because Mrs. Trahern doesn't even know some of the stuff we have back there. I feel like I am planning a lot. I'm going to **be teaching** three chapters and I thought I was just doing one **originally**. There was never really like, "Ok well Ms. Byrd's going to teach a period." It was more like, "Ms. Byrd's teaching today. And I'm going to sit back here and keep my mouth shut. She's done a good job of letting go. I think it was kind of hard in the beginning, but now she's kind of at that point. Like today we were late for lunch because it was my fault. And I had a teacher come in and be like, "Where are you?" and **Mrs. Trahern** pointed at me and I was like, "Oh, sorry." But I mean, I needed to learn that. And I was thinking, "Why didn't she tell me we

needed to go?” And then I thought about it, “Well, can't be late. Gotta learn somehow. Gotta get in trouble by another teacher.” I now have a helper. She'll tell me when it's 12:30 every day.

Things feel like they're starting to come together for me. Students seem to be responding well and respecting me. I think they see me as a teacher now. I also feel like I'm starting to be able to be who I want as a teacher. Oh yeah! This lab was really cool. We did a sedimentary rock lab where they had sediments. I went to the intramural fields and I got bags of clay and gravel and sand. Students then each received a cup with the different sediments. They observed the sediments with a magnifying lens and identified similarities and differences between the grains. Afterwards, we mixed all three types of sediments with water and stirred them up to see which sediments settled to the bottom of the cup first. Students came up with reasons they believed the larger sediments settled out first and we linked this process of settling of different-sized sediments to layers in sedimentary rocks. I finished the lesson by asking students to think about why grains in sedimentary rocks are usually rounded and not sharp. Mrs. Trahern decided to give me feedback after class this day using the middle grades evaluation form. She showed me that she does know a lot about teaching that day, though. Not just teaching jargon, but she was like, "Yeah, you pointed out these things that relate to life, which were real discrete. And she picked up on that and little things like that.

A few days later...**GREAT!** What is Dr. Smith doing here? And on the day Molly is videotaping me for my reflections class, nonetheless. Why didn't I know he was coming? I am *SO* nervous. I'm pretty sure he's going to find something wrong with what I'm doing. Just having him in the room makes me nervous. Oh well, what we're doing went pretty well first block and I know this isn't the most horrible activity I could be doing with students. I know what I'm talking about, so here goes nothing.

I had students begin with this warm-up: Give a brief description of how cookies are made. Consider how the mixture of raw ingredients is like sedimentary rock. Describe how cookie dough "changes" when it is baked in the oven. **After the warm-up, we took some notes.** I used a guided note format, which I had never tried before. The students seemed to do better with this than regular notes. Then, I had students model the formation of metamorphic rock using clay. I read them directions and we completed each step together as a class. This activity went pretty well, all things considered: Molly, Tammy, and Dr. Smith all came to observe and I ran out of Play-Doh half way through the day. Fortunately, Mrs. Trahern had some extra in the storage closet. On a positive note, the students had some really great things to say about the difference between banding in sedimentary and metamorphic rocks. I think having an opportunity to "make" a metamorphic rock was a much more

concrete way to understand how they form then talking about this using only the description in the textbook.

I met with Dr. Smith about his observation of my class later that evening. What a disappointment! To hear you're not the worst....it was like, ok, well I know that, but I actually thought that I was ok. He told me that I should encourage students to do more thinking rather than just accepting what I said as the teacher. He did not like the guided notes we did and asked if I had gotten the idea from my teacher. I wanted to tell him that I had been working long and hard to come up with ideas any way I knew how and that I was getting nothing from Mrs. Trahern, but I didn't and listened to his comments. Molly, how else am I supposed to do it? He's right. I know he's right, it's just that I didn't think I was that type of teacher. I've spent hours and hours planning and trying not to be that type of teacher [the type whose students just accept everything they say without thinking]! I'm really frustrated and exhausted! I can't wait to watch the video of myself from today. I feel like an awful teacher.

After school that night I watched myself on video. Gosh, Dr. Smith is right! As I watched the guided notes section, I cringed. When I watched myself just regurgitating facts I got...I don't like that! I mean I literally was like I can't even watch myself do that. I don't want to do that. I have to figure out a way where that's not even part of my classroom. I don't want that at all. I think it's awful. I don't think that's very me. I mean telling someone what to think. I just don't like that. And I didn't really think of it that way. But that's kind of the way I went through

school. So that's kind of what I took. And that's what Mrs. Trahern would do. And I didn't have time to think about inquiry. I was thinking about sleeping for 3 hours.

As I thought more about why I had originally thought these notes to be a good strategy and why I liked them a lot less after watching myself and talking to Dr. Smith, I think that the guided notes made **students** more, not excited, but more willing to write the information down. Probably because they knew that after they did that they were going to be able to do something else. Although the majority of the students were taking notes diligently, it appeared incredibly boring. There was little student-teacher interaction, and no student-student interaction.

Although I was not particularly satisfied with this aspect of my video, I was pleasantly surprised to watch how I managed the classroom. During the hands-on portion of the activity, when they were trying to pull the Play-Doh apart, the **students** were acting like fools. But I was so calm. How was I so calm with all that chaos?

About a week later, Lilly called me to share more about what she was thinking about Dr. Smith's observation: I don't know what **Tammy** said to Dr. Smith to make him come, but in the long run it was helpful because I need to think about that. I do need to concentrate on not just giving them information. I've been thinking a lot about how I could do what he's saying. Especially after watching my video I know what he means by I'm not the best and I'm not the worst. The story Dr. Smith told me when we met has really been a good thing for me to think about. He was telling me about going to a trail by the river with a friend. While there, they found this big, big rock that looked like it didn't belong

there. His friend guessed that a volcano brought it there. I saw that same rock while I was running the other night and that is such an unlikely explanation. **This made me realize** there's such a difference between hands-on labs and inquiry labs. It took me until that moment to realize the difference. I realized I have been incorporating "hands-on" activities to help the students visualize concepts, but I have not been incorporating inquiry-based activities.

It is important to me to facilitate student thought! You should have heard the first day of class in Dr. Faust's class [teacher of the reflections course]. He came in and told us, "You don't have to tell me that inquiry is the best thing. I know you can't do it all the time." I raised my hand and I said, "I wanted to be that teacher before I even knew what inquiry was." I hoped to emphasize the importance of learning to my students by expressing my passion for science in my classroom as an advocate for inquiry-based activities...

Anyhow, I've thought back on what I've done during my student teaching and I did have some inquiry labs even though I didn't even realize that they were. We did a crystal growth lab when we started igneous rocks. And I presented them the problem: how will the temperature affect the rate of the cooling? And we did it. We watched how the crystals rapidly cooled and were real sleek and tiny when it cooled at room temperature and then the ones that cooled on a hot plate took a very long time and it was like real powdery because all the water had evaporated. And later, when I would go back to that lab I'd say, "Well, you know if it cools under the Earth and it takes a long time to cool, what's it going to look like?" And they would say, "It's gonna have real small grains." And I'd be like, "Well think about it. Think about the lab." And they'd be like, "Oh yeah. Oh yeah. It's going to have real...it's going to have real big grains." And

so the inquiry does work. If I thought about that a little bit more I could have made it even more influential I think.

What is your description of inquiry? Inquiry-based learning allows students to question phenomena and scientific issues in science through exploration. I believe students learn how to learn through inquiry-based lessons, as well as understand concepts on a deeper level. Using inquiry-based learning strategies, students can apply characteristics and content of science to their lives. Presenting them a problem, or, you know, why would this happen and letting them find the answer themselves. Rather than me just telling them what it is. Like, "Ok, big grains form like this." You know and have them write it down. And instead they were able to figure that out and see it, - connect the concept. I didn't tell them that in the beginning. They figured that out in the end by themselves. **Inquiry activities are more beneficial than hands-on activities because you can improve** the quality of knowledge gained.

That reminds me: when we learned about inquiry at the university I felt like inquiry was fake. It seemed like it was so lat-ti-dah. **We did an activity in the class that I guarantee would never work** with kids. Honestly I didn't learn anything from doing it. We talked about it in theory and we were supposed to apply it but we never really applied it. I did do one lab **during my practicum**: the oil spill lab. That was the first experience that I've had with it. It completely bombed.

I can't believe I'm almost finished student teaching! Thursday, we wrapped up the rocks and minerals unit. The students were to compare candy bars to rocks. They sketched and described seven different candy bars and compared their data with rock samples. It was fun

and I was able to assess what the students gained about rock identification. Lilly served as more of a facilitator throughout this lesson than she had in the past. The following is a brief synopsis of the ways in which she interacted with students throughout the period. After Lilly got students working in groups of three or four students, she circulated through the room asking students questions to get them thinking about the characteristics of the candy bars they were observing. What are the holes? Air holes. Air holes - that would be a good description. What kind of grains does that one have? Do they look big or small? She moves to a new group and helps a student get back on track: Write some descriptive words. OK, what does it look like on the outside? Ok, Let's look on the inside. A student says something that I can't hear. Ok. Let's write that down. Lilly moves to a new student and prompts: Is it smooth? Is it rough? What does it look like on the inside? What kind of grains does it have? Are they big or are they small? She asks a student what the Hershey bar looks like. It's dark, smooth, and fine-grained, like shale. Lilly was so excited she started crying. I was having a hard time figuring out why she was on the verge of tears and why she kept looking up at me and smiling. When she came over she explained that she was so excited that this particular student, who had a challenging home situation, was making connections between the candy and the rocks. He understood what they were doing and gave a really great answer.

Students worked very productively for the majority of the period. Some groups collaborated well. In other groups students worked more independently. Lilly continued to move through the room prompting students: Was it rough? What

did it look like? How do the grains look like they're stuck together? Stuck. What's the scientific word? Squished. Another word? Cemented. She moves to the group next to me that isn't being very productive. A student asks, "Are you serious? You didn't tell us that." Lilly responds in a very understanding tone, "Well I'm telling you now." The student seems to respond well and gets back to work.

At the end of class, Lilly brought the group back together and they went over what they had come up with as a class. Before starting, Lilly waited for students to get quiet. It took them a minute to get quiet. Multiple students sssshhh'ed their peers in order to help Lilly get them quiet. Thank you. Ok, looks like everybody has guessed their rock. A student announces he thinks his is a schist. She asks students to raise their hand as to whether they agree or disagree. Most students disagree. She asks students for other ideas and asks them to explain why they think this. Why do you agree? **What** is your evidence? Who disagrees? Why? OK, number 4. Somebody I haven't heard from. A student says he thinks it's a schist. Why do you think it's a schist? What did you write? She encourages multiple students to contribute and share their observations for each candy bar as well as their rationales for selecting the rock that they did. She hands the student who is defending his answer the rock that he chose to compare it to his written description.

I thought this activity went really well also. For the most part, the students acted as expected. There was candy involved and they were in groups. Except for noise, nothing got

too out of hand until 5th period. The teacher's pet, a student who receives special privileges throughout the school, is in my 5th period class. This student is sweet, but doesn't know when to be quiet. We have a great relationship. When we started talking about rocks and minerals, he brought in his entire rock collection (extravagant) to show me his favorite gemstones. He even gave me a pair of turquoise earrings.

During the lab, I constantly asked the student to stop talking to his neighbors while I was giving directions. He would smile, apologize, and a few minutes later would continue talking. In the middle of the lab we went to lunch and I spoke to my mentor teacher and told her this student was driving me crazy. She understood and explained he doesn't understand consequences. When we got back from lunch, I was trying to get the students back into the groove, which is difficult after lunch. I was still asking the student to stop talking, because I couldn't compete with him. Next thing I knew, I looked at him and in a stern voice said "GOOD BYE! Please go to the hall!" The students were stunned. Not only did I raise my voice, - I rarely raise my voice -, I raised it to the student who NEVER gets in trouble [Lilly's emphasis, not mine]. I had no more problems the rest of the day.

This evening I decided to write a letter to Dr. Smith about his observation a few weeks ago:

Dear Dr. Smith,

I want to thank you for the conversation we had after you observed me at Stoney Hill Middle School. Your constructive criticism was information I have been waiting to hear. I feel the only way to improve as a teacher is to be aware of what needs improvement.

After reflecting on our conversation, I have a better understanding on what I want to change. I have been preoccupied with classroom management, school policies, planning, and grading, and have not taken time to evaluate ways to improve each lesson. I appreciate you reminding me to reflect after every lesson I teach and think about improving the learning environment of the students.

I realized I have been incorporating "hands-on" activities to help the students visualize concepts, but I have not been incorporating inquiry-based activities. I want my students to be introduced with a problem and come up with a solution independently, rather than being given explicit information to apply. I revised the clay metamorphic rock lab after careful thought and consideration and developed an inquiry-based activity that allows the students to investigate how metamorphic rocks form. I have attached the new lab. Please give me feedback and let me know if I am on the right track to helping my students "think." Again, thank you for the advice. I hope I am a better teacher the next time you observe my class.

Sincerely,

Lilly Byrd

We talked more about this episode during our final interview: All right, so that conversation with Dr. Smith...tell me a little bit more about that. Well the whole student teaching was definitely a roller coaster, where I felt confident and then I would feel really low. And that caught me off guard because I was at a real high point. I was seeing progression. I was getting back good grades. I was seeing changes in students. And then to hear you're not the worst. I know that, but I actually thought that I was ok. When I thought about it I do need to think about the holistic approach to teaching. It's not just about fun and it's not just about presenting the material. There's a lot that needs to be thought about and I was just kind of

concentrating on the basic things when I needed to think about everything. And I wasn't. I was thinking: they need to respect me; I need to make sure that I don't have a typo. I had classroom management and content on my mind constantly. I would think about those things rather than...I don't think I did do enough reflection on how could I have made this better. So he made me think about that again, which I needed to hear.

That reminds me of a great lab we did. It really was a great lab. At the end of the day, Mrs. Trahern was even like, "Ms. Byrd, those kids learned so much today." It was really cool. I wasn't really sure how to do it, but everyone had a group. Everyone had a role. And so they were all in pods. And then we just briefly talked about how to identify a mineral, like kind of went over the streak test. Kind of went over the hardness test. And then I just gave them the stuff. And then one person was the leader. That's why Sierra was so happy, because she was in charge of keeping everyone together. And then there was a material handler and a recorder. They had the mineral and their material and they had to write down the color, the streak color, if it's harder than glass, and then figure out **what mineral it was**. And then they had a table that let them look at all those characteristics and figure out what it is. And then after 5 minutes I would ring the bell, and they'd switch and get another mineral. I think that's when I got to really know them on a different level, because I was letting them take responsibility for their learning. And I just gave them the stuff. And I want to do that more. I remember that whole day because I was so exhausted but I felt so fulfilled because I knew that that was really beneficial. And I went home and everyone had 100's and the next day Mrs. Trahern was gone and I handed their lab grades back. They all crowded around my desk in this circle, which they thought was so cool, and I would be like, "Ok, what'd you get for one?" And they'd hold up **the answer**. They thought it

was really fun. That was memorable. Why was this so memorable to you? I guess for the vision of the kind of teacher that I want to be. I was able to see that. You know, where it wasn't just fun because they were playing with Play-Doh. It was fun because they were learning.

Something that they really did not know about and they were able to do it and then succeed! The students learned more from the experience than they would have from just listening to me.

I've been thinking a lot about the aspects of student teaching that have really boosted my confidence and realize that the students' response to me and to what we're going has been my primary confidence booster. Reflecting on difficult moments and analyzing how I dealt with dilemmas helped me believe in my decisions and gain confidence. When I began grading students' work and observing progress in my students' success, I gained confidence as a teacher knowing I was helping students learn. When students who had given me problems previously began working hard consistently, I knew I reached my goal.

There were many students that tested my patience when I was teaching, but one female, who I will refer to as Sierra, made a lasting impression. Sierra was suspended more days than she was in school. She would sleep or talk during class with no interest in learning. I never yelled at her or embarrassed her, although there were times when we had behavioral discussions and she refused to respond. Sierra also spent a lot of time in other teachers' rooms for being disrespectful. For a mineral identification lab I implemented, Sierra was chosen as her group's leader. Every student in her group stayed on task the whole period, displayed enthusiasm about the experiment, and had thought-provoking discussions. At the end of the lab, I awarded the best-behaved group with a piece of candy. Sierra's group was by far the best-behaved group during the lab. As I

praised the group and Sierra, I watched Sierra smile for the first time since I met her. From that moment, I developed a relationship with this student, as she began asking for help, staying alert, and respecting others. Reflecting on this particular circumstance was a concrete confidence builder.

Golly! The complaint! They already complain, “Ms. Byrd, you give us so much work.” I guess I’m kind of proud to be known like that. I don’t want to be known as the slacker teacher. I don’t understand how a teacher can do that [do the same thing day after day and year after year] and feel like they’re doing their job. I’d be bored out of my mind. I have to be doing something or I have to fall asleep.

One of my students said something really great the other day. Her comment stands out in my memory. During a conversation between a gifted student, my mentor teacher, and me, **we were talking about** teachers yelling at students to maintain order. The student explained how most students resent teachers that yell and use their “teacher voice” all of the time. She then looked at me and said, “Ms. Byrd, we all know you have a teacher’s voice, but you just don’t like to use it.” I was aware then that I could maintain a peaceful classroom without aggression, as long as I maintain consistency, honesty, and respect. I am thankful to this student who helped me grow as a teacher.

I cannot believe the last day is finally here. What a semester! I have learned so much and have grown significantly as a teacher. Can you think of any other moments, events, experiences that stand out to you? The last day. Cause I was able to...I wore my hair down. And I stayed in the room and graded and a couple of kids each period stayed in there to work and I got to talk to some kids on a more personal level that I was never

able to do. That was cool because I really understand their culture now. And that starlet thing...I've gotten over that fear. It's hard to give that up. I can see why some people never give that up.

Are there any other experiences that stand out to you that you're not proud of? This is kind of off, but when we had **that** team meeting about new rules that had to be implemented it [my negative response to these rules] wasn't noticeable, but I thought it was, because I even asked Mrs. Trahern and apologized. I thought that those rules were so stupid. And like, I need that to happen for me to think about, "Well, if you want to keep your job you have to abide by the school rules." But they were so ludicrous. And I even said something to Mrs. Trahern the next day and she's like, "Oh, I didn't even notice." So I don't know if it was evident, but to me it was. I should have been like, "This is the new rule. We are going to just do it."

Do you think that if you were not a student teacher you could have or would have responded differently in that situation? I'm glad that I was a student teacher. Cause I would have gotten in trouble. Yeah? Why? I mean I just felt silly telling 8th graders to get into a line. I think that they're old enough to do it without one. It seems like a dictator. I even had this one kid and he went, "Hail Hitler." And it was so true. It just seems like 6th grade, yeah. 7th grade, I don't know. But I mean, 8th grade? "Line up. Keep your hands to yourself." I don't know. I mean, I guess you have to have structure and it's the ones who can't follow the rules that ruin it for everyone. And that's kind of what I would fall back on. They'd be like, "Why do we have to do this, Ms. Byrd?" And I'd be like, "Well, some friends can't follow the rules." So, you know, literally like going back to elementary school. "Catch a bubble."
[makes a face w/ poofy cheeks]

So, in a future school I'm sure that's something you're going to see again. How would you see yourself dealing with that when you're a member of a team? I think you have to just do it if it's going to work, because you're on a team. Mrs. Trahern thought it was kind of stupid...you could just tell it in her voice. And I guess that's kind of what gave me the ok to be like it's ok to not be **excited about the rule**. But I think there's a way to go about **enforcing the rule**. I mean by the end of the year it wasn't so stringent.

So, I'll remember that. You don't want to make a spectacle out of yourself. I guess some rules are meant to be broken, but you do have to be respectful. There has to be some logical reason that they want that. If you were older and you had more experience...there's a big difference between someone like a student **or** a first year teacher **and more experienced teachers**. I mean who am I to say that this rule's stupid? What do **I** know? **I** don't know the difference.

Lilly also elaborated further on her relationship with Mrs. Trahern and how she had been able to incorporate group work into her instruction: I remember that near the beginning you really were thinking group work was something you wanted to do a lot of but you were really worried because Mrs. Trahern was like, "I don't do group work. You know, it doesn't work." How much did her idea play into your planning and thinking? We never planned together - ever. She would say, "I need your lesson plans," because that's what she always expected from the middle grades student teachers. So, I knew that I didn't have to type lesson plans. I knew that I didn't have to have a unit, but because she wanted me to I went with that. She didn't give me any information. She gave me a book. But she didn't give me any restrictions either. I just had to kind of wean them

into another way of learning, cause they were really used to just coming in, she would talk to them for 20 minutes, and then give them a worksheet. So I didn't want to shock them. And I could always tell, I think even near the end, she just got mad at me or was willing to get over it. She is one of those teachers who wants it quiet. I'm not really like that, but I wanted to respect that. So I would think about that: Ok, I did group work today, so I really shouldn't do it for the next couple of days so that she can have her peace of mind. And, near the very end I just said, "Whatever." I mean that last week we did group work that whole week and she was ready to tear her hair out! Was she really? Yeah. She would go into that storage room and close the door. That reminds me. The day after we had all those people come [the day after Dr. Smith, Tammy, and I observed and video taped her class]. I was just a nervous wreck. I thought: I know no one's going to come tomorrow so I'm just going to get a worksheet and we're going to do it. And I ended up doing probably one of the best labs ever. I started doing it at like 4:00 that afternoon, because I was just like, "I'm not doing anything." But I got rocks from each category. And made a chart and said describe its texture, describe its composition, or color, and identify it. We took them [the rocks] outside and put them on the picnic tables. And Mr. Radon even came out there and got into it like the whole day. **He even did it with his class** the next day. I thought that was really cool. **Anyhow**, half the kids stayed inside and did a worksheet that I made and then the other kids went outside. And it was probably one of my most favorite labs. And it was one of those days where I was thinking, "Ok, Mrs. Trahern needs an off-day. I need an off-day." But she got one because we went outside. So why do you think it was your favorite lab? Well, it was like a puzzle. I separated the categories. Like the metamorphic rocks you had to describe its color and you had to describe if it was foliated or not. And they would use

their book as like a guide. And I also found like a table so they had to use those parts to figure out how to identify it.

As she was talking about her relationship with Mrs. Trahern, Lilly also shared this story: There was a girl in my last period class. Her name was Anastasia. And on one of her quizzes she drew a razor blade with blood dripping off of it. And I asked Mrs. Trahern about it and she's like, "Oh. It probably doesn't mean anything." And I asked Anastasia and she said, "Oh it don't mean nothing." And later on down the line, I found out that she cuts herself and had this razor blade necklace. We had a confrontation at one point because she was just being rude and ever since that time I was like, "Look, you know you can talk to me. You know that I'm not going to say anything. You know that I'm going to be here for you." And she was like, "Yeah, I do." And ever since that point it was completely different. But, that was a dilemma. Should I carry this out? Mrs. Trahern made it seem real light. I didn't really want to seem like I'm going against her and take this to the counselor or whatever. But then I also felt responsible for this child's well-being. So that was a dilemma.

On the last day of her student teaching placement, Lilly received a nice note from Mrs. Trahern and reflected on her experience as follows: She wrote me a really sweet note saying that she learned from me and that I'll be a great teacher and I think that the impression that I had from her in the very beginning is completely different **now**. Because I know I was really kind of pessimistic. She's not like me at all. She's not going to agree with this. And I didn't think it was going to work. But she was very open-minded. She gave me the opportunity. Her slackness was ok because I took the slack. And at times I kind of resented her, but most of the time...**I even picked her son up from school a few times. I do feel**

badly for the students in Mrs. Trahern's class, though. I'm sure that they're just going to cram material and then they take the state standardized test. I guarantee you Mrs. Trahern's not going to teach them a thing about anything else. They'll watch videos.

In our final interview I also asked her to reflect a bit more on why she had felt so nervous having Dr. Smith observe her? Just him being there. And I think nerves come with if you're comfortable with what you're doing. I felt pretty comfortable with what I was doing. I mean it might not be the best thing but it's not the wrong thing. And I know what I'm saying is right and I'm not misleading students. I knew that if anyone was going to find something wrong with what you're doing it's going to be him. And, of course, he did. But, you know, he's the head honcho. He knows what's wrong. You know? Does he? Yeah. I mean...yeah. Why do you say that? Like why do you assume that he knows? Well I mean I would hope he would have his title for a reason [laughs].

I decided to question Lilly about this: Do you think that people in positions of authority are more knowledgeable? Do you usually take their ideas and accept them? Um, ok, no. Because he had an idea and I thought about it and took what I wanted out of it. What I would take is their experience, because that's something that I don't have. So, through their experience in the schools, you know I am going to take that knowledge, because that's something I don't have. I do have a naïve view of affection compared to him, who's been in the schools for 30 years. So, yes, I would take that as advice.

I kept in touch with Molly after student teaching was over. We talked on the phone and she helped me search for a job. Thank goodness for some time back with a wonderful university teacher. The last part of our reflections class has helped me

remember who I want to be in the classroom and rethink many aspects of who I am as a **teacher**. When I asked her to explain why she thought she lost sight of that or was unable to be who she wanted to be in the classroom she offered two possible explanations along with a lot of "I don't know." She said she didn't want to blame it on Mrs. Trahern, but that that's all she saw in what Mrs. Trahern was doing and, as a result, that's what she thought she should probably do. She emphasized that she didn't want to shock the kids.

Lilly and I went for a run a few days after this phone call. Near the end of the run, we started talking about education and Lilly explained: **I've come to realize there are two types of teachers. There are the types like Mrs. Trahern, who fill the typical teacher role and leave it at that and there are the other types who are all about the students and how to get the students to learn and be better individuals. I see myself in the second group.** I grew as a teacher after I reflected on the importance of incorporating inquiry into the classroom and I will always be conscious of the importance of independent student discovery.

Summary Model and Supporting Examples

As explained in “The Model” section prior to the narrative, Lilly made bids at three D-identities throughout student teaching (*respectful visitor*, *teacher*, and *good teacher*). The narrative section of this chapter depicted the manifestations of these D-identities as well as how the emphasis on these identities shifted over the course of student teaching. Although these D-identities were all relevant throughout her placement, she increased or decreased her emphasis on them depending on how confident she felt about whether or not her bids at these particular D-identities were successful (recognized by others) or not. Although the ways in which these different D-identities became relevant to her in negotiating teaching identity shifted from moment to moment, it is clear that each of these D-identities were highly influential in the decisions she made about how to enact herself in the classroom. In addition, the *teacher* and *respectful visitor* D-identities were certainly more prevalent near the beginning of her experiences.

Initially, Lilly was very conscious of being a guest in Mrs. Trahern’s classroom and acted in ways that fostered her mentor teacher’s recognition of this D-identity. Despite being granted considerable freedom by her mentor teacher, many of Lilly’s teaching decisions were based on structuring instruction in the same way that Mrs. Trahern had previously done them. She made her decisions not because she believed this was how she wanted to do them, but because she wanted to be respectful of her role in Mrs. Trahern’s classroom. Although this D-identity was influential in Lilly’s negotiation of teaching identity during student teaching, it is of less interest than the other two D-identities as it is the one that is least likely to be relevant during the induction year.

Although examples of Lilly's bid at this D-identity abound in her narrative, I will include just a few in the paragraph that follows, lending support to this claim of the *respectful visitor* D-identity, which was important to Lilly throughout student teaching. When Lilly first began teaching, she tried to teach in ways that aligned closely with how Mrs. Trahern did things. For example, she made the decision not to change Mrs. Trahern's way of doing things because she thought it would be easier to keep them the same than risk stepping on her toes. She opted not to change the groups to which Mrs. Trahern had assigned students and she decided to maintain her mentor's policy on tardiness. Furthermore, Lilly considered Mrs. Trahern's preferred classroom environment when planning her lessons: One day when she wanted to do a hands-on activity with students, she ultimately took students outside to conduct the activity in order to give Mrs. Trahern a quiet day. Thus, Lilly repeatedly made attempts at being perceived as a *respectful visitor* and never seemed to lose sight of this. Even at the end of student teaching, when she began incorporating more student-centered instructional approaches, and placed less emphasis on this particular D-identity, she still indicated that what she was doing was driving Mrs. Trahern crazy: "She was ready to tear her hair out. She would go into that storage room and close the door." Thus, even after Mrs. Trahern recognized Lilly as a *respectful visitor*, this particular D-identity was one that never became entirely unimportant to Lilly. Lilly was keenly aware of what she needed to do in order to be perceived as a *respectful visitor*, since she carefully observed and analyzed the way in which Mrs. Trahern was responding to her.

Returning to Lilly's model of negotiation of teaching identity, Lilly also made numerous consistent bids to be recognized by students as a *teacher*, rather than a student teacher. For example, Lilly consciously decided to wear her hair in a ponytail every day in order to convey to students that they should see her as a teacher. In addition, Lilly described the first time she

disciplined a student by signing his agenda as “sacrificing” her first lamb: She sent the message to the student that she was the teacher and that he should see her as such. Her language is interesting in this example, indicating that this bid at *teacher* is somewhat difficult for her: she sacrificed the lamb for some greater purpose – being seen as a teacher. Lilly’s bid at being recognized as a teacher was also apparent in the way in which she positioned herself at the front of the classroom initially, in her focus on staying out of students’ personal conversations, in her comment to one of the students that ganged up on her (“Honey, I’m not arguing with you. I’m your teacher”), and in her announcement to her students when I was videotaping (“If you misbehave, I can take this video to the office”). Much like the *respectful visitor* D-identity, her bids at *teacher* were a consistent focus throughout student teaching, although they became less apparent as students began recognizing her as a teacher. I find it significant that in our final interview she explicitly mentioned wearing her hair down on the last day of class. She was grateful for the opportunity to talk with students on a more personal basis. However, she did not feel she could interact with them in the same way throughout student teaching.

In reconsidering both of these D-identities (i.e., *respectful visitor* and *teacher*), it is significant that until Lilly had made somewhat successful bids at these she focused less on the *good teacher* D-identity and more on these. As she became confident that her mentor teacher perceived her as a respectful visitor and that students were seeing her as a teacher, she shifted her emphasis toward the *good teacher* D-identity.

Ultimately, the D-identity that was most meaningful to Lilly throughout student teaching was being recognized as a *good teacher*. It is on this D-identity that I primarily focus as the bids used to establish it best represent the complexity of Lilly’s negotiation of teaching identity. One could argue that the previous two D-identities (i.e., *respectful visitor* and *teacher*) had more to do

with negotiation of student teaching identity than teaching identity. However, because they allowed me to depict her experiences as a student teacher more coherently, I believed it was important to incorporate all three of these D-identities.

The good teacher D-identity best exemplifies Lilly's negotiation of teaching identity throughout the student teaching experience. This was evident even when the *good teacher* identity manifestations were subtle and inconspicuous at the beginning of the student teaching experience. As student teaching progressed, the following factors demonstrated their relevancy to this D-identity: To begin, Lilly relied heavily on external sources of feedback (e.g. students' response to her as a teacher and to her instructional activities, other teachers' expectations and perceptions of her actions, and cultural norms of schooling related to being a good teacher) in making decisions about what to do in the classroom or how to modify her teaching identity. These external sources constituted an important aspect of the social context of her negotiation of teaching identity. However, she also relied on her own vision of the **type** of teacher (i.e., caring, student-centered, fun, and focused on learning) she wanted to be in making these decisions, which I define as the personal dimension of her negotiation of teaching identity. She kept this vision in dialogic tension with the responses she received from external sources and when she received negative feedback, or undesirable feedback from the external sources she returned to her vision of the type of teacher she wanted to be, often refining it, in making changes to her teaching identity. Thus, in Lilly's bid for the *good teacher* D-identity both the response of the social context as well as her personal vision were influential in how she made this bid. She used students' responses to determine whether or not she was being the type of teacher she wanted to be and whether or not students were responding to her as the type of teacher she wanted to be. It is important to distinguish this approach from one in which students' responses are used as an

indication of whether or not an activity “worked,” which is very separate from the personal dimension. Lilly’s *good teacher* D-identity was refined and reshaped considerably throughout student teaching as a result of the ways in which she refined and clarified her personal vision of teaching. What allowed her to do this?

Confidence was one of Lilly’s tools of agency that allowed her to mediate the tension between the feedback she received from the social context and her own personal vision of the type of teacher she wanted to be. In cases where she lacked confidence, Lilly often based decisions about how she should modify or construct her teaching identity (both instructionally and in terms of her relationship with students) almost solely on the expectations of others and cultural norms of schooling rather than her own vision of the type of teacher she wanted to be. In these instances, she was unable to keep tension between the social dimension and her vision of the type of teacher she wanted to be. This was evidenced in her initial attempt at mimicking Mrs. Trahern’s teaching style during which she made impromptu comments from the book while conducting a class discussion. After teaching in this way, Lilly explained to me that this activity had not gone well because she lacked the confidence and experience necessary to teach like this. Although this approach to teaching clearly stands in stark contrast to Lilly’s personal vision of the type of teacher she wanted to be, because she lacked confidence, she did not question the lack of connection to this vision. Later during her placement, when she attended a meeting with the other 8th grade teachers, she responded similarly. Her comments to me regarding this meeting were interesting as she began, not by telling me about the meeting, but by explaining that **she** needed to become more strict. Only when I prompted her to explain why she thought she needed to change her teaching identity did she describe the meeting. Although, in this case, she was able to realize that the teachers’ proposed solution was inconsistent with her perspective on the type

of teacher she wanted to be, she still concluded that **she** needed to change. Thus, the dialogic tension between Lilly's personal vision and the social context tended almost entirely towards the social in instances when Lilly lacked confidence.

However, as her confidence increased, which was typically a product of others' positive response to her, she became better able to make decisions about her teaching that aligned with the type of teacher she wanted to be: She was able to keep a tension between others' response to her or expectations of her and her own vision of the type of teacher she wanted to be. If students or others did respond negatively to her, this caused her to raise questions about her teaching identity and how she could modify it in terms of the type of teacher she wanted to be. For example, if students responded negatively to class on a given day, Lilly took this feedback and compared it to her vision of who she wanted to be as a teacher (caring, student-centered, fun, and focused on learning). This is nicely exemplified near the beginning of student teaching when Lilly teaches a lesson on global warming: She does so in a teacher-centered manner. When students act bored and uninterested, she returns to her personal vision and concludes that students were not having fun and, as a result, she concluded that they would probably find class more enjoyable if they could **do** something. This modification of her instructional teaching identity was a product of both the response of the social context and her personal vision (she wanted to be a fun teacher). An additional example that reflects her ability to maintain dialogic tension between the social and personal dimensions in learning to teach took place prior to our second interview. On this particular day, Lilly was having students decorate journal covers that they would use throughout the unit on minerals. From my observation, class on this day had gone smoothly. However, when Lilly and I met to talk about it, she was clearly frustrated and said it had felt chaotic to her. I queried her about this remark and she explained that class had felt like a

social hour. It seemed clear to me that her frustration was a product of class having transpired in a way that did not align with the type of teacher she wanted to be (learning-focused). She was keeping the social context in dialogic tension with her own personal vision. Ultimately, she concluded that she was not dissatisfied with class since what they were doing was not “rocket science.” This example is one of many illustrating Lilly’s negotiation of teaching identity as she received feedback from students and others. In addition, it nicely illustrates the process of refining this personal vision in which she engaged throughout student teaching, which is linked to her second tool of agency: a love for learning and growing.

It is noteworthy that when Lilly felt highly confident in whom she wanted to be as a teacher or in what she knew about teaching, she became able to release the tension almost entirely between others’ expectations and responses and her own vision of the type of teacher she wanted to be. Near the end of student teaching she complained about students’ whining regarding the amount of work she asked them to do, but, rather than modifying her approach she explained that she was satisfied with being recognized in this way by students. After all, she did not want to be known as a slacker teacher. Additionally, near the beginning of student teaching Mrs. Trahern suggested that in Lilly’s lesson on natural disasters she should focus on hurricane Katrina. However, Lilly did not focus her lesson in this way because, as she explained to me, it did not make sense to learn about hurricanes if students had not even learned about thunderstorms yet. Thus, in both of these instances, Lilly virtually ignored the social context in favor of the personal dimension.

It is also noteworthy that when Lilly talks about those experiences that were “confidence builders,” they were almost always easily traced back to her description of the type of teacher she wanted to be. Often, these confidence builders were focused on her relationships with

students rather than on instructional activities in and of themselves. For example, when she made progress in getting Sierra, a student who had previously been uninvolved in class, participating and contributing to class her confidence increased significantly. Furthermore, when she sent Bozo into the hallway in response to his rude comment to another student's answer, she became more confident because she knew she "practiced what she preached." She valued a safe learning environment and was willing to be the type of teacher that enforced this. In addition, when Lilly described one of her favorite lessons (on the day that Mrs. Trahern was absent), she explained that this was her favorite in terms of her vision of the type of teacher she wanted to be. Additionally, she explained that students were having fun, but that it was fun because they were learning, not just fun because they were playing with Play-Doh. In addition to exemplifying how Lilly used the response of the social context in relation to her personal vision of teaching to boost her confidence, this example exemplifies the way in which Lilly used students' responses to refine her personal teaching vision. Thus, confidence is one of Lilly's tools of agency. This tool is critical to Lilly's negotiation of teaching identity.

In considering Lilly's negotiation of teaching identity further, another tool of agency was integral in this negotiation: a desire to learn and grow. This tool was influential in her attempts to change her teaching identity in response to others' expectations (she wanted to learn from their experiences), students responses (she wanted to learn how to be the type of teacher she and they wanted), and feedback regarding the quality of her teaching (she wanted to improve the quality of teaching in which she was asking students to engage). It contributed to her redefinition of her personal vision of teaching, which she continually refined and expanded throughout student teaching. For example, although Lilly was always cognizant of wanting be a fun, caring, student-centered, and learning-focused teacher, it is evident in her data that she had yet to fully define

her conceptions of these characteristics within the context of the classroom. Thus, by keeping her personal vision in dialogic tension with the response of the social context she was learning how exactly she defined those characteristics she had identified as the “type” of teacher she wanted to be. This is especially apparent in thinking about Lilly’s attempts to be a learning-focused “type” of teacher.

Although Lilly structured class in a way that let students know learning was the top priority from the beginning of student teaching, she had not explicitly been able to connect the nature of learning in her class with the nature of learning that she valued (i.e., engaging students in independent thinking and inquiry-type learning). Thus, initially when students did not respond well to an instructional approach, Lilly often resolved this tension by implementing a different type of activity (visual, hands-on, etc.), which often linked to another aspect of her personal vision of teaching. For example, when students did not respond well to a very lecture-oriented lesson on global warming, she concluded that they were bored and that she needed to make it more fun. As a result, she modified the activities she used (typically selecting activities that mirrored those to which she had responded as a learner) in order to make class more fun, rather than using this feedback to redefine her vision of herself as a learning-focused teacher. In examining Lilly’s teaching identity, she seemed to instinctively begin enacting herself in ways that encouraged students to do more thinking prior to her meeting with Dr. Smith. However, these changes were more often a product of Lilly’s modifications in relation to another aspect of her personal vision (especially the “fun teacher” aspect) than the learning-focused aspect of her personal vision. Lilly’s emotional response to her conversation with Dr. Smith regarding his observation of her teaching indicated that she had not connected the learning activities she was designing for students with her ultimate vision of type of teacher she wanted to be (learning-

focused, but in ways that promoted independent student thinking and discovery). She was extremely frustrated with the “type of teacher” she had become and exclaimed that she had spent hours and hours working and planning not to be that type of teacher. After this point, she spent a considerable amount of time and energy focusing on how to make this type of learning her top priority. Thus, her personal teaching vision was expanded or refined, as Lilly made explicit connections between the type of learning she valued and the type of learning in which she asked students to engage.

In summary, Lilly’s negotiation of teaching identity can be characterized as a negotiation of dialogic tension. Lilly focused on how students and others responded to her as a certain type¹⁵ of teacher, which she referenced back to her personal vision of teaching. She consistently used these responses to refine her conceptions about the type of teacher she wanted to be, which was often inseparable from students’ responses to **her**. When she lacked confidence, she was less able to stay in touch with this personal vision of teaching. However, as her confidence increased, the dialogic tension she maintained between the social response and her personal vision allowed her to refine and reshape her personal vision in ways that influenced her teaching identity and produced more desirable responses from the social context. This refinement is linked to her love for learning and growing. Dr. Smith’s visit with Lilly allowed her to define her notion of “learning-focused” teacher more clearly and make explicit connections between the nature of learning in which students were engaging and the quality of learning in which she wanted students to engage. In addition, she was able to connect the learning-focused and fun aspects of her teaching vision as she realized that fun did not just mean playing with Play-Doh, but fun meant engaging in high quality learning. Thus, as Lilly interpreted responses from the social

¹⁵ Type in this usage refers to Lilly’s current *good teacher* D-identity.

context, which she typically kept in dialogic tension with her personal vision, she used them to redefine, expand, or clarify this vision. This process was exhausting to her. She explained that this was one of the hardest parts about learning to teach: It's all about what you think is ok or is not ok. As she mentioned near the end of our work together, she was very grateful for the opportunity to return to her university reflections course and work with a great professor who helped her *remember* the type of teacher she wanted to be. In other words, she was grateful to be able to work on redefining her personal vision of teaching without any dialogic tension between it and the social context.

Chapter 5 - Stacey Sky's Tale of Negotiating Teaching Identity: What Works, My Little Petri Dish? What's Wrong With You?

Because [student teachers] defined as rigid the complex tensions embodied in the imperatives of social control, they constructed the teacher's identity as either tyrant or comrade...the tyrant imposes an autocratic rule, while the comrade discards all explicit rules. In moments of ambivalence, [they] vacillated between these two possible identities, and found that neither produced the intended results. Jamie gave tests, but refused to police them [students]. Both student teachers desired to create a classroom that valued student participation. However, when they responded to their students' concerns..., they did so on a deeply personal level and then vacillated between the incredulity that can accompany the unexpected and the despair that can shadow the unknown...they expected their students to act as they would act. This expectation framed their perceptions of classroom life. So when the students raised their own concerns, they could only read them as the student's rejection – or acceptance – of what they saw as the teacher's humanity (Britzman, 2003, pp. 225-226).

Teaching Identity

Unlike Lilly's teaching identity that, in general, progressed in a positive direction (i.e., she became less teacher-centered and less custodial in her interactions with students), Stacey's teaching identity changed more randomly. To more clearly represent her non-static teaching identity, I will first describe the instructional aspects of her teaching identity and then the interactive domain (how she interacts with students): these components of her teaching identity nicely contrast one another.

The instructional component of Stacey's teaching identity can be described as a combination of somewhat risky, less traditional ways of enacting herself as a teacher and very traditional teacher-centered approaches. Often Stacey gave notes using PowerPoint media, internet simulations or led class discussions. In addition, she frequently assigned students work (i.e., foldables, outlines, worksheets, vocabulary definitions, etc.) that they were to complete at

their desks during which time she typically allowed them to talk to friends. In addition, she assigned students larger scale projects within which they were to develop expertise and use this expertise to teach their peers. Furthermore, she conducted mini-demonstrations at the front of the room and involved students in these activities, facilitated an inquiry-oriented activity early in the semester, and spent an entire day listening to students' stories related to the content of an upcoming unit rather than showing a video. Thus, Stacey's teaching identity varied dramatically in terms of the instructional approaches she employed. It was difficult to predict what Stacey would be doing instructionally from one day to the next as her instructional teaching identity changed almost daily. She was willing to try out different instructional approaches as they occurred to her.

On the other hand, the ways in which she interacted with students, or the interactive component of teaching identity, were much more consistent. She enacted herself in one of two ways: Either she presented herself in a laid-back, calm, non-managerial manner or as the "mean teacher." Typically, the interactive component of her teaching identity can be described as the non-managerial Stacey. She allowed students to chat regularly, did not correct students immediately who were misbehaving, gave them many chances to improve their behavior, rationalized with her kids as people rather than nagging at the students as though they were incapable of reasoned action. However, on a few occasions her teaching identity can better be described as the "mean teacher." Stacey described herself as huffing and puffing and acting noticeably frustrated in order to get students to stop doing what they were doing that was undesirable. I never observed when Stacey enacted herself in this manner. Each time I was present, her teaching identity was essentially non-managerial. At times this progressed to the point that students were completely off task for major portions of the class period. In the section

that follows I describe how I created Stacey's model of negotiation of teaching identity and subsequently present the model.

The Model

Stacey's model was constructed very similarly to Lilly's. I began construction of Stacey's model by examining my data analysis for examples of Gee's (2001) conception of D-identity (described in chapter three and chapter four) as well as Holland et al.'s (1998) tools of agency. Although Stacey negotiated her teaching identity similarly throughout student teaching, her teaching identity did change in various instances: she could be one type of teacher one moment and a very different type of teacher the next. The random nature of her actions remained a consistent characteristic of her teaching identity throughout student teaching. This variation was most evident in the instructional component of her teaching identity.

Because Stacey could and frequently did change her teaching identity, I identified her two tools of agency as willing to take risks and failure to harbor self-criticism. These tools allowed me to describe her negotiation of teaching identity. The following model provides a way of conceptualizing Stacey's negotiation of teaching identity throughout student teaching.

The following is a preview of Stacey's negotiation of teaching identity model that is intended to serve as a guide for reading the narrative that follows.

- Four primary D-identities are useful in considering Stacey's negotiation of teaching identity during student teaching: First, she makes bids at being recognized as a *competent professional*. In conjunction with this, she periodically makes bids at being recognized as a *student*. Both of these D-identities are relevant in considering her relationship with her mentor teacher. In addition, she makes bids at being a *teacher that does things differently* and

- at being seen as a *teacher*. These D-identities are all relevant **throughout** her student teaching experience. However, they do become more or less relevant at different times. The *teacher that does things differently* D-identity is particularly important in understanding Stacey's negotiation of teaching identity as it positions Stacey in opposition to schools. She enacts her teaching identity in ways she perceives to be different than what teachers normally do and then focuses on whether or not these *different approaches* work or not. If they do not work, she typically does one of two things: 1. Modifies her teaching identity while still doing so in ways she perceives to be *different than typical teachers* but that might work better or 2. Tries to repair the students or system that are not working. Stacey makes many fewer connections to a personal vision of good teaching than Lilly, but instead tries approaches that seem appealing or like they might work with little connection to the personal dimension.
- Stacey has **two tools of agency** that mediate how she negotiates her teaching identity: She **takes risks** even though she recognizes that her approaches or activities might not work and she **does not harbor self-criticism**.

The Narrative

Why is this the story I have decided to tell and how representative is this story of Stacey's negotiation of teaching identity? The analytical approach outlined in chapter three depicts the process used in crafting this narrative. I believe this narrative to be one in which the most relevant aspects of Stacey's experiences negotiating teaching self are illustrated based on my formative analysis (described in chapter three). Much like Lilly's narrative, Stacey's is arranged chronologically: As she related stories to me regarding her experiences during student teaching, I arranged these in the order these events occurred for Stacey during student teaching.

This allowed me to portray for the reader Mandy's story of learning to teach. It is important to note that although a narrative arranged chronologically inherently allows for a focus on development (change over time), my primary focus in this study was on negotiation of teaching identity. Whether or not this process led to the development of core teaching identity is addressed in the final chapter. Also, similar to Lilly's narrative, I have included the conversations with Stacey regarding the subject matter of her teaching in order to allow the reader to explore the way in which coming from a subject-specific teacher education program assumed or deferred relevance in her negotiation of teaching identity.

Figure 4 depicts the fonts that are utilized throughout this narrative.

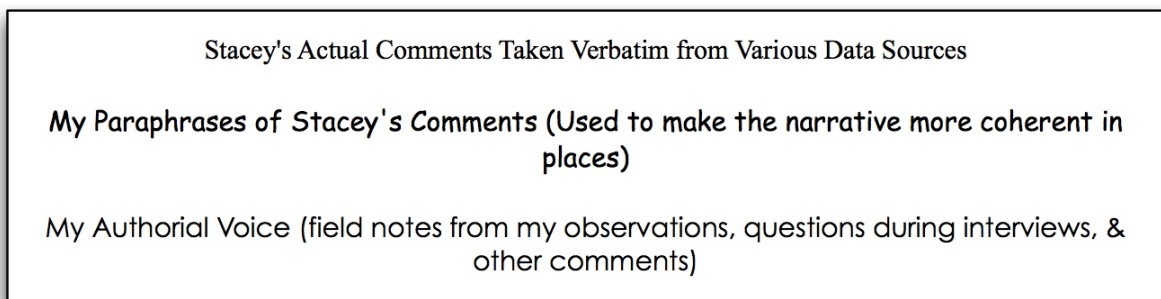


Figure 4: Fonts Utilized in Narrative

A week before I met Stacey, she started student teaching at a local school. She was extremely dissatisfied with her placement there. I cannot deal with this mean and bitter teacher trying to teach me how to be a teacher. I'm not going to learn anything from her. I'm going to become like her. So after the third day I contacted Dr. Smith and he told me he couldn't change my placement. I told him that I respected that, but that

this wasn't working for me. He told me to give it the full week. **I decided that** sometimes you need to make your own path and as soon as I got off the phone, I called a teacher I knew at Stoney Hill Middle **and asked her if she could** find someone at her school who wanted a student teacher. She found a couple people **that were willing to work with me.** When I contacted Dr. Smith again at the end of the week, he still said he couldn't move me. **I explained that I** already found a placement at Stoney Hill Middle, but he was worried that the university would overstay its welcome since there were already multiple student teachers located at Stoney Hill.

Yeah, but they really want me. I'm great. They know me. I know this school. And since I'm already technically a week behind on the pacing plan, I won't be if I'm up here because I already know the school **since I completed my practicum there.** Then I started crying, partially because I was really, really upset that I had to stay in such a bad environment and partially because it works. I told **him that it was the university's** responsibility to keep us in a safe and comfortable environment. **Plus,** there was a clerical error on **the part of the university:** I study life science. You put me in earth science. This is not my subject. If you want me to grow as a teacher, you'll move me. I was respectful because you don't get anything by pouring vinegar on the situation. I'm a honey person all the way.

After Stacey had already been transferred to Stoney Hill Middle she agreed to participate in my study. We met in the College of Education one evening after Stacey's school day. I chatted with her for about five minutes and

noticed that she was wearing bed clothes: a silk robe, slippers, and pajama pants. I asked her if she had gone to school today and she informed me that it had been pajama day at Stoney Hill. **Tomorrow is hippie day and I'm going to dress up for that, too.**

Prior to our first interview, Stacey wrote the following about science for her professor in the university reflections course she took during student teaching. The questions to which she was responding are shown in this font. What are your beliefs about the nature of science? How should this be presented in the classroom? I have absolutely no desire to answer this question. To be honest the question seems to overwhelm me in a very unpleasant way. I know what science is. I know how to teach. Put them together and you have a science teacher. So what is this "nature of science" you speak of. Naturally in my confusion I turn to the NSTA website to find a "good" definition. "Teachers of science engage students effectively in studies of the history, philosophy, and practice of science. They enable students to distinguish science from non-science." Okay, so I have to teach that science is science. All of a sudden this kind of makes sense to me. Have you ever written an English paper and a scientific paper in the same week? Science papers are different than your other papers. They are more strongly based on fact and aren't as "fluffy." Thinking about science is different than thinking about other topics. In my classroom I think I will teach my students how to think and evaluate like scientists.

Stacey was also asked to think about what inquiry meant to her and how she saw herself using inquiry in the classroom. I am sure some science teacher is going to hunt me down and shoot me for saying this, but in most cases inquiry is just a buzzword that has

very little meaning on its own. I do honestly believe that the root to all science is inquiry, and that it is the teachers' responsibility to make his/her students curious and interested about science. Taking the emphasis off the teacher and placing it where it belongs, on the student, is essential in creating a successful learning environment (look more buzzwords). It is also important to be realistic. Some classes you can't just give a general concept and materials and say construct a lab that demonstrates this highly specific principle. They are going to be lost and in some cases shut down completely. Having a good balance between teacher instruction and student directed learning is a must. Knowing your students and what things motivate and interest them is also important. I can guarantee that without some level of inquiry in your classroom you will predominately be lecturing and your students will say you are the "mean teacher." No one wants to be the "mean teacher." Inquiry is at the heart of all my lesson plans because I believe students learn more when they come to the conclusions themselves. The importance of student directed learning seems like such a simple concept, but I have seen many teachers ignore it.

The science education faculty are always talking about inquiry in the classroom. Frankly, it scares the heck out of kids. They don't know how to do that. And it's funny because I wonder what the step was from when you're young and you're little and you're playing with Play-doh, and you shove it in your mouth, and you're like, "check, do not eat Play-doh." I had a theory that Play-doh would be good. I shoved it in my mouth. Play-doh is in fact not good. Now I know. I have learned. And that's the best way to learn I think, but by the time they get into middle school most of them have lost it. I'm like, how did they lose it? It's too many teachers just telling them, "Sit down. Copy these notes. Regurgitate these facts." Science isn't like that, though.

The following evening we met for our initial interview during which I asked Stacey to tell me a little bit about herself since I didn't know her very well. Of all the things we could talk about me is the most awkward. She then began describing her educational pursuits. I actually changed majors half a dozen times at the very least. My parents don't think teaching is a career. I'll definitely teach [pause] at some point. I just don't like to make definitive plans. I'm the type of person who'll be ok with just about anything. I can teach. I like teaching, so I obviously can do it. I just don't know what will happen. I want to be flexible and open. I don't want to be trapped ever. **Another of my characteristics is that I'm hypercritical. I know I am. I'm very, very hypercritical. I have to force myself to think about what the good things are.**

I guess the reasons I'm most excited about teaching is that I like kids. I mean I love the material and the science. I absolutely love it, but it misses the element when you don't have the kids. I love them. I love middle school: just this quiet anarchy with the way they are. Most teachers hate it I guess. But they have so many thoughts going through their heads. They can go in any direction at any moment. And you just have to find something that's interesting enough to focus them. Just this little seed of something and they'll go with it and they'll ask about it and they'll keep moving. And, by the time they're in high school everything is, "Is this for a grade?" because at that point they're so programmed.

It's really frustrating right now because the kids I'm working with are programmed already and I'm trying to deprogram them. I can give them these creative, wonderful inquiry activities and I'm like, "Do this. It will be great." And they're like, "Is this for a grade?" It doesn't matter. Just do it. Just figure it out. But they won't. They can't do it. But if I give them an

activity, like today I lectured with PowerPoint and I did a fill in the blank thing, and **it was** very boring and **lacked** creativity, **although** it was highly educational. They followed it better. I **told them to write the information down** and every single one of them shut up, looked straight at their paper, and started writing.

Do you feel like you have had any experiences in the education program that have been beneficial? I've come up with all my ideas or opinions mostly just on my own. Just what I think is right. It's common sense to me. But to some people it's not common sense, so I don't know how they learn it.

Can you tell me a little bit more about how you came to be interested in science and what science means to you? **This is** totally bizarre. If you looked at my academic grades in areas in which have excelled, I do better in every single class **other than** science. I'm exceptionally good at math. I love to write. I read all the time. My worst grades – some of **what has** hindered me graduating previously and one of the reasons I am not finishing my double major is because of science. I love it. I have a passion for it. I understand it. Because of the reasons I like to teach it is why I like it so much: Its versatility. It's wonderful. It's interesting. It's exciting. It's for everyone. I feel like I'm making a commercial for science: Golly-jeepers it's neat! I love the way things tie together. Every single subject can go back to science in some way: There's history in science; there's writing in science; there are theories; there's all the math in the world; there's every subject in the entire world all in science. And you can find something that relates the kids to it. If someone hates writing and reading, English is probably not ever going to be passion of theirs. You can take science and find anything they're interested

in and you can relate it somehow. You've just got to find out what they like and relate it to them. The teachers who don't do that are just teaching from a textbook. And it's sad.

Thank goodness I was able to move to a different school. I feel much better about working with Stephanie Hubert than the first teacher I was placed with.

What's Stephanie like when she teaches? Well, the students respect her a lot more than they respect me, which is understandable. They know her a lot better than they know me. She had to do the talk with them, "Hey, Ms. Stacey has the right to discipline you, sign your merit card. You need to treat her like a teacher." They're better now that she had that talk with them. But they still have that substitute teacher mentality that they can get away with more. This week I'm teaching every class, every period and using all my materials: me, me, me, me. So I think the more they see me, the better. But they still go up to her and she's like, "Stacey, after this week I'm going to tell them to go to you for everything." Ok, that's fine. It'll annoy the spit out of me because I'm so tired of hearing my name it's ridiculous.

That reminds me, it was awful today when I was explaining to them how to do the foldable. And I couldn't get them...they couldn't get how to fold a sheet of paper into thirds. So, I had them watch and told them, "Look! This is how Stacey folds a foldable." And then I was like, "Oh no." And you hear Stephanie Hubert in the back just laughing. And all the students are like, "Is this how Stacey does it?" "This is how Ms. Sky does it. Don't call me Stacey." Not good. I opened this can of worms and they're all like, "Stacey this, Stacey that." It doesn't bother me. They can call me Stacey and I wouldn't have a problem. If they can call me Stacey and still show me respect that would be awesome, but I don't think that's going to happen.

Stephanie and I did an activity together yesterday. She was inside helping students do a vocabulary exercise and another activity and I was outside with them. My portion, which was an inquiry activity, completely bombed. I'm tired of inquiry. I feel that inquiry, while it is wonderful, is not always practical as I've learned now. Sometimes it's just a science education buzzword. Tell me a little bit more about this inquiry activity you tried with the students. It was on ground water and surface water filtration. I even kind of spoon fed it to them, I thought. I always think that I am giving them everything and it's just never the case. But I gave them a 2-liter bottle, coffee filters, rubber bands, gravel, sand, and grass and I told them to make a model of the Earth and show how filtration works thinking that they would tie the coffee filter to the bottom, put substrate in and pour water through it. That was my thought - my great envisionment as you will. No, that does not happen. They freaked out. "Well, what do we do? What do we put in where? How do we do that?" First period, I was very, "You will figure it out" and encouraged them to figure out what all the individual supplies did. And then I started easing them into it. It was a nightmare. It was truly unpleasant. My plan was to just make sure students didn't kill each other. But I couldn't get them to do it. When we had planning I talked to Stephanie and I thought about it myself and I was like, "This just isn't working." I had the actual lab write-up in case things went awry so I decided to give it to them and have them make it. Even with written instructions in front of them they still needed to see me do it. What do you attribute them not being able to do it to? Besides just complete and utter laziness, which I have discovered that they definitely have, I think it's because they've just never had labs like that before.

Mary and I talked a little bit about inquiry during our second meeting a few days later. This is ideally how I want all my lessons to go, but sometimes you're tired and you can't think of that creative, wonderful, witty idea that will have them all jumping for joy. Sometimes you just have to teach them. Sometimes your students need those calm days, too, so it's a good mix. I feel like they learn more from calm days. I wish they learned more from inquiry, but I feel like they learn more from the calm days where I'm sitting there and I'm walking them through it cause sometimes they just can't handle figuring it out themselves.

My flopped inquiry lab and how Stephanie and I organized class that day has made me think more about how student teaching should be set up. I think we should make this entire experience longer and then the first three weeks of the experience like every 2 days you'd go to a different classroom and you'd see different teaching styles and different ways and you could collect all of these ideas by observing. You could just have this little goody bag of ideas that you grabbed for 3 weeks from just seeing different classrooms. Then you go into your one classroom and do your student teaching experience, because now you have all these ideas. And you've got all these new ways to teach. Why can't we do that?

Anyhow, after our one day of co-teaching I've taken over teaching in the classroom. I love middle schoolers. If it wasn't for all that micro-management, which all the teachers say will get better. I told them that this is just a real big problem for me. They're like, "Yeah, you're not mean enough." Stephanie told me the same thing today. I know. I'm aware, but to me respect is fundamental: it doesn't need to be earned. It just needs to be maintained. I can respect them as they should respect me because we're people. And the more respect I show

them, the more respect they'll show me. While they are not my equals, I can still respect them. I don't think very many teachers think that, but I believe it's fundamental courtesy. **Students** just don't show it. I need to get meaner and I understand that, but it's hard for me because I don't want to yell at them. I hate to be the rebel in the group, and maybe this just shows my inexperience and/or ignorance, but I want my kids to like me. I don't think it's such a bad thing if your kids enjoy being around you. It's not like I am trying to get a middle school crew together or anything. I just believe that if they like you then they are going to honestly listen and care about what you have to say. **Despite this**, the other day they were little jerks the entire day: every class was awful. I didn't teach them a thing.

So do you think they understand what respect means? My first period does. I had my respect speech **with them**. I did not expect to develop **a respect speech**, because I'm really laid back. Just come in here, be cool with me. I'll be cool with you. I don't mind if people call out their answers as long as there's not anarchy. I don't mind if we're just hanging out. I like it very laid back. But these kids have no respect. One of the kids the other day wanted my attention and he'd heard from someone that my name was Stacey and he actually was like, "Stacey, come over here." And he told me what to do and that was the first time they saw me mad. I put the fear of God in that child. I was like, "You do not address me so informally. You don't talk to me like that. I'm your teacher. I need more respect than that." That turned into my first teacher speech ever which was on respect. That's my only pet peeve. I'm not too big on just following the rules all the time. I think it's ridiculous when someone raises their hand to ask to sharpen their pencil. As long as I'm not talking, go sharpen your pencil. I even think it's ridiculous to ask to go to the bathroom, to be perfectly honest, but if you, they go to the

bathroom on their own they're going to run off and never come back. If they could just be cool enough to leave, go to the bathroom, come back in. But that's not the way it works.

What's your respect speech? Can I hear it? I have no idea. I have to get really, really angry. It has to be in the moment. You might hear it tomorrow, though. Those little brats. I adore them. They amuse me so much. They're just like little puppies. They run across the floor and trip over themselves. They're a mess. They don't know what they're doing, but I honestly believe that they want to learn. Sometimes they need a little help. And then they don't have respect and I get angry and **tell them they** aren't respecting me. I'm a teacher and I'm also a fellow human being. I respect you and you respect me. And when you're talking above me and your fellow peers, you are not respecting us. **There. That was part of my respect speech,** **but** it changes every time. Very moment thing.

I visited Stacey's class the day after our interview in which she described her frustration with students' level of respect for her. The following is taken from my field notes of Stacey's response to students throwing things in the classroom: Don't throw things. You shouldn't throw it no matter what. What is wrong with you people? You don't throw pencils or pens. Stacey asks the student to whom the pencil was thrown if he has a working pencil. Are you good? She then tries to resume giving notes using a PowerPoint presentation during which students are supposed to be taking notes. However, students continue chatting and carrying on with one another. Can you please get your merit cards out and put them on your desk? You know you're not supposed to be talking when I'm talking. The student responds, "Whatever, whatever, whatever," quietly under his breath. Will you all please listen? Why are you

talking while I'm talking? A student asks her why she keeps repeating herself. Stacey says because no one is listening. She turns to some boys and asks them to get their merit cards out.

Later during that class period the student who previously threw the pencil blurted out to another student, "You'd better lose your little ill attitude or you're gonna get hit." Stacey, who is standing about 15 feet from the boys, doesn't turn around or respond to this comment. She continues writing on the board. "Next time he has an attitude I'm going to hit him," the pencil thrower announces. Stacey intervenes: **Stop talking to each other. The end. Just don't talk to each other. If you hit him I'm going to write you up.** She then continues writing on the board while the students' noise level continues to increase. **Shhhh! There's no reason anyone should be talking right now.** The students' noise level continues to increase. Stacey has not signed the merit cards she asked students to put on their desks earlier.

I love doing really creative things with my students. The following is a synopsis of one of the initial days I observed Stacey. She often mentioned how much she loved foldables and how creative they were. After class began, Stacey asked students to get out their Section 2 worksheets. She asked students to answer the questions on the sheet and requested that students fill in the answers as they went along. After finishing the worksheet, Stacey proceeded to finish talking to students about the information in her PowerPoint presentation. Students were supposed to be writing notes, although many did not. The

PowerPoint is filled with long sentences and also includes fun photos. After defining the terms habitat and niche for students, Stacey announced that they would be doing an activity. She begins drawing a foldable on the board and tells students to pick their favorite animal and then draw its habitat and niche. In addition, students are supposed to put it in a food web including information about what it eats as well as what eats it. As students begin working, Stacey circulates the room, reminding them to be productive and helping them think of examples.

A few days later, Stacey met with her university supervisor, Mary Sieber. **I love my university supervisor, Mary. She is wonderful and always makes me feel so good about myself. We had a great conversation a few days ago. I told Mary about the following experience:** One of the kids in that class, it almost hurt my feelings a little bit because he was like, "You know what. You need to be meaner. You're letting us walk all over you." What? It's weird to hear that from a student. **He was right because** that day they really were actually walking all over me. **This was** before I found my purpose. Mrs. Hubert and I **had a little bit of a problem** developing **a management plan together** because I want to teach my way, which is very different than her way. She's much more strict than I am. I'm very laid back. She wanted me to be more like her, **but I wanted to change her way of doing things** a little bit. **She has a system where she writes four blanks on the board and then throughout class she adds letters to spell "free" if students are doing well. If**

students earn all four letters they get free time at the end of class. If they are not working hard, they accrue letters spelling work. Anyhow, I'll implement her rules. We'll do the "free." We'll do the "work," but I want to make it into a contest. I love a little comfortable camaraderie. It makes them much better. **The students and I are** at a great place now and I feel like they're responding.

In our meeting Mary also told me she wanted to see me lecture. Having them just sit there as I go through a PowerPoint is just awful to me. How can I tell if you're learning? You're too busy copying things down and I don't get any feedback. And that's how I determine if I'm teaching well is by the feedback. If I'm not getting any, I could be talking to a brick wall. I do see the point, though. Some days you just have to give them information. Like vocab, you just sit there and give them information and that's what Mary wanted to see. **She's seen me do** all these creative things, **which she says are great, but she wants to see me lecture.** Stephanie keeps telling me that, **too.**

Sarah shared the following with me at our second interview, which was conducted approximately half way through the student teaching placement: The other day they had "fre" and they were being really rude, bad people. "You all need to be quiet. You need to give me respect." I said it over and over and over and over again. They were ignoring me. I just looked at them and gave them the angry teacher look. **Then** I ran up to the board and I erased all of **the letters**. And they were like, "You can't do that, you can't do that!" **I didn't respond orally but** put a frowny face on the board. Sometimes I draw smiley faces or frowny faces. I don't know why I do, but they love it. So I put a frowny face on the board and

they just started looking at me. And the class was like, "What's wrong? Why did you take them all away." I don't know why I did it. That was that really, really, really bad day. So I just wrote on the board, you make me sad. I don't know why I wrote it. I just did. And they all got quiet and they're like, "Why are you sad?" And I'm like, "Because you all are being mean to me." And they're like, "How are we being mean to you?" Because you're screaming and hollering and disrespecting me." And they're like, "We're sorry." It's ok. It was so cool, because they did care about you. They're sweet good people. They care. They really do. I don't know why I did it. I was actually kind of bummed out that they were being so rotten. It was like a moment of self-actualization for them I guess. They can actually hurt someone's feeling and their actions do mean something to people. They need to pay attention.

Oh that reminds me, today, I don't know why I did this, and I don't know if it worked or not. It might have. I need to ask Stephanie about it tomorrow. But, I was teaching and I'd whisper to the class, "If you can't hear this then you're talking too loud." I was tired of raising my voice and **saying** everyone needs to be quiet. Get out your merit cards. Ahhhh! I don't want to be a yelling teacher. Maybe I'll try the quiet way. I want to be a find-a-new-way-to-do-it teacher. So, some of them would start to respond and I'd be like, "Raise your hand if you can hear me." And they got quieter. Some of them would raise their hands and then the rest of them were confused. It wasn't like an immediate response thing. But, it worked pretty well.

I think what a lot of my frustrations boil down to is trying to balance having my personality and my style, **with having** control. I finally found it one day. Mrs. Hubert helped me a lot on that, so now I'm where I need to be, which is good. That's good. So you're finding out you can still be a strict teacher and you can still, like that student said the other day, - he really wanted,

because a lot of students want to be in a classroom where there is discipline and where there is structure. That was weird to have a student tell me that.

I still feel ok about working with Mrs. Hubert. She's fine. She has good control of the classroom. She goes by the book. I'll learn how she does her grading and her procedures. I learned about classroom management and how she does things. I think she teaches pretty well even though I didn't see her a lot before I started teaching, because I kind of jumped right in immediately and started teaching one day just like that. When I introduced Chapter 18, I wanted to start with Section 3, because to me that made sense. I learned now that starting it where I wanted to start it is not as good as starting it where I should have started it. But that's how I wanted to plan it. Stephanie was like, "Did you realize that was Section 3?" Yeah, I wanted to start at Section 3 and then go back to Section 1. She wasn't rude or anything about it, she just didn't understand why I didn't start at Section 1. Well does it matter? She explained that students like to start at Section 1, and do Section 2, and do Section 3.

I think the free/work competition is working. It gets them to work and it's fun and playful. It's how I am. Also, I like how I talk to students who are not being respectful: I'm discrete if someone has a problem. I quietly ask, "Can you please take out your merit card? Can I sign that?" I don't want to call somebody out. I think humiliation is not a good tactic for teaching. I don't use that. I just respect them. I care about them and I'm not ashamed that I care about them. In our classes, everyone tells us not to be their friends. They tell us to stay distant and to be their teacher. In class today that's what Lilly and I were talking about. I was like, "Be yourself."

I always follow the rules. I've done everything I needed to do up until this experience and now I'm going to be me, because this is what got me to this point. This is what makes me different from the other teachers. You want the kids to learn you have to give them something. I'm just going to be me. The minute I started not worrying so much about what Stephanie thought and started being me, I got more comfortable. I got more stern actually, which I didn't expect to happen. I realized you do need discipline. I thought of my parents a lot because they taught me more than anyone else I ever met. How did they do that? They love me. They care about me. They joke with me. They listen to my problems. And they also know how to use a stern and loving tone when they communicate to me. **This is similar to what I think I need to do with students:** If you need to discipline them sign their merit cards. They get in line like that [snaps]. You don't have to be confrontational with them.

Stacey began class today using guided notes (i.e., notes with blanks in them that students fill in while she's giving a PowerPoint presentation). After about 10 minutes, she moved on to a simulation of greenhouse gases and their effect on the environment from the EPA. She asked two students to read the text bubbles for the two comic people who are part of the simulation. The font is tiny and many students can't read it and just listen as the two volunteers read the text bubbles. Stacey has the class do two such simulations: Both times student volunteers read the text directly from the simulation. Once finished, Stacey summarizes the key information and then the class takes the quiz that's included at the end of the simulation. Next Stacey tells students how to make a foldable that includes information about the carbon cycle. Stacey has made a sample

foldable and informs students that they should write specific vocabulary words on different flaps and copy a diagram of the carbon cycle on another flap. She instructs students to use the book to get definitions for these vocabulary words, but tells them to read the section rather than using the glossary to find the definitions. You all are too good for that. Students work somewhat quietly and independently; many go to the board to copy Stacey's carbon cycle diagram into their own foldable.

The following class period, Stacey had students finish their foldables and create and cut out water wheels, on which they wrote the labels condensation, evaporation, precipitation, and groundwater. Stacey asked them to define these terms and color their water wheels. She informed them that they should read Chapter 19 to help them on their carbon cycle foldable. Students chatted loudly throughout class. Some worked productively on the assigned task. Most did not.

Things have started going downhill quickly with Stephanie. She's started e-mailing me feedback on how I'm doing in class rather than talking to me in person. She doesn't talk to me and she's so two-faced. In her messages she's like, you have good content area. Now I'm going to use three paragraphs to tell you how awful you are. Of course I have good content area, I've been in college for a couple of years. I'm sure I have the content area of a 7th grade science teacher now. That's not difficult. I don't know how anyone could have a content area problem. She's just not constructive. She's so different than Mary. When

Mary didn't like my lesson plan, **she explained why: I needed** to have **better time estimates and** clearer objectives that were obtainable to the students. Ok, how can I do that? She helped me do that. And today I gave it to her and she's like, "I loved it. It was great!" She was so supportive. If there is a problem, she tells you this is the problem and this is how you fix it. She loves my management and she loves the way I do things. I finally came into my own yesterday. I just realized who I am is who I am and I'm going to teach the way I teach. I'm going to implement the policies and the rules of Stoney Hill. I can be stern and fair and still be laid back and still care and still be a nice person, which is who I am.

I realized this after an experience I had with Stephanie. She (Stephanie) likes the way I teach. Our biggest problem is that **she is** always concerned about my management. I thought about it and I'm like what do I need to do to make her happy? So one day I was like, I will teach the way Stephanie wants me to teach. And I taught that way and by the end of the day I just was heartbroken. I was like I can't treat the kids this way. What did it look like on that day? To me, it just looked like I was being mean and confrontational: Do this. Sit there. That's how a lot of teachers are, too. Like the entire day I was ordering them to do this, do this, do this. So I gave her exactly what she wanted. I taught the way she taught and at the end of the day she was like, "You were just mean to them." I taught the exact same way. I guess she saw it from an outside perspective. I wanted to be like, "Well what have you learned here?" But I couldn't. So I just took the beating. **I've decided that I don't function the way Stephanie does. I don't mind a bit of anarchy and can't be a strict dictator. I'm not going to worry**

about her concerns with my management any more. Mary loves how I manage the class, so I'm going to keep doing things my way.

I observed Stacey interacting with her students a few days after this conversation: The warm-up for today is to read a book. Stacey reminds students that they should all be reading. Briefly after the reminder, students start chatting. Some start pulling out their agendas. Stacey asks, "Who's not reading their books?" I do a quick count and note that at least 5-8 students aren't reading. A student decides to get a magazine and steals it from another student who is reading quietly. "Brian took my magazine." They carry on for a bit with no response from Stacey. Eventually she says, "Shhhhh." The girls in the back corner are talking. "He's picking his boogers," says the student sitting right next to Sarah. The student who stole the magazine has gotten up to get a new magazine per Stacey's request and begins looking at his magazine after another reminder from Stacey. He begins commenting on what he's reading out loud. "Shhhh," she prompts. Others begin chatting. Stacey tells them to mind their own business and tells them they should be reading. She goes back to the corner to tell a student to read. On her way back she notices a cool pen on a student's desk and plays with it for a second. The girl holds her hand up and Stacey gives her five and chats with her for a second. Many other students are chatting quietly rather than reading. After a few more minutes, Stacey announces: **Thank you all for reading so well. You all can put away your books.**

I've spent some time thinking about what a flop it was when I tried to teach like Mrs. Hubert. The following are the thoughts that I described to my peers in the reflections course regarding this experience: I have recently come to realize that you can be both a friend to your students and an effective teacher. I was lucky and had the opportunity to talk to my mentor teacher during 2nd period planning. We both agreed that while her management style was really effective for her, it is almost impossible and rather tragic for me. During third period I had that moment when you know everything is going to change. That class started off unruly. It was directly after lunch and these kids could care less about what I had to say and they didn't try to hide it. I was advised that you should just stand at the front of the room and give them the "teacher look" until they self regulate. Apparently the person who gave me these words of wisdom never had a class like mine. The longer I waited the louder they got. Without having respect for me they had no reason to be quiet. At that moment I realized that this was my class; while I do care and want to be their friends, more importantly, I want to be a good teacher. I made them responsible for their actions and held them accountable for the decisions they made by **letting** them know that their behavior determines what we do in the classroom.

I really can't stand Stephanie telling me what to do. I feel like I'm becoming a revolutionary. At first I just thought I'll teach school. I like the kids. They're funny. They're great. And now I'm like, this is how I'm going to do it. This experience is helping me realize how I want to do things. And I don't necessarily want to do them the way everybody else does them. **For example,** I think textbooks are the devil. I have to use them, but I think they're absolutely awful because they constrict what you're going to teach. I understand having curriculum guides so that all kids learn the same thing. But having a textbook in no way helps you. I think it just

hinders your creativity. It just makes it easy. What I did today was definitely just a PowerPoint thing: I made notes from the book in an outline format; I left some blanks; I put some pictures up in PowerPoint. It took me less than an hour. I had the whole lesson done. And the thing is, they loved it. That's what killed me. They loved it.

So tell me why you hate the book so much. It's a crappy book. It's dry. It's boring. It doesn't have anything interesting in it. I haven't seen a lot of textbooks. I just don't think you should just teach from a textbook. Like biomes could be great. They could bring in these funny animals. They could tell you all these weird adaptations they have. But no, it's like wetlands are places where there's lots of moisture in the ground and this helps with flooding. Ok, yahoo for wetlands. Why are wetlands important to me? How are they benefiting the students? Or the rainforests. I thought at least they'd go into biodiversity. There are so many animals here. All our medicines come from there. Don't burn down the rainforest. You know, any of that. No. No. They don't even have global warming in it.

I don't like it. I guess maybe it could be just the one, two, three, just chapters, chapters, chapters. Why can't I be flexible? Why can't we learn this and then some kid say something and I'll be like, "ok, well let's do this chapter now." Sure, why not?

How driven do you feel by the state standards? I think it's essential to guarantee that all children have the same education, which is the exact answer that I would give an assistant principal at a job interview [laughs]. I mean it is good that everyone gets the same education. This is what you need to cover. But you can pull other things in there. I want to spice it up a little bit. And it's not my soul saying...So you don't feel like that's the limit of what you do? Oh no! But most teachers I think they do. I think they feel like the standards are the limit and the textbook is the limit. Those 2 things equal everything they can handle. Are you

kidding me? Every single day I could go in there with a PowerPoint presentation, have them take notes, and go to the next chapter in the book. It would be predictable. They'd probably do fine. I don't think that they would learn or enjoy it, but it'd be easy for me. But it wouldn't be fun or good.

I mean I know you need the state standards and standardized tests and all that stuff. I know it's important. To a degree it regulates to make sure everyone gets a fair education. So that's wonderful, but it's also really, really, really frustrating. Because it's teaching to state standards and it's teaching to the test and it's teaching for everyone else but the students. I mean when I'm pulling all this stuff I understand I need to meet these standards. I get it. But really I should take this material and the first thing I should do is **figure out** how I am going to relate this to my kids. How is this pertinent to them? Why do they care about this? That's the first thing a teacher should do. Cause they always ask **why the need to learn this information**. I would like to be able to say, "This is why you need to learn it." But I always ask them, "Well why do you think you need to learn it?" And the number one answer: standardized test. And I'm like, "cktttt. That's kinda true. But here's another reason to learn it: the intrinsic value of knowledge."

Anyhow, I really like open discussion as well. I feel it connects the class more with what is going on. My mentor teacher keeps telling me I need to be a little more tough, but to be honest I like my way better. I like having an atmosphere in which students are free to share their thoughts and ideas.

I love teaching, but I disliked it so much for a little while there because Stephanie is this negative person who's sitting back there judging me. I'm just going to ignore her. I don't see her.

She's not there. This is my class and Mary **told me that I** took control. That was your class today. **I think Stephanie's negative feedback has been really hard for me to take because** I want validation. All of us do. I want someone to say, "You're doing this right. This is the formula to be a good teacher. Do this and this is right." **The tricky thing about this, though, is that** your mentor teacher thinks her formula is the formula. So you're in her world and you're trying to figure out how to be a good teacher and in your mentor teacher's eyes you're a good teacher if you teach like her. Well, I don't teach like her, so I got all this negative feedback, **which made me think I was** a bad teacher. And for a long time **I thought I wasn't** reaching the kids. What am I doing wrong? And then one day I **realized** my validation should not be in her. It should be in the kids. They should let me know if I'm being a good teacher or a bad teacher. So what would it look like if kids were letting you know you're a good teacher? I guess just the respect. I mean I can do the analytical part. My test grades are better than hers. So they're learning. They respond more in class. And there's more respect. At first I had to yell, "Calm down. Sit down. Be quiet. Read this." Now I can do smaller gestures. I can be like, "guys." And they'll know. I don't know if it's being trained or if it's respect. But it's one of the two.

Things were usually great with my students. This day they weren't, though. I had an awful migraine one day. I was drugged up and crying and Stephanie made me teach. Maybe I'm just a nice person, but I would have been like, "I'll teach for you today. It's ok." I was in so much pain. It was awful. So I'm in there trying to teach, but I can't be under the fluorescent lights. So we're sitting in the dark and I'm trying to teach and Stephanie is on her computer doing

nothing. I just wanted to throw a chair at her. This is ridiculous. This is just mean! Anyway, individual students care a lot. They'll come up to you, hug you, rub your hair, **ask you if they** can get you anything. Individual students are wonderful. As a collective whole, though, they're jerks. They really are. **I mean**, I'm a mess. I'm crying. I didn't let them see me cry. I mean good gracious, no! But I was very unhappy. And I still went up there. I still did my job. I didn't give them funny anecdotes or stories. I didn't really relate to them a lot. I was just trying to get through the material and survive the day. And they were talkative and they were mean and they were not cool that day. What is going on?

The next day **I told them** I was in a lot of pain yesterday. And this is how you treated me. This is what you did. I told them when I first started teaching **that is they were** having a bad day: If your significant other breaks up with you; if you're crushed; if you're going through stuff at home; if you're not feeling well, tell me and I will not bother you. I'll understand. I had 2 girls who were feeling so bad one day and I didn't make them take a test **that day**. And the one day I told you all I'm not feeling well, this is what I need, you all abandoned me. You all didn't care enough to show me that kind of respect. And I'm sorry that that is the case. At the end of the day I had a gazillion sorry cards. They were so sorry and felt awful.

That reminds me of another episode I had with my students. People always tell you that when your kids are talking, being disrespectful and crazy you should give them a teacher look and they will cave. NO! Whoever did that did not have kids like mine, because they don't cave. They were like: Free period. We'll just keep talking. No one's stopping us. They could care less about my teacher look, which I didn't think I had, but I developed the teacher look and I'm very excited about that. Some people in my Wednesday night class that had the angry teacher

look were very proud of me because the week before I couldn't get it. Everyone else was like, "I've got the look. I've got the look." And I was like, "The look does not exist for me." **Anyhow,** the teacher look did no good. I waited and waited and they got louder and louder. So I went and got a marker and pulled up the overhead screen and wrote respect in huge letters on the board. I huffed. I acted obviously irritable. I just sat there and crossed my arms and looked at them. I looked at them like I was going to kill them all. I wasn't even that mad. I was fine, really, but I wanted them to think **I was** furious. And they stopped and they looked at me and they were like, "K. What's up? Why are you doing that Ms. Sky?" And then they started getting quiet. **I asked them what** I needed to do to make them feel respected and asked them **what they** thought I needed to feel respected. **We ended up** talking about what respect meant. They thought respect meant doing what you're told. No, not necessarily. We really did spend most of the class period just talking about respect. **After this,** I taught and they listened and they cared and that moment was a turning point for me because I made them responsible for their actions. I am not responsible for the crazy stuff they do. I'm responsible for making sure that crazy stuff doesn't get any of them killed, but they're responsible for their actions. They should be introspective and self-regulated. I think my future classroom will have 2 mottos: People rise to the level of expectations placed upon them. I expect my kids to succeed. And something about respect. Yeah, that's definitely a huge piece for you. It's huge for me. I think once they understand it they self-regulate. I don't want to spend...I'm a teacher. I'm a guide. I help them through things. But I'm not a ring-leader. I'm not supposed to keep them in

order. I want them to do that on their own. I'm not going to yell at them, because if I yell then they'll yell at me.

Thank goodness for Mary. She always loves what I'm doing and how I manage kids. They seem to be really responsive to you: your style, your presence fits in very comfortably with them. You're getting pretty good respect and response from them. I think so. They're much better. Give them a couple of good lectures. I got mad at them because sometimes they're very disrespectful and they know now that that's not tolerable.

Later in the same conversation with Mary, Stacey shares the following: Stephanie's going to be gone tomorrow and they're totally going to treat me like their substitute. I'm so sure of it. They're going to have a substitute in there but I'm still going to do all the instruction. I just know they're going to try to treat me like a substitute. I wonder when that moment comes where they have that inner monologue that tells them what I'm doing is inappropriate. I shouldn't be screaming and yelling and running down the hall. I should be walking normally. Typically, the yelling and constantly having to admonish the kids and call them down doesn't work nearly as effectively as your style: a casual style.

So what other experiences really stand out to you? **Stephanie** called in sick one day like 20 minutes before class and **told me I should** just go down to the library and grab a video. **I said ok but then started thinking about it and realized** I don't really want to show a video. So I **decided I was** going to teach them. Some people ease into cold water one toe at a time. I'm the type of person who runs and takes a flying leap of faith. I have yet to drown so I guess this really works for me. I started off class with an open-ended discussion. We talked the entire period. We just talked. This was probably more productive than watching a video. SO

why was this significant to you? Because of the connections they were making later and because I was grotesquely unprepared and I was scared silly. I really wanted to go to that video and toss it in. I could have finished my grading. I could have taken a nap. Whatever. But, **instead I** heard what they had to say. I have never had so much fun teaching.

I know I totally dogged the textbook earlier. I have a few new thoughts about it. The good thing is in the beginning of each chapter it has demonstrations. Or it has just some kind of way to grab them into the material. So I used some of those that worked really, really well. The good thing is if it's in the book, it probably works. It's probably a very, very simple demonstration. And it's probably incredibly effective because it comes with questions you can ask them and prompts. That was nice. I used those because they were there and they were easily accessible and really easy. They were really helpful. I also used them for key vocab. I mean key vocab's good. It's simple. Because if I went and said, "I'm going to do a unit on the circulatory system" there's such a wealth of knowledge out there on the circulatory system I would probably overwhelm them. I would drive them crazy. Poor kids, they don't need that. But if you have a book it's like this is an idea of what 7th graders need to know. This is not the all-encompassing book that knows everything there is to know about everything. It's just an idea. And I'm going to pull. Ok. That's interesting because I know at the beginning you definitely had an aversion to the textbook: I hate the textbook. It's evil. I think sometimes I'm just a person of extremes. Because I was like, "I'm never going to use it. Forget it. No." And later on I was like, "Huh. You have some merit textbook and there's a reason you're here."

Also, you do feel comfortable teaching from a book. It makes you feel safe. I try to pull on as many outside things as I can and link them to the textbook. **For example, in the biomes activity** I followed the book for the definitions and then I spiced it up with pictures and adaptations and all this stuff. **Just like when** we did the carbon cycle we made foldables. I love foldables. I think they're greatest thing. At the end **of class we** made a food web and I started off and I was the lion and they had to raise their hand and be either something that a lion eats or something that eats a lion. And then I tossed the ball of yarn at them **while** holding on to my end. After a while we had yarn all over the room and it was the food web. It was interactive. It was great. But I spent every moment of that lesson not talking about producers and consumers and carnivores and omnivores and everything I wanted. Instead I was like, "You need to sit down. You need to be quiet. You need to raise your hand. You're not being respectful. Do you want to hear my respect speech again?"

Middle school students are so great. It's all about "What's the answer that pops up into my head. I'm going to give that, because that's what there." I mean sometimes it's misguided. Sometimes it's a little off, but it's just refreshingly honest. That's how they are. If they throw something out there that's just really far off I'm realize I'm not directing them as well as I need to be. I need to wrangle them in and push them in **a different** direction more. In high school you sometimes have no idea what they're getting and what they're not getting because they don't respond to you.

We did projects on biomes. I really liked it because students could pick what they wanted to do. **The students presented their projects:** Here's the role of a teacher. Let's

see how it works for you. And sometimes I let the management get out of control because I **wanted to see what they would do**. Maybe they'll appreciate my role in the classroom more.

The grading was frustrating. Projects are a pain to grade anyway. Then you have to practically bribe students to bring them in. You're like, "Hey, this is a test grade. Bring it in." And then six weeks later I was still begging kids to bring them in. What do you attribute that to? Laziness. Of course they're lazy. They don't want to do it. They have to see consequences. **So I decided to assign all the students who hadn't turned in their projects to silent lunch until they had their project finished**. But I had like 90 people at silent lunch and there was no room for them. When I was putting **the grades** in online, Stephanie **told me not to put in zeroes**. If I don't put in zeroes their parents **aren't going to know that their child is missing the assignment**. If their parents go and see a 42 they're going to be like, "What are there zeroes in? Joey and Beth, you didn't do your biomes project. Do your biomes project." The parents will do something.

Anyhow, I put in the grades and a couple people were failing and Stephanie **told me I needed to go back and change the grades**. No, sorry! I called so many parents and **told them that** these are the assignments that had not been turned in. They loved to hear it. They were happy about it. **I was** thinking to myself, "You can go online and see all their grades. Why haven't you done this? What is wrong with you? Bad parent." In the end she bumped people up and changed their grades to have less people failing.

I'm really enjoying doing PowerPoint presentations with the students now. I know I originally said these were awful, but I've reconsidered this opinion. If I give students a word and told them to look it up in their book it wouldn't happen. They just wouldn't do it. They wouldn't respond. Half of them would do it. Half of them would ignore me. But to have something like a PowerPoint presentation allows me to walk them through it. I have little examples and cute pictures on my PowerPoint - things they can look at - And little things that aren't on the test. This little animal and this little animal this is how they interact. And this is a symbiotic relationship. Sometimes you need those little stories about a little picture to tie it in your head and make it fit. So, I like PowerPoints.

I'm so excited that I get to go to 4-H center with the other 7th grade teams on Tuesday and Wednesday, but at the same time, I'm really worried about Mrs. Hubert teaching again while I'm gone. I wonder if when I come back the kids won't respond as well to me because she will have gotten them back on track with her way of doing things. I think I'm going to have to be mean with the 15 students I'll be taking care of on the field trip. If I'm not mean, I'm worried the entire day will be awful. I think I'm going to have to act less buddy-buddy and more teacher-like. The kids should respect me because I'm a teacher and for no reason other than that. Just respect me because I'm a teacher.

A few days after returning from the 4-H center, I observed Stacey again. On this day, students were told to read and outline four sections of the chapter.

Stacey informed them that if they worked quietly the first half of class she would allow them to finish their outline with a partner during the second half of class. After about 50 minutes, Stacey stops grading and gets up to go through the chapter with the class. She takes notes on the board and asks them specific questions about the chapter from the notes she created for herself.

After thinking more about what I had read in Stacey's written responses for the reflections class, I realized I needed to further explore the ways in which science had played a role in her life. Science is just a wonderful web-work of things. **Students** can find something they enjoy doing. So paint me a picture of what that would look like - science building on everything. What have you done with kids that is a really great example of what you want that to look like? Church camp. I did weird science with the kids. What was weird science? Weird science was growing things or putting the Mentos in the bottle and making it explode and talking about pressure and CO₂ building up. Taking activities and doing them and having the kids do them and then being like, "What is this? What did we learn?" And then building on it. Ok we just learned about photosynthesis, let's do something else. It will just keep growing and growing and they build *the* understanding. You go and start talking about it and it builds because people are interested in things. They are curious. All you have to do is the spark the itty-bitty interest in one of them and they will all crumble. And it's so exciting! I like outdoor lab activities. Just following your whims, your head, your heart.

I also really enjoyed my entomology class because we spent more than half of our time in the field, looking at the bugs we found **and looking to see** how many legs, what it

looks like, what family it is in? He taught us in the field. I never cracked a book in that class once. If he'd just given me this picture and said memorize this, I would have **melted**. I would have fallen apart. But he didn't. We went out there in the field, saw where they were, dug in the dirt, had them in our hands, caught them, killed them, pinned them. We did everything. That was real life. That was learning – actually doing labs, seeing science, and understanding the process of science.

Well how about the inquiry buzzword? I was so bitter the inquiry day. I don't know, what is inquiry? Oh we use it all the time and just to give it a definitive thing, what is inquiry? It's inquiring, it's wondering, it's finding something, observing something, studying something, and just figuring out your own ideas, your own questions and building on those questions. That's what I like, but then some people think inquiry is **when** I give them everything and I say figure it out and come to your own conclusions. Maybe that is part of it, but my kids can't do that. My kids can't do that at all. Inquiry in that sense is impossible. I think learning is more than just copying notes on a sheet of paper. I think you need to see it, breathe it, and smell it. It's so much more than just writing it or just hearing me say it. It has to be all those things. I want you to hear it and experience it and you're going to remember it.

Even though not all kids inquire, many at this age do, which is one reason I like working with them so much. I can't make them learn. I can't make them wonder. I can't make them have any inquiry whatsoever. So I'm glad that at this age, most of them still have it.

I think all of them have lazy days. But I think if they see it as an authentic task then they're not lazy anymore. So I have to make it something that's relevant to them. I have to make it authentic. Copying definitions from a book is not going to be real to them. That's what I try to

do and it doesn't always work. I mean not every class is going to be this amazing thing. Some people are just not curious about nitrogen fixation and you can't make them curious about it. It's not going to happen, but you can try to get through it. People like mushrooms and decaying things. And buzzards. Sometimes it's not interesting. Sometimes you've just got to learn it.

When we just have to learn it, students often ask why we have to learn this **information**. And I can tell them why or ask them why do we have to learn this? Standardized tests. No, you want to learn because learning is good. Wondering is good. Not the standardized tests. I mean, it's important, but it's not everything. Most teachers would have been like, "Yes, you need to know that for the standardized test." No, you need knowledge for the sake of knowledge. And so it's hard because in my future classroom I'd like to have more inquiry. I need to be in a progressive school. I need to be a school of the future, I guess. Because following that pacing, that same routine day-to-day is good [tone goes up at the end of good], but are they learning? You're not necessarily teaching to their background and their diverse interests. You're teaching to standards. Kids are more than standards. Kids are a lot more than standards.

So do you feel happy with how you're able to interact with the kids in terms of science in the classroom? Yeah. I think so. What do you think is really great about how you're interacting with them as a science teacher? As a science teacher? I don't really know what you're asking. I mean I know the content. Like I know how to teach them. I know they're learning. What stands out to you about the science you get to do with your kids? Now? I guess they stand out more than the science stands out, which is probably a problem. Probably the science should stand out more than it does.

I really despise following someone else's pacing guide and the book. They worship the textbook, so I have to use the textbook. I don't have an option. In our final interview, Stacey expressed a change of tune about the pacing guide that she talked about despising using earlier in the semester. I mean I still don't like it. Yeah? But you get adjusted to it. You realize that you have to do it.

When Mary came for her final observation of me class was a train wreck. The kids were awful. She ended up staying for two periods and we talked after that. As I was talking to Mary I was getting a little upset because no one likes to hear criticism from someone who's only given you praise.

I really can't stand Stephanie. She wants the students to like her and does anything possible to take credit for things the students like. Like yesterday at the end of class, Mrs. Hubert went up to the board and added the last "e" to "free," which meant students got free time at the end of class. That was my job. Grrrr.

She also keeps trying to tell me what to do, but most of the time I know it's not going to work. The kids weren't going to get it that way. I knew that. I don't think she always thinks of how to reach them. She just **thinks about** how to get the material out there. And I wanted to reach them, because I'm not teaching to high schoolers. So she gave me those things and she told me to do them. It sounds awful and it was very disrespectful. To be perfectly honest I should have done things her way. It was her classroom. She's responsible for their grades. I was in there as a guest doing a job but I should have been like, "Yes, ma'am" and done it

her way. I can see how she would be frustrated with me. Because I listened and then I did things my way.

I had a strange relationship with the teacher across the hallway (Ms. Bond), who also had a student teacher. She talked to me about her student teacher and Stephanie talked to Ms. Bond about me. I gave Ms. Bond advice on how to deal with her student teacher. Ms. Bond's student teacher talked to me a lot and would tell me things like "I don't need to turn in lesson plans." But your mentor teacher wants them, so you turn them in. That's how it works. They needed a mediator. So I helped their relationship I think.

It's kind of ironic that I gave Ms. Bond's student teacher advice that I was not following myself. But Stephanie was trying to constrain me and I just stopped letting her. She told me what to do and I didn't do it. In retrospect my mom would be disappointed. I grew a lot. I said, "yes, ma'am" and just did my own thing. Technically that makes me a liar, but if I had done what she wanted I think I would have been more like her at the end. I just would have gotten a lot of practice in a classroom being someone I'm not. How's that going to help me in the future? Not so much, which is why I did things my way.

I wrote the following about how my ideas about management have changed throughout student teaching: I consider myself to be an extremely laid back person, which translates well into my teaching style. Classroom management was my primary concern because I didn't have a lot of experience working in a formal classroom setting and because I have been called a push-over on more than one occasion. I'm the type of person who is really nice and takes a lot of abuse, and then snaps one day and everyone regrets it. One of my goals was to deal with

situations as they arose and to not let things build up inside. I have a tendency to give to many chances; students who know you are like this will walk all over you. The important thing is make sure you follow through with what you say you are going to do.

I've been debating whether or not I should teach evolution. Since I didn't know what to do, I decided to broach the subject with my peers in the reflection course.

Hiya guys,

Should I teach evolution? I do feel like I have an obligation to my students and to their education to teach everything that is necessary for them to succeed on the CRCT test. Is this a huge deal to me? YES!!! I'm not the type of person who just wants to stir up trouble. I also don't think I am going to change the world, but my mentor teacher is cutting things out of the curriculum based on her personal views. There are standards that need to be met and they aren't. As always I want to be respectful of her classroom. Should I just ignore my feelings and finish up student teaching (knowing that she will not teach them what they need to know)? A little insight would be helpful. That's it. Thanks for listening to my rants!

Four of Stacey's classmates responded to this post. Although they could all relate to her dilemma all four suggested she not worry about teaching evolution for the sake of salvaging her relationship with her mentor teacher. She responded to their post as follows: I don't think my kids will be dramatically shortsided if I don't teach this. Maybe this isn't a battle I need to jump into. Will they get those 9 questions on the CRCT right if I teach them evolution? Hope so. If not, what's the point? Upon thinking about it, I think I want to teach my mentor teacher that the subject can be approached and taught in a

scientific manner that doesn't have any particular agenda associated with it, other than teaching that is. Thank you very much for responding. I like your approach on things.

I decided to teach evolution for my final lesson. I talked to Stephanie a lot about that lesson before I did it and she had some problems with it. She just didn't want to teach it. She could happily ignore evolution. **She told me the way she would teach it would be to go up there and be** like this is just a theory. I don't believe in it. And then just go through the big vocab. Well, the minute you say I don't believe in it you've lost your class. You don't believe in it, why am I learning it? Oh, this is just a theory, why do I need to learn that? Gravity's also a theory kids. Just pay attention, ok?

The following episode is taken from my field notes on the last day I observed Stacey teaching about evolution. Students' comments are shown in this font. The following conversation occurred about halfway through class after Stacey did a demonstration of favorable adaptations and defined some key words related to evolution. All of this was very teacher-centered. She asked very few questions and those she did ask typically required students to respond with a yes or a no. Does evolution occur? Can it occur? This is a class discussion. What do you think? Because evolution is change over time. That's all it is. It's change. You see these changes. What's some proof that these changes occur? Animals. Yes, animals. What about the fossil record? The fossil record. The fossil record...exactly. Things change just a little bit. Just the tiniest, little bitty change. Like that whale that has the femur that it doesn't need. It in no way helps him. So over time he may not have it. But right now he has it because of that common ancestor. It's very important. Lots of students in the class start blurting out. So we came

from birds? Who came from birds? We came from chickens. No we came from God. And that's fine. I'm not messing with your religious beliefs. We're talking about a scientific theory. Change over time. So are you saying we could have come from monkeys? No, I'm not saying...She said we came from monkeys. What I'm saying is....shhh...the fossil record. So old bones that they dig up from a long time ago...they can date them and they can see how things are related and how things are similar. And so that's what it is. Evolution is change over time. It's not saying you came from a monkey. It's saying, that change occurs. Now we're going to watch a video. If you talk, you'll have to take notes. What's the video about? It's on evolution. Is it boring? You're going to watch it whether it's boring or not. Kids begin moving to the front of the room and sitting on the floor. Stacey tells them not to lie down, but they do anyhow. She doesn't say anything. As the movie begins, students are chatting loudly and looking at the M&M's she is passing out rather than watching the video. Stacey announces that they can't request specific types of M&M's. Students begin saying that they don't like the type of M&M's she's given them. If I say your name you're going to have to take notes. Students continue to chat loudly. Stacey steps into the hallway to check on those finishing their tests and is gone for about 5 minutes during which time most students chat with friends rather than watching the video. When she re-enters the classroom, their behavior doesn't change.

I had **a lot of** fun introducing **evolution** that day. It went well in every single class. It was fun and towards the end I had my little kids saying evolution existed. It was fabulous because they saw it as change over time. I mean people just get hung up on the vocab when it comes to evolution and natural selection.

In thinking back to my relationship with Stephanie, I think the following is what frustrated me the most: Stephanie talked to Ms. Bond about me - about how I wasn't doing things right. Or when she had something to say to me, she wouldn't say it to me, she'd e-mail it to me even if I was sitting next to her. But she'd also CC it invisibly to my university supervisor, which is just low. That's just plain rude. If you have something to say to me, say it to me. Why can't you be an adult? If you have a problem with another professional you talk to them. You work it out.

Maybe I should be a little more forthcoming with what's coming, with my lesson plans, with how I'm feeling, with what my kids are doing. And I need to keep her in the loop more. I learned that because Ms. Bond was just so controlling over her student teacher. She needed to have everything approved a week in advance and just didn't give him freedom. I really appreciated the freedom I had after that. I was like, "Oh wait." She doesn't like some of the things I do, but at least she gives me the right to do them even if she says don't do it and I do it anyway. She doesn't rake me over the coals for it, even though I should have never done that. I mean I know that when someone says no and you're in that classroom I really should have been like, "Yes, ma'am" and done what I'm supposed to do, but "Ehhhhh." Live and learn.

I thought a lot about whether I want to be a teacher or not during student teaching. I think we'd all be lying if we didn't think about it at one point or another. You have that day and you're like, "I'm not going to teach. I'm not going to do it. Just no." I still have reservations, actually. I've never had a day where I was like, "Well, I'm not teaching?" But I had a lot of days where I was like, "Should I teach? Am I making a difference? Am I doing this right?" No one tells you if you're doing it right. No one says, "Hey this is working. I see it

working." You just try and you try and you convince yourself that it's working even if it's not. I mean I want someone to be like, "Hey, you're doing well. You're doing it right. Good job. Or, this is what you're doing wrong. I think Stephanie was supposed to do that and she didn't. And I'm like, "Lady, you screwed me out of something." I don't know what it is, but it's something. So do you feel like any of the things she had to say via e-mail were helpful at all? No! I thought she was just being negative. She'd be like your management's all wrong. You need to do it my way. That's pretty much what it all boiled down to. You're either too nice or, the one day I did things the way she wanted me to do them, I was too mean. And I'm just like, "AHHHH." It was always you're too this. You're too that. Thanks. **I guess a lot of what this boils down to is that** anytime I did what Stephanie told me to do it wasn't what I wanted. Cause I don't want to be told what to do. That's just me being defiant. I'm at that age where I'm not going to listen to anybody. I get that.

In our final interview I wanted to find out a little bit more about the instructional aspects of Stacey's work with students that stood out to her. I asked her: What things do you look back on student teaching and think, "I'm totally proud of this?" Oh, I don't know. I never think of things from that perspective. No? What perspective would you think about them from? Did it work? Did they learn? I don't really think of myself being proud of any...I mean everything could have gone better and everything could have gone worse. It was what it was and it worked or it didn't work. The things that worked are the things I'm proud of...that I would do again. Her supervisor, Mary, asked her a similar question in their final meeting: Have you tried, have you done anything at all that you feel just did not go as you had wanted it to go? Not really. I mean everything's worked out fine.

She also described frustration with teaching the nitrogen cycle. It was a disaster. Nitrogen and carbon cycles are really, really hard for them to get. They couldn't get it.

Repetition is the mother of studies, my Latin teacher used to say. The more you do things, the more you learn them. But if the more you do them and the only thing you're doing with it is writing it then most likely you're not learning it. You need to do more than one activity to get them to get it. I'd show it to them one way and then I would go up on the board and draw it another way. And then I'd leave blanks and have them come up and draw it. No matter how many times I prompted them, helped them, walked them through it, they just wouldn't get it. There's nothing I could have done to get them to get it. And trying to think back on how would I do that differently...how I would do that so they would get it? I don't know. I had them draw it on their sheets of paper. We did foldables. We did everything that you can do to get the stuff and they just wouldn't get it. They did disastrously on the tests.

Thank goodness for my university supervisor, Mary. Mary was wonderful. Mary was great. She really, really, really helped me. I mean talking to you helped me because it made me evaluate what I was doing throughout the process, which I think is great. Talking to Stephanie, taught me how I do not want to teach. She told me what not to do. That was good. And talking to Mary made me feel like I wasn't alone. She was that sweet grandma lady who just hugged me and took care of me and was like, "I really like this." She made me more confident about my management, my respect, how I work things. She was so supportive. She was like, "This really, really works for you. Don't let anyone tell you to change because it works for your personality." Did she give any constructive criticism that stood out to you? The last time we talked...because she was there for 6th period and then 7th period. She actually ended up

staying for 2 periods because 6th period was awful. The kids were awful. Everything was awful. They weren't listening. I couldn't get them to listen. To this day I don't know what went wrong. I think it was Meagan. Meagan was really, really, really, really awful that day. And she took people down with her, because she's got a very magnetic personality. I lost my whole class that day. I don't think they learned anything. I actually ended up re-teaching the material the next day. It was awful. But 7th went wonderfully. When we talked Mary said 6th period was bad, but that she was glad she stayed for 7th. She explained, "You're a good teacher. You're confident. You just need to learn to deal with those one or two students who bring down the whole class." I tried. I signed her merit card, but she really should be out of the school. She should be in alternative school. If you get confrontational, she gets worse. If you're too passive, she'll walk all over you. Threats don't work. She could care less. I've sent her out. I give her silent lunch every day. And there's nothing that works for her. There really isn't. And she takes down the entire class.

And I was talking to Mary and I was getting a little upset, because no one likes to hear criticism from someone who's only given you praise and so I'm just kind of like, 'Ok' (mopey voice). And she was like, 'How would you do that [improve this situation next time]?' I don't know. I mean I would want her out of the school. I just don't know how to deal with her. And we talked and we talked and then I was like, "I know what I'd do." It just hit me. If I put her desk in the corner of the room not facing everybody else, just facing away. I will take away her audience and her behavior will change. And I think that's how I'd deal with it.

So do you think you grew at all as a science teacher? Hmmmm. What is this science teacher nonsense? Uh. It still bothers me. I don't know why it bothers me, because there is a difference between science teachers and other teachers. There is. Well is there? Yes, I think

so, because the nature of science is different than the nature of other things. It's more fluid, more moving, I think. I could be wrong. More fluid, more moving, huh? Like in math, there's right and wrong. You learn it and that's it. In English there's grammar and the way you do it. And in history there's historical dates and facts that you need to know. Science changes daily. And everything relates so wonderfully. You can take any two things in science and get them to relate somehow. Everything just ties together so wonderfully. I don't see that in other subjects. So when you teach it, you can...I taught them all this stuff. And maybe they don't know it perfectly, but when I go on to the new stuff, I can tie it back to the old stuff.

Kids care about science, I think. Maybe I'm really, really biased. I could be really, really biased. I don't know. I mean I've had a lot of kids who **originally didn't** like science but at the end of the year they loved it, because I related it to them. Like it or not, the only thing they really love is themselves.

So, if you had to say, "I'm a good science teacher or I'm not a good science teacher" what would you say and why? Ooh. Um...[long pause]. I think I'm a good teacher. I don't know if I'm a good science teacher. What is your idea of what a good science teacher would like look if you're not sure whether or not you think you are a good science teacher? Ms. Frizzle from The Magic School Bus. She was a good science teacher. Why? She knew everything there was to know about everything and she never had to look at notes. Like she knew what was going on. I mean it never seemed like a struggle. It was a TV show, I'm aware, but **she never** struggled to relate to them. It just seemed more fluid. For me, sometimes it's very hard to make things relate to my kids. It's a struggle and sometimes I don't know everything there is to know and I have to look at my notes and have

things outlined out or I get very confused for no reason. And I know I do. I need to have it written. I need to have every question written. Yeah. She's pretty much my hero. It just was always so fun. I mean some of my classes aren't very fun. Just to be blunt. Not every day can be fun and magical, but I kind of wish it could be. That'd be nice. That'd be good. Some days it's not. Some days it's very dry. It's very boring. And I'm not good at hiding how I feel.

Once again I had to return to the science education buzzword in my university reflections course. The following is what I'm currently thinking about inquiry in the classroom. Oh silly inquiry how you challenge my imagination. Initially I thought inquiry was just a buzzword and had little practical application in the classroom, at least not true inquiry. I wanted my students to come to their own conclusions, but I honestly believed that I was going to have to hold their hands the entire process. I tested this theory one day when I gave my students an inquiry lab. I gave them all the necessary materials to create a model of the earth's layers and to demonstrate how ground water works with a coffee filter. I felt like the "lesson" was a disaster and we just ended up making a huge mess. Several months later we went on a field trip and the lecturer asked my students questions about how ground water works. My students knew the answers. They kept going on and on about the models they created. From an organizational perspective, that day seemed like a train wreck. But from the students' perspective the lab was fun and made them curious. I learned that you should never judge a lesson by the ease in which it's accomplished. Students need to see, write, touch, and think to truly have the information stored.

I guess one of the biggest surprises is how valuable student teaching actually was. I didn't think student teaching was necessary at the beginning. I was like throw

me in the classroom. I will be fine. Sink or swim. Whatever happens, I will be fine. I thought the whole thing was **going to be** a waste of time but that's not true. It was not a waste of my time at all. I was grotesquely wrong. I really, really was. I was very, very wrong. Just dealing with the management, the day to day stuff, trying things, seeing them fail, hearing other teachers, having help: You need it.

Teaching is more than knowing the material and knowing the “tricks” to get students to listen to you. It’s about being comfortable with yourself. I mean the areas in which I knew my strengths I’m aware of even more: content and time management. I’ve never really been all that concerned with content. After student teaching I pretty much feel the same way. The general outline is in my head and when its time to teach a certain subject I just review the material. I think for most teachers the challenge is never content area, but making that content area interesting. Science is naturally interesting, but we have all had those days when you have massive amounts of information to give and very little time. Sometimes it's a challenge to make those PowerPoint/notes days interesting. With a few pictures and coupling your lecture with interesting facts relevant to your students these days can be a lot of fun.

I found my niche there. I guess it's just a south Texas thing, but I believe in respect. I believe in being honorable and doing what you need to be doing. Not because someone told you to do it, because you know it needs to be done. But I didn't have any kind of translation for the classroom. I didn't know what I needed to be doing. I went in there thinking I was in charge. My classroom. I realized my kids determine the flow at which the class goes. Just being around them and seeing how they respond to certain things that I do. They're my Petri dish. I mean I just went crazy. I just tested things. I saw things that worked. And I got comfortable. I got confident.

Something I didn't realize I would struggle with so much was management. I came to realize that having clear expectations and always following through when you say something are very important management tips. At the beginning, they walked all over me. I was like, "You need to stop. Calm down. You all need to be quiet. Please do this." And I do believe in saying please and thank you. I mean that's just polite. But if they see weakness of any kind they walk all over it. At the end I was like, "You need to calm down." And they'd be like, "Yes, ma'am." You can still be polite and you can still be nice but you have to be stern. You have to have a commanding presence. And I don't think I had that until I was in front of these kids.

Along with classroom management goes respect. Respect isn't just given; true respect is earned!

I can't believe student teaching is finished and that I'm not going to see my kids anymore. I think one of the greatest things about doing all these reflections is that once I write something down it's gone. Once I write it down I feel purged of it. It no longer bothers me. The last few weeks in my reflections course have been really great. We talk a lot and we work on our resume and job procurement and he's making sure we're all certified or will be soon. Someone's actually holding our hand. That's what it is. He's like, "You know you all have kind of been on your own for too long, let me hold your hand and walk you through some things." And I'm like, "thank you!"

I had an interesting chat with Stacey on gmail a month or two after finishing my data collection. What she wrote to me seems an appropriate way to conclude her narrative: Being a "typical stereotypical teacher" has more to do with how

you present information to your kids than how you deal with their actions in the class. I just want to always connect with them. Sometimes we both forget our roles in the classroom and then the teacher look comes out. I always had a problem calling my "students" students. I always thought of them as kids because that's who they are. I want to teach to the person not their role in society. Yes, they are my students, but they are people. And I do care, maybe more than I should.

Summary Model and Supporting Examples

Stacey made bids at two pairs of D-identities throughout student teaching. One pair relates to the ways in which she interacted with her cooperating teacher whereas the other relates to the ways in which she tried to be recognized as a teacher. Although the pair of D-identities pertaining to her relationship with Stephanie Hubert, the cooperating teacher, may seem irrelevant to her negotiation of teaching identity, I have included these D-identities as they parallel the other pair of D-identities, which are also quite dichotomous.

In her interactions with her cooperating teacher Stacey made bids at two distinct D-identities: First, she made a bid at being recognized as a *competent professional* who was fully capable of taking over the classroom immediately and independently. Second, she made a bid at being recognized as a *student* who expected support from her mentor teacher at particular moments throughout student teaching. I have paired these together because they are both relevant in her interactions and relationship with her cooperating teacher. The order in which these D-identities are presented is significant, as Stacey begins student teaching. Although Stacey predominantly made bids at the *competent professional* D-identity, there were moments when this D-identity was inconvenient or caused her discomfort. She responded to these moment by

making bids at the *student* D-identity. These D-identities mirror those she employed in her interactions with her students.

Multiple examples of Stacey's bids at these D-identities emerged in my work with her. One example appears near the beginning of student teaching when Stacey first began working with Stephanie. She described herself as taking over instruction almost immediately upon beginning her work with Stephanie and explained that she was doing all the lesson plans, all the grading, and all the teaching. She even referred to her cooperating teacher by her first name throughout my work with her (Lilly, on the other hand, always referred to her cooperating teacher as Mrs. Trahern). When Stacey was pursuing the *competent professional* D-identity, she planned and implemented instruction in the way she saw fit. Often she did so regardless of her cooperating teacher's preferences.

On the other hand, at times Stacey made strong bids at being perceived as a *student*. She did not always want the responsibility of being the *competent professional* she was trying to be. For example, one day Stacey had a migraine and did not want to teach. However, Stephanie did not take over for her and Stacey ended up teaching for the good part of the day in partial darkness. She was clearly frustrated that Stephanie did not offer her assistance or relief and mentioned that she would never take the same approach with one of her *students*, indicating that at that moment she wanted to be treated in the same way. Stacey's comment at the end of student teaching supports this claim that she made bids at both the *competent professional* and the *student* D-identities: She explained to me that she was glad to be back at the university where someone would hold her hand again and emphasized that they (the student teachers in her cohort) had been out on their own for too long.

In working with students Stacey made bids at two primary D-identities: First, and most persistently, she made bids at being recognized as a *teacher who did things differently* (i.e., a laid back teacher and one who gave students information in non-traditional ways). I find it interesting and important that this D-identity naturally positioned her in opposition to schools and their cultural norms. It is also interesting to note that she prioritized this D-identity above being seen as a *teacher*. I often wondered whether students saw her as a teacher and whether she might have been more successful in her bid at being a *teacher that did things differently* if she had first gotten students to recognize her as a teacher.

In making her bids at being recognized as a *teacher that did things differently* Stacey based her decisions about how she should enact herself as a teacher primarily on her vision of being a teacher that did things differently. It is interesting that this “personal vision” seems disconnected from the personal dimension described in Lilly’s narrative. Whereas Lilly’s personal vision of teaching resonated deeply with her way of being in the world, Stacey’s “personal vision” was connected to a more depersonalized goal: to be a teacher that did things differently. In other words, she thought about what she believed would be a good instructional or interactive approach to utilize with students (e.g., a creative, innovative, non-traditional approach) and tried it out. She spent less time and energy trying to predict how various individuals within the social context might respond (i.e., students, her mentor teacher, etc.) to this approach than Lilly (who did ponder this as it was personally connected to her vision), and instead focused almost exclusively on the activity or approach. For example, at the beginning of student teaching, Stacey decided to organize her initial teaching unit in the order that made sense to her rather than in a way that aligned with the book’s organization. She did this because she wanted to do things differently as a teacher and because she thought it was a good idea.

Afterwards, her mentor teacher asked her why she had decided to structure her unit in a different order than the book and explained that students liked the order of the book. Although Stacey found this information disappointing, she did organize her instruction in a way that aligned with the book's structure in the future.

Thus, as Stacey enacted herself as a teacher based primarily on the *doing it differently* D-identity (i.e., her ideas about what she wanted to do with students that would be a different way of doing things than most teachers rather than her ideas about what she should do that resonated with some deeper aspect of herself as an individual), her instructional or interactive approach became more of a trial and error teaching identity that allowed her to learn about the nature of the social context (i.e. how students responded to activities and actions). Whereas Lilly was constantly aware of and trying to learn about the nature of the social context **prior** to enacting herself as a teacher and modifying her teaching identity based on how the individuals within the social context were responding to **her** (i.e., as the type of teacher she wanted to be), Stacey's actions as a teacher were intended to help her learn how the students responded to the **instructional approaches** she **employed** (again, these were more like tools than an extension of her preferred way of doing things as a learner or a person). Her learning was very disconnected from some deeper personal vision. In other words, she did not use students' responses to help her determine whether or not they were seeing her as the type of teacher she desired, but instead used these responses to determine if activities worked or did not work. Her primary goal seemed to be to determine which of the *doing it differently* activities worked and which did not. She exemplified this approach quite clearly in our final interview. I asked her to explain what things she was proud of when looking back on student teaching. Her response stood out to me: "Oh, I don't know. I never think of things from that perspective." I asked her to clarify what perspective

she did use in thinking about what happened during student teaching and she responded, “Did it work? Did they learn? I don’t really think of myself being proud of any...I mean everything could have gone better and everything could have gone worse. It was what it was and it worked or it didn’t work. The things that worked are the things I’m proud of...that I would do again.” She also explained to me that her students were like her Petri dish: She observed how they responded to certain things that she did and went crazy testing things, which helped her know what worked. When she was uncertain whether something she had done worked or not, she periodically resorted to outside sources in order to help her determine whether or not what she was doing worked. For example, one day when students were getting louder and louder she decided to try a quiet method of getting their attention. In a low voice she told students who could hear her to raise their hands and repeated this quietly for a few minutes. Students began raising their hands and eventually quieted down. Afterwards, she mentioned to me that she needed to ask Stephanie if this approach had worked.

After Stacey learned about the social context from a given experiment, she used it to guide her enactment of teaching identity in the future, **if** she repeated the same sort of instructional approach. If not, she was on to a new experiment. However, she did begin tweaking her teaching identity in her new experiments in small ways that incorporated what she had learned about what worked and what did not. For example, early in the semester Stacey implemented an open-inquiry lab in which students were to create a model that depicted Earth’s filtration system. The lesson was extremely chaotic and Stacey described herself as unable to get them to try to make the model. They would not even start doing it. She stood her ground during first period, telling students they could do it and giving them very little guidance. However, when they made no progress, she revamped her plan for second period. Clearly, that approach

had not worked, so she decided to give them her lab write up and have them make the filtration system using her diagram. This still did not go very well and ultimately she concluded that inquiry was just a science education buzzword and explained that kids were lazy and inexperienced, which is why the activity did not work. Stacey virtually scrapped this approach since it had not worked and began incorporating more PowerPoint presentations, which although she did not like initially, seemed to work much better. In so doing, she tried to make her PowerPoint presentations *different* by incorporating fun pictures and interesting, attention-getting information.

It is interesting that later in the semester she got a new perspective on whether or not the inquiry activity worked when her students were on a field trip and began talking extensively about their filtration models. Even though students' responses to her *different approaches and activities* were not always what she hoped (i.e., the activities did not always work), she continued to think of ways to do things *differently* in modified form. In small ways (i.e., giving notes because students learn well from them, ordering her instruction so that it aligned with the book) she began enacting herself as a teacher in ways that aligned with what she had learned from students' responses to this particular activity (i.e., kids do better when I give them notes than when I conduct an open-inquiry lab).

This was not true in all instances: When she did not like the response of the social context she also did the opposite and got frustrated with it for its shortcomings (i.e., kids are lazy). In such instances, she became focused on “deprogramming” students or the system. For example, when she assigned students the biomes projects a large percentage of students failed to complete them or submit them. Her first solution was to put all the kids on silent lunch: This would make students complete and submit their projects, she concluded. After realizing it was impossible to

put so many students on silent lunch, she decided she would give them all zeroes and wanted to enter these grades electronically so parents would be able to see that their students were failing science. When Stephanie decided this was not the best approach, Stacey became frustrated and exclaimed that Stacey was just perpetuating a cycle about which all teachers complained. In other words, Stephanie was not allowing Stacey to deprogram or reprogram the system.

Once Stacey had conducted an experiment and become more aware of the typical response of the social context (her students), she accepted what she had learned without many questions, even if it was unappealing to her and used this as a mediator in planning future *different activities or approaches* or she continued to enact her original teaching identity in an attempt to repair the problems of the social context. Her bids at being a teacher who did things differently seem integrally connected to the lack of personal attachment Stacey felt regarding the activities she employed and students' responses to them. Rather than beginning with a vision of what **she** *does* want to do as a teacher, she focused on improving schools and doing things differently than other teachers, of whom she often spoke negatively.

In addition to bids at being a *teacher that does things differently*, Stacey also made bids at being seen as a *teacher* (much like Lilly did). It is important to note that her primary focus was on being a *teacher that does things differently*. She weighted this D-identity above being seen as a *teacher* and explicitly mentioned on multiple occasions that she really did not want to be seen as a teacher and even forgot to act this role in the class at times. This was apparent in many of her actions: She wore pajamas and hippie clothes in class near the beginning of the semester because it was school spirit week; she rationalized with students very differently than most teachers, talking with them as people rather than students; and she wanted to hear about students' personal lives and share her own with them. Based on my observation, students realized Stacey

was uninterested in being seen as a teacher and treated her much less like a teacher than Lilly's students did. Thus, whereas Lilly prioritized being seen as a teacher as one of her primary D-identities, Stacey prioritized this D-identity inconsistently and made bids at it when being recognized as a *teacher* was necessary in order for her to maintain order: In other words, this approach worked at that particular time. Thus, the being seen as a *teacher* D-identity was employed when she became frustrated with how students were responding to her teaching identity. Although these bids did not align well with her vision of the type of teacher she wanted to be (a teacher that *does things differently*), she believed they served a necessary function when the students got out of hand and felt little remorse in using this *teacher* D-identity.

In considering Stacey's ability to modify her teaching identity throughout student teaching, I believe two tools of agency were critical: First, Stacey was very willing to **take risks** even though she recognized that they might ultimately have negative outcomes and second, Stacey **did not harbor self-criticism** after the experiment was over. Once again, these tools vary considerably from those employed by Lilly (i.e., confidence and love for learning and growth). Stacey typically learned what she could from the experiment and then moved on to another. Thus, in implementing various experimental *doing it differently* teaching identities Stacey generated a plan that seemed logical, tested it (which was a risky endeavor), learned whether or not it worked (i.e., did students respond well to it), and then moved on to test a new idea without harboring self-criticism or frustration. All of this was disconnected from (or difficult to link to) Stacey's personal dimension, which was an awkward subject for her as she explained in our first interview. She incorporated some of what she learned about the social context into her teaching identity because these **activities** or approaches **worked** even if she initially felt disgruntled that they did. In some cases she became more comfortable with a teaching identity she had not

originally sought to adopt. On the other hand, she rejected the response of the social context and tried to improve, deprogram, or fix schools or students. In summary, Stacey's negotiation of teaching identity can be characterized as a black and white, trial and error sort of negotiation.

Chapter 6 - Mandy Fleet's Tale of Negotiating [Student] Teaching Identity: I've Got Good Activities, but I've Only Been a Stepparent

[Student] Teaching Identity

In general, the instructional and interactional components of Mandy's teaching identity remained static throughout student teaching. In addition, it is important to note that in Mandy's case, her negotiation of self was less about being a teacher and much more about being a student teacher due to the nature of her mentor teacher's involvement in her learning to teach. Although this claim could also be made for the other two participants, I believe they were both able to negotiate teaching identity, even while positioned as student teachers, because their cooperating teachers granted them sufficient space to establish themselves as teachers and to be recognized as teachers by the students. This was not true in Mandy's case. Although she was in a classroom, taught and planned a three-week unit, and worked extensively with students, her students never came to see her as a teacher, nor did she see herself as a teacher. Next, I provide a description of her *student teaching* identity, as opposed to her teaching identity.

Mandy's student teaching identity, on the surface, appeared to be similar to that of her cooperating teacher since their relationship was mimetic in nature. Thus, in enacting herself as a student teacher she focused on instructing students much like Mr. Tucker had in previous class periods (when he was teaching and she was mimicking) or in ways that aligned with what he would do (when she was planning and teaching her own three-week unit). The instructional component of her student teaching identity, then, was both teacher-centered and student-centered. Mandy typically started her lessons by giving students some of the necessary subject

matter content information in a teacher-centered manner (e.g. mini-lecture, notes, story, etc.) and then proceeded by asking students to do something with this information (e.g. place vocabulary words in the proper location on a graphic organizer, create a skit, write a story, etc.). In her interactions with her students she was typically willing to joke around with them (or “goof off” with them) and interact in a friendly, joking manner, much like Mr. Tucker did. However, she tried to make it clear to students that she had boundaries and that there was a time to goof off and a time to get serious.

The Model

Mandy’s model is much less complex than that of Lilly or Stacey as a result of both the way in which she was professionally positioned throughout student teaching (as a student teacher) as well as how she responded to being positioned in this way (mimicking). Her model arises from the three D-identities that were her primary foci throughout student teaching as well as from a description of how she responded to being positioned as a student teacher throughout her placement. This model focuses on her negotiation of *student teaching* identity. Admittedly, this type of negotiation is likely to vary significantly from the ways in which she ultimately negotiates teaching identity in her own classroom when she will no longer have anyone to mimic.

The following is a preview of Mandy’s negotiation of student teaching identity model that is intended to serve as a guide for reading the narrative that follows.

- Three primary D-identities are useful in considering Mandy’s negotiation of student teaching identity during student teaching: being seen as a *teacher*, *caring about students*, and being *like Mr. Tucker* (the teacher after whom she modeled herself). Initially her predominant D-

identity was being seen as a teacher. However, she felt unable to make successful bids at this D-identity as a result of the way in which Mr. Tucker interacted with her and the students while she was teaching. Nonetheless, she continued making bids at this identity throughout student teaching. She tried to establish positive relationships with her students, although she had difficulty doing so as a *teacher*. In addition, she focused much energy on being like Mr. Tucker. In my work with Mandy she never questioned Mr. Tucker's approaches and tended to value his ideas and practices over those suggested by her university supervisor.

- Although Mandy probably employed **tools of agency** in negotiating her student teaching identity, I was unable to identify these because the ways in which she changed throughout student teaching were much less apparent to me than the changes I noted in other participants. This lack of evidence with regard to her change in identity seems due to collecting less data in my work with Mandy. This made it more difficult to detect the subtle ways in which Mandy changed throughout student teaching. Since Holland et al. (1998) define tools of agency as the improvisations that people use repeatedly (from one moment to the next) that ultimately result in self-change, it is important to have a clear sense of the way in which individuals change from one moment to the next in order to utilize this analytic approach.

The Narrative

There are multiple stories that could be told regarding Mandy's experiences learning to teach. Why is this the story I have decided to tell and how representative is this story of her negotiation of student teaching identity? The analytical approach outlined in chapter three depicts the process used in crafting this narrative, which I believe to be one in which the most

relevant aspects of Mandy's experiences negotiating student teaching self were my primary focus. Thus, this product is a product of analysis and reflects the relative importance of findings from the initial stages of data analysis. Much like the other narratives, Mandy's is arranged chronologically based on the order in which events described occurred. This allowed me to portray for the reader Mandy's story of learning to teach. It is important to note that although a narrative arranged chronologically inherently allows for a focus on development (change over time), my primary focus in this study was on negotiation of student teaching identity. Whether or not this process led to the development of core teaching identity is addressed in the final chapter. Also, similar to the previous two narratives, I have included my conversations with Mandy regarding the subject matter of her teaching in order to allow the reader to explore the way in which coming from a subject-specific teacher education program assumed or deferred relevance in her negotiation of teaching identity.

Figure 5 depicts the fonts that are utilized throughout this narrative.

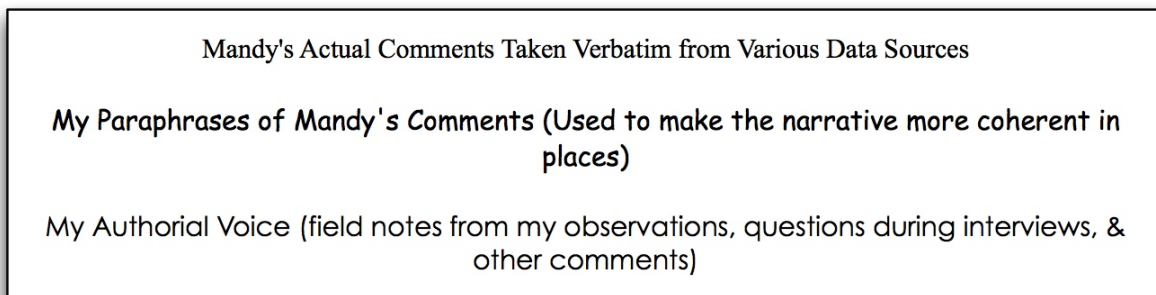


Figure 5: Fonts Utilized in Narrative

Mandy is a senior middle grades education major with areas of concentration in social studies and science. The following is Mandy's description of herself from our first interview. It will serve as the backdrop for this narrative:

I'm fun-loving. I like to be carefree. Not very serious. I like goofing off. I'd much rather have a good time than be serious. Pretty much happy most of the time, too. It takes a lot to stress me out. Pretty care-free about a lot of things. I'm more laid back than some people. I don't get uptight. I'm not OCD: I'm not obsessive about things. I don't get stressed out about little things. I'm just carefree about everything. Just go with the flow. You can't change some things. Just go with it.

I just found out my practicum placement [6 week field experience the semester before student teaching] is with Mr. Tucker. All of my friends in my cohort had a lot to say when I told them I would be placed with him. They told me that he had been teacher of the year and they were like, "We used to work with him. He's serious." I was worried about this. They just kind of scared me a little so I was intimidated. And then when I met him I realized that he is what he is because he's awesome. He takes it seriously.

My experiences during the practicum last semester were really great in Mr. Tucker's class. I got to help him a lot with his class. So can you tell me about a lesson that you did with them. What it looked like? Let me think. What did I do in here [long pause]? We did a video. That was really cool. We were studying volcanoes. We studied all the facts about them and then we started talking about Pompeii and Vesuvius. The kids had to pretend like they were people living in Pompeii on the day that it was going to erupt and incorporate facts and ideas. They had to dress the part and they were news anchors. That's what it was! They were news anchors from Toga TV and they had to report about Vesuvius' eruption

and all the facts about it: pumice is falling and all this stuff. They really got involved. That's when you saw some kids that are normally quiet really break out of their shell.

What was your role in implementing and/or planning that? It was Mr. Tucker's idea and I was in charge of getting little things together and bringing it all together. What did you have to bring together for that? I went shopping for materials. Togas. So you bought props that they might want to use in their skit? Right and then getting them organized. Telling them what they were supposed to do: what their job was. They had to write a script. They had rehearsal time and then they had to act it out and get all the little facts straight. Make sure they didn't have the facts wrong. **I think this was really fun and went really well.**

I've known for a while that I want to work with middle school students rather than elementary or high school students. I think my experiences working in the daycare pointed me toward the age group I enjoyed. **I worked with students ranging from kindergarteners to fifth graders.** The older they got, the more we got along. The younger they were the less we got along. **I** couldn't take the whininess, so that knocks out 3rd grade and down. They were getting better in fourth grade, but they were still clingy and indecisive. They just wanted what you wanted: whatever you thought was cool they thought was cool. They didn't have their own thought process. They're too busy wanting to know what you think about something rather than what they think about something. With 5th graders it got a little better, but the summer right before they went to 6th grade was when they got on my level. We could talk about things and I could rationalize with them. They're more independent. They think

on their own and have their own ideas. I like that about them. I just saw them as more of an adult. They're not adults by any means, but I could see more eye-to-eye with them. I like to let this age group think on their own.

I'm really glad I'll be teaching science during student teaching rather than social studies. I used to love social studies, but I've found myself getting less and less into it. I think the reason I'm not so into it is because I'm scared of failure. I don't feel as though I'm prepared enough to teach history, because all the content courses that I took weren't really directed towards middle school. They had secondary people in them, so every teacher that taught it was more of a high school teacher coming in to be a college professor. So they focused more on what you would do in high school. That's great and all, but what do you do in middle school? That's a whole different group of kids. So I just feel like I'm not as prepared to teach social studies as I am to teach science. I just don't feel like I know enough content to turn around and teach it to children.

In my social studies course I feel like I didn't learn a thing. I didn't learn anything about Georgia History and what if I have to teach it? I'm going to have to basically learn it the summer before I have to teach it. And then, I just feel as though I am in no way prepared to teach history. And that's what scares me. I don't want to have to teach history because I don't want to have to go through the learning of how to do it and by myself. Nobody helped us through that, as where with science they helped us along the way. That's similar to reason I wasn't sure if I wanted to teach seventh grade, because I hadn't had the content course for that so I didn't know if I wanted to teach that just because I didn't know if I could teach it well.

Although I know I have room to learn, I definitely feel more prepared to teach science than social studies.

I'm definitely more comfortable with my science content. We had science content classes that really helped **with that**. They taught it to us like we would learn it as a college student, but then they also broke it down with a class that just basically teaches you how to teach it to middle schoolers. It was directed towards middle school. We didn't have secondary people in there learning how to teach physics to high school students at the same time you were learning physical science. **What I liked best about these science methods courses was that they** showed us activities that we could do with our students: activities that other people have done that have shown to be worthwhile rather than us just trying something and always coming up short. I think these science courses were really good, because you can know all day what something means, but you don't know how to take what you know and give it to a middle school child.

I don't think many of my middle school teachers **knew how to do this**. I hated my middle school teachers. I felt like middle school was just a holding place for kids. It was a joke. And I don't think it should be like that cause I felt like I wasted three years of my life. I can't remember one thing that I learned. I don't remember having a good time unless **I was doing** something bad. And that's why I was having a good time, because I was goofing off. I was more in-tune with my friends and cared more about what they thought than anybody else. I backed away from my family and took on the role of my friends and what they thought. **I was definitely** more peer-driven at that age. And you remember that very specifically? Oh

yeah. Definitely. Name brands. Had to wear what everybody else was wearing. Definitely.

Hmmm. That's interesting. I don't remember that at all. You don't? I do. I remember walking up to people with my friends and having to be the popular kid and all that.

Anyhow, getting back to my experiences as a middle school student: My teachers never taught me anything and I just don't want to have that with my kids. I definitely want to be part of a change because I don't think middle school is a holding place for adolescents. I think it's a place to learn. I guess that **what motivates me to teach middle school, because** I was the lucky one that continued going through school, but I'm sure a lot of kids get lost at that point and you have teachers that are not showing you that education is valuable. That's what made me want to be a teacher so I could catch those kids that are about to be lost. This is a very vital *age*. If you don't catch them now and keep them interested in school there's a big chance they're not going to make it out of high school. This is the time to do it. If you've already gotten to high school and you've gotten to 10th and 11th grades you kind of know you want to go to college. You've got that mindset. But this is when they make decisions about whether they like school or they don't like school. It should be fun, educational: a boost towards education rather than something that seems negative. Whereas I saw it negatively. I want kids to see it as a positive place.

Although I can't think of many positive experiences I had with learning in middle school, I do remember one class. I did have one good teacher that I really liked and it was because he told stories. He was a history teacher and he just told stories. He was a really good story-teller, so I liked that. It was my favorite class. Because he just stood up there and

talked and I never had to take notes and I'd just sit there and listen and get it. That was one of my more memorable classes, - one of the few.

I'm mainly a school science person. I can't really think of any experiences I've had with science outside of school that stand out to me. I've taken 2 biology courses, plant and animal biology, chemistry, started physics but dropped out and then took the physical science education one, earth science. I believe that's it. I loved biology, especially dissection. I got it. I like things that you can see for yourself and it's hands-on. I liked earth and physical science because I like being able to see things, to be able to experiment and to show things. When you teach it, you can show it. I like that.

Ok, so if you had to think of your life and any experiences you've had with science perhaps outside of school does anything stand out? Chemistry. It was the hardest thing I've ever taken in my life. The numbers are what got me...all the numbers. I had to struggle with it. Did you have a lot of labs that you were doing in that class, or what did it look like? Uhhhh [long pause & laughs]. I have no idea. Chemistry stuff [laughs]. We went to the lab. We saw chemical reactions of things. We mixed elements to see what happened, things like that. I mean it was fun when the labs were going on, but figuring out why that happened and balancing equations and things like that. I liked going to the lab and doing things, but as far as the work that goes after it, like writing it all down, balancing the equations, all that, that just wasn't my thing. I had to struggle with it.

So what originally made you gravitate towards science? I love it. It's my favorite subject. I have always loved it. I always loved science: hands-on, experiments. You see

it. It's everything around you. There's reason for it. That question of, "Why are we learning this?" It's science it involves you every day. In math I never knew why I had to know those things. History I got it, but I'm in history. And then with English I'm just really not the greatest writer, so I never got that. But with science I saw it. I understood why we were learning it, so I never had to ask that question, "Why?" I think that's why I really liked it a lot.

I know when you're observed people want to know why you're teaching what you're teaching other than because **it's included** in the standards. With science, it's based on everything around you, - especially earth science. It's Earth. It's where you are. It's outer space. And it's weather and climate You can basically tell them [they need to know] all that to be a better individual. **When** you watch the weather channel, you will understand it after you've learned meteorology. I don't know. I always liked things that had a reason behind learning. There's no reason for algebra. And that used to drive me nuts that I had to learn... So the reason for science is because you can see it? Because it's around you? Right. And kids know that and they get interested in it. Teach about clouds. They can go outside and look at clouds. Teach them algebra, they can't go outside and look at algebra. They could care less about all that.

I think science is especially motivating to middle grades students. I just really like them. They're smart alecks and I love that. I think if you can be sarcastic you're smarter than the average **person**. It really does take a smart person to be as sarcastic as they are sometimes. And they're really creative at that age because I think once you go to high school your creativity is ruined. They mold you in the way they want you to be. At this age they're still extremely creative. They're still really young and innocent in their thoughts and they can just go with

whatever they feel. Nothing's holding them back. Nothing's made a mold around them. They're what they want to be. I wonder why that happens at high school? I don't know. I really think they strip you of who you are in high school. Cause they force you to be something that you're not. They force you to be what they want you to be. They want you to be this way and that way and in middle school they're still young so they're still the way they are. They're real creative. They think of things that you would never think of in a million years and you're just like, "God." You get home and you're like, "I can't believe this."

Starting back at Heavenly Middle this semester was still a little intimidating. I had to get to know the students in the classes I worked with during my practicum again and meet lots of new students. I don't know why but I'm at the age where you still want to be liked. I don't know what that is. It doesn't matter who you are, you still want them to like you and respect you. I mean you naturally want them to see you as somebody that can be their friend and somebody they can trust in and everything but you also want them to respect you. That's a constant fear is how are they going to see me? Are they going to see me as a step below a teacher? Are they going to see me as older? Are they going to see me as a college kid? How are they going to see me? So I was a little nervous about how they were going to take me as a teacher. How do you want them to see you? As long as they saw me as a teacher and respected me. Once you get their respect you can get their friendship, but you have to get that respect first. If they see you're just a college kid...it loses...

I arrived today to conduct my first interview with Mandy at Heavenly Middle School. I had asked her when scheduling the interview to select a location with which she felt comfortable and that was most convenient for her.

She selected the school. I asked her if we would be able to find a place to do the interview outside of Mr. Tucker's classroom so she would feel comfortable answering all of my questions. She mentioned we could use the empty room down the hallway. However, when I arrived today she wanted to do the interview at a table in the back corner of Mr. Tucker's room. I asked her more than once if she was sure she didn't want to go someplace else so she felt she could respond openly to any of my questions, especially regarding Mr. Tucker. She said it didn't matter and that she would be able to say anything she needed to with Mr. Tucker in the room. Although I wanted to push harder and move to a neutral location, I decided this was probably a significant decision that I should honor and ponder throughout my study. About 10 minutes after beginning the interview, Mr. Tucker returned to his room to get work done and remained working at his computer, about 20 feet from us, for the remainder of the interview.

A few minutes into the interview I asked her the following: All right so if you had to describe a good science teacher and what that person does with his or her students, what would that look like? Honestly? It would be Mr. Tucker. He's probably the best science teacher I've ever seen. He interacts with the kids. For every lesson that he teaches he does visual, auditory, kinesthetic **activities**. He has projects to get the kids that love to draw involved. He has writing things for the kids that like to write. He has skits and things for the kids that like to write and for the kids that are more dramatic and like to act out and be more creative. He just reaches from all different areas to make sure that all the kids are

involved and enjoying the lesson. And he's real interactive and fun with the kids. He's not uptight, strict and by the book like a lot of teachers are. He jokes around with the kids. He has a good time with them. Why is this so important to you and why do you like this? Because it connects with them. Cause you could actually see where they were interested – genuinely interested. Not just because they knew they were going to have to pay attention to pass the test. They really wanted to know. And they really got excited about stuff. And you would have kids that would never do anything until he brought out that one project that got their attention and then they would actually sit back and start learning.

So what about him make him a good science teacher? Are those things specific to science? I think **this approach would** work with any age group. I think he could do it with any age group and it would have the same impact. Do you think some of those things you listed hold true across all subject areas? Definitely. Definitely. Is there anything that he does that's specific to science or that you can think of that would make somebody a really good science teacher that might not be the same thing that would make them a really good language arts teacher? In math and language arts you can't do as many hands-on **activities or show** them as much, but with history you could do some of these things. **The teacher down the hallway** here, he actually reenacted the Battle of Gettysburg on the football field to get the kids to understand the concept behind that. So, you can do that across the curriculum. You might not be able to do it to the same extent as you can with science because there's so many things you can do hands-on. So do you think you could be an equally good science teacher if you didn't do so many of the hands-on activities? No. Because there are some kids that you can tell them

all day long but until you show them and let them experience it they're not going to get it, especially at this age. When you teach, some kids will get it just by hearing it. Then you've got to show them. Then they have to interact with it.

That reminds me. That's one of the reasons that I pulled away from the history, because it wasn't as interactive. I like being more interactive. I don't like being just straight from the book: read, read, read, answer, answer, answer, write, write, write. I like to be able to break it apart, do fun things, be creative, and have a good time. I want to be interactive. I want to be fun. Can you paint me a picture for what having fun looks like? I always try to joke around and have a good time. I don't like to sit there and just teach and be serious. I like to goof off and cut up with kids. Humor. Making it not just sit and listen kind of stuff. I want to be able to let loose and then have a fun interactive way of learning. I want the kids to feel free to ask questions and to be involved, not to just feel like they have to sit there and take it all in. They like to be a part of the lesson not just listen to the lesson. I want them to actually have a good time and like coming to school. I want to make sure I hit all the levels that they learn on: Hit all the kids that need that extra step to learn to be able to have projects to help them learn rather than just preach it and teach it and that's it. With history it wasn't like that. And I know they [the teachers] could have done it at times, but there are not as many windows to do it. There are not as many opportunities for you to do it. Are there any specific pieces that might make you a good middle school **science** teacher? Is there anything that stands out to you about that science piece other than what you mentioned? I think that's about it...that and I love goofing off with the kids. I love getting on their level. I love being able to goof off with them. **It's really important for me to be able to connect with students**

and science is a subject in which I will be able to do this more easily than other subjects, especially since I had those courses that prepared me to teach middle school kids.

Anyhow, getting back to Mr. Tucker. I think I have a really good relationship with him. He helps me. I'll watch him and mimic what he does because that's the best learning with him. When you have somebody that's that awesome to watch is amazing. I get all the things that he does for my book [a notebook of activities she is keeping] for my later use. In case I do teach this class I can have the things that he has, the ideas that he has. He's done it for years so I know they work. Right now he's phasing me in. I watch him for two periods and then I teach two periods. Last week I watched him for three and taught one.

So he's doing the planning right now? And then the 29th I plan a class. That's the first one and then I have 4 weeks where I'm in charge, - where I have to write the lesson plans. Are you going to get access to his stuff when you're planning do you know? Yes, ma'am. They [the folks at the university] said I could use it. I can use like his graphic organizers because I mean it's really hard to make graphic organizers.

So tell me what it looks like when you're teaching after watching him for the first two periods. Does he chime in periodically? Yes. And I like that. He'll help me. There are little things I forget to do and say. And over the content, - I'm covering the things and I'll forget to say one thing that will help them see it better and he'll either tell them or he'll tell me. Either way works. Like today we were talking about a supernova and the blackhole and how it implodes and the iron. He jumped in on that and elaborated with them. I couldn't because I didn't know totally. That's where you over time get built up and you understand it more. I read

the book. He's definitely done more than read the book, so he chimed in and broke it down for them so they could see it better, because they had questions. Is there anything that you're worried you're not going to learn in your work with Mr. Tucker? No.

I've already picked up a lot of neat ideas from working with Mr. Tucker. One thing he does that I think is important is using the SmartBoard. I've seen how much it improves student learning. I think it's great to have that tool so you can show the kids and interact with the kids. Mr. Tucker has showed me all the ways that you can pull in visual aids to help out. For every lesson I think there should be a visual aid. I'll always have one: whether it's a picture or whether it's a movie or something. Also, he's showed me the importance of having a project at the end of everything. That's one thing he does, too. When you learn something you also have a project to go with it. So, the creative kids that like to draw can have an opportunity to draw and learn. And the kids that like to write have an opportunity to write and learn. So that's one thing I'll take to my class.

I had a blast teaching the lesson Mr. Tucker planned today. We had the kids think about Newton's 3rd Law and apply these principles in designing rockets that would fly the highest. What we did today is my type of lesson plan. I loved it. Kids got to have fun and goof off. To be able to do that is amazing. I love that. I was able to help groups design their rockets while being able to cut up with the kids. I think they know that I can play around and be goofy and have a good time with them and then, at the same time, if they take it too far they know when I get serious. The group I was working with today is

still kind of new for me. This is the first time I've ever taught them this semester and I never had them last semester. So, they're still learning my boundaries: what really bothers me. I like playing around and having a good time, but with this age group, they really like to push. If they can get past that [serious teacher persona] they love to, but you've got to stick to your guns and get serious when you've got to get serious.

I love the kids at Heavenly Middle School. They're so wonderful. My experiences working with them are very different than some of the other experiences I've had out in schools in different counties. I remember leaving school every day when I worked in another county thinking, "How do they not get that?" I mean I can't imagine any other way to say it. Here you actually see them get it. That's something I didn't see as much there. Like some kids, of course, they get it. Then you get those kids and you're like, "I don't know what else I can do." Here you don't have that as much. Do you think that's going to be a problem when you get into another school? I hope I won't have those problems, but I'm sure I will have that happen. I'll work through it. I can still talk with Mr. Tucker. He lives in [Name] County so he'll know what to do. He can give me help.

I also love being with these kids because I love being able to goof off with them. And you've found you've been able to do that just fine? As long as you have control and you don't lose it. Mr. Tucker helps me with that, because they know I'm not a teacher so it's easy for them to overstep their boundaries. They don't really know where the boundaries are. So he's always there to back it up.

So what sort of things will they try with you that they won't try with him?

They take it a little too far. And I'll get them back in but it takes me a little bit longer then when it's him. They'll try me a lot more than they'll try him, but that just comes with time and the fact that I'm not the authority. They know I can't do certain things. They know I can't write them up. I can go to him to have them written up, but they know that I'm not a full-blown teacher and they push the envelope. I think it would be a lot different if I were a full-blown teacher because then they know that I have the ability to do things. These kids aren't dumb.

One of them called me an assistant the other day. [laughs] I was like, "I'm not an assistant." **I think he said this because** I don't teach his class yet. He was like, "What do you do, just file papers and pick up his book?" And I was like, "No, and you know I'm not that."

A few days after our initial interview I observed Mandy. The following is a description of a segment of class Mandy taught after first watching Mr. Tucker teach. **Do you still have a copy of that planet data sheet that Mr. Tucker and I gave you?** The student responds that he does have it. **Well can you hurry and finish copying it and then give it back to me?** Mr. Tucker immediately interjects that, in fact, he needs it back now so others can copy it. He also pulls out a sheet of paper that Mandy is referencing and holds it up to show the class, explaining that these notes can only be used on the first part of the upcoming test. **Since you'll only be able to use your notes on the first part of the test, it's still going to be important that you study.** A student complains that he can't use his "seasons burrito" on all of the test and explains that he believes it is silly that he has to rewrite this information. He begins arguing with Mandy. Mr. Tucker

interjects, "Julius, there's a sign [class rules emphasizing respect] in the upper left corner of the white board over there. Do you see that?" Julius quiets down. **So, study hard and if you need extra help there will be a study session tomorrow morning before school where we'll answer any questions you have.**

Later during the same class period Mandy begins showing a brief video clip on the SmartBoard. When the video is finished, Mandy summarizes, "Ok, that shows you the difference between asteroids, meteors, and comets." **The next video will show what happens when meteors impact the moon.** After this statement, Mr. Tucker offers the alternative suggestion, "Let's start with this one." He immediately begins showing another video. "Ok," she says. The students are watching quietly. When the video stops, Mandy comments, "Pretty cool theory, isn't it, - that water came here by comets." A student responds with a question about riding comets like cowboys. Mandy asks him what he said but before he has time to respond Mr. Tucker starts a third video clip. Mandy tries to introduce the video clip: "The next one...I'm not sure...the next one is how it impacts the Earth." However, the video is already playing.

After finishing the video clips, Mandy asks students if they have any questions about asteroids, comets, and meteors. She clarifies what they need to know from the video clips. While she is still clarifying, students begin talking and start getting up to retrieve their SmartBoard keypads [remote controls] for the review game, which Mr. Tucker has projected onto the SmartBoard. Mandy asks

them not to get up until she's finished. Students sit back down. Once she is finished she asks students to get up and pick up the keypads while passing out folders with game questions inside. She instructs students not to open the folders.

The students chat loudly while she finishes passing out the folders. Mr. Tucker moves to the right side of the classroom and frowns at students who are not behaving well. He makes his way to the back of the classroom and quietly explains to two students what they are to be doing. This same pattern of "chiming in" occurred throughout the remainder of the class period.

I think my university supervisor and I will work together pretty well this semester. She's taught in both urban and rural areas and just quit teaching last year, so she probably has a good sense of what classrooms are like. I'm not worried that she doesn't have a background in science. I don't think this would really matter in working with students at this age: The content's not that hard. I think the only thing I wouldn't get from her that I might get from a science person is she won't know if I say something wrong. But I'm sure Mr. Tucker will correct me on this, so I'm not worried about it.

In my first meeting with my university supervisor today, we talked about my relationship with Mr. Tucker. [Riley's comments will appear in this font throughout their conversation.] I don't know what to do about...he's [Mr. Tucker] very involved. I know. And a lot of the people who supervise do not allow mentor teachers to do anything. I, on the other hand, do believe when

you're doing group stuff, it's fine if the mentor teacher walks around and assists. But he's very involved. Right and it's so tough for him to back up. And I hate to say anything. I don't want to overstep my boundaries because I know I'm not the teacher and I know he's the teacher. I'm supposed to be following him and shadowing him, so I'm scared to say anything. I don't want him to ever think that I care, because I love it. Because he helps me. Like if I'm saying something and I don't do it right...if he thinks that I can improve on something he's quick to tell me about it. Instead of making the class suffer he'll help out, too. And I know that's frowned upon, but I actually think it's good cause it's constructive criticism and help. That way the kids don't suffer for the lack of something I'm not doing right. So I like it, but I'm sure like some of the supervisors...

No, no. I like it. I mean you're really good team teachers. I think as you move maybe into your own unit hopefully...and maybe I'll just gently say, "I love that you team teach with her, but during her unit I really need to see her do everything." And you're right. It's his classroom, but he has invited you into his classroom to let you take charge. I just wonder what the dynamic would have been today if he wasn't in there at all. It is his classroom, but during your practicum that's more shadowing. Student teaching is really you trying out your own things. And he seems like he would be totally fine with that. He's just so into kids and laughing and making sure that they're...And they're so into him, too. That's another problem. They LOVE him. They want to go to him. They want to talk to him. They want his praise. His praise is way more important to them than mine.

We also talked a little bit about my classroom management. Riley mentioned that it took me a long time to get this group quiet and asked me how I might be able to improve this. With that group I've just got to work with them more so they can see my serious side and my fun side. [long pause] It's just going to take time since I wasn't with them

last semester. They're going to have to learn that even though I'm not a teacher I'm still supposed to be seen as a teacher. Well, you are a teacher. You're just a student teacher. Right [in a tone of disagreement - laughs].

I've been following Mr. Tucker's lead for a few weeks now and have just started teaching my own unit. The following is a snippet from one of the first classes Mandy taught during "her unit": You all might want to take notes on this. So we have freshwater and saltwater. Do you think there's more freshwater or saltwater on Earth? Students shout out a bunch of answers – most say saltwater. 97% of the Earth's water is salt. Only a mere 3% of all the water on Earth is freshwater. Now of that 3%, you all got to keep this in mind, this is of the 3% - seventy-six percent of that is ice. It's frozen. They can't get to it. 12% is shallow groundwater, 11% is deep groundwater. And then you have a small percent of water in lakes, rivers, and in the atmosphere. A few students start writing. Mandy moves back and forth pointing at the screen. If we only have 1% of water we can drink, how come we don't run out of water? Student responds that she doesn't know how to say it. Mandy responds: You're right. Water's recycled. Mandy pulls out a glass of water. This water's been around since the beginning of the Earth. Dinosaurs drank this water and peed it out. I found this water just for you all. It is hard stuff to find dinosaur pee water. You know what else was in this water? You remember the Gladiators when they used to fight? There's a little Gladiator sweat in this water...Do you think I'll drink this water? Yeah, because you're nasty. Students laugh. Because you like dinosaur pee. Mandy ignores this comment and moves on: There's no more water on Earth today than when it started. The same water that's here today is the same water that's been around forever. Students begin

asking her all sorts of questions. They shout out, laugh, and try to be cute and entertain their peers with their responses and questions. We're going to talk about that. All these questions are about to be answered.

Can't you make water? Students shout out, laugh. Guys, you all are getting way too in depth. Hey, I'm not joking. It would be much easier to take the salt water and fix it up. No, I'm saying. No, I'm saying. No, she's got a good point [another student]. Can't I talk? Ansley, I want you to finish. All right, what I'm about to give you is this picture. I know you might now know where everything goes. Where everything goes [snicker], a student says in a mocking voice. She responds multiple times that they will be getting to the answers to students' questions later in class. She then passes out a manipulative that she got from Mr. Tucker: The manipulative had water cycle vocabulary words and clip art pictures of different phases of the water cycle. Mandy asked students to arrange them in the best way they knew how. Students are somewhat productive while working on this. Some students try to pop the plastic baggie that holds the words. Others arrange the words and images quickly and then chat with others in the class. After students finish, she continues by asking them to take notes on the information related to the manipulative they just completed. After a while she asks them: Have you ever let a tear dry and felt that gritty feeling? A few students respond that they have. If you drink salt water and then go run, will your sweat be saltier? No, that's not how it works.... The sun beats down, gives off heat, you have the ocean, it rises as water vapor [with enthusiasm in her voice]. Imagine. Water vapor. Students snicker. Wow. Tough word. These interactions typify those between Mandy

and students for the remainder of class. She leads the discussion for a while longer before showing a video clip, asking students to write a story about a day in the life of a water molecule going through the water cycle, and showing a Magic School Bus water cycle video clip.

I really liked this lesson. Here's what I wrote about it in my reflection for Riley. I held up sea salt and asked if table salt and sea salt were the same thing. This started a huge discussion in which they ended up figuring out the answer for themselves. I also showed them how much salt would be left if you took 1 kilogram of ocean water and boiled the water away. They couldn't believe how much salt was in that small amount of water. I could tell just by how into the lesson my students were that they were grasping all of the ideas I was trying to teach them. They also enjoyed going to the lab and doing the experiment. Even if it was short they loved getting to move around and do something different. This lesson went fabulously and I couldn't have been any happier with it.

I met with Riley again the other day and she had some constructive criticism for me. Just a suggestion: If you want to pass out stuff, have kids pass out stuff so you can continue talking. I did that but it's such a....cause the ones that want to do it are the ones that are going to socialize if they do it. So I quit. It was just...it was getting a little... Quiet Sally who sits over the corner who would probably love to do it, but she would never say anything because she's so petrified. **Riley also mentioned that I needed to be mindful of my sarcasm.** Sarcasm is good when it's positive. I'm really sarcastic, so I would make fun of myself. I wouldn't put it on the kids, because this age is so sarcastic and they let you think they think it's funny when you are sarcastic, but they really don't like it and it shows up in the end. I don't usually cut jokes. A lot of those kids I know can handle it,

because they do that with Mr. Tucker. I've seen them go back and forth and they've learned that when I say things I don't mean it. I know I can do it with certain kids: They go with the flow. They love it. They'll give it to Mr. Tucker; they'll give it to me and they want it back. They think it's fun to have interaction like that. Yeah, just be mindful of it. Sometimes it does sound negative. Even if it looks like... This age group loves that. It's like their life style is to be sarcastic. That's the only thing they understand at this age is sarcasm.

I observed the following when I went to observe Mandy a few days after this conversation. After the announcements, Mandy announces that students have wanted to know when they're going to watch the video they created a few days ago. She explains that she's decided that their behavior between now and then determines whether or not they'll watch it. She doesn't tell them any specific things they have to do in order to be able to watch it. She just explains that the class has to be good. Mr. Tucker interrupts and mentions that they might want to consider pulling out those students who are not well-behaved instead of ruining the opportunity for the whole class. Mandy says, "I think we'll be fine." Students begin asking a lot of questions about this: "What if I'm not here on that day?" Mr. Tucker responds, "Hopefully, you won't be." Mandy then explains that they will have to choose whether they want to watch their class' video or those skits from another class. Students complain, "Why can't we watch both." Mandy responds, "Ok, well we just won't do it [watch the video] and we'll learn [have class like normal]." Mr. Tucker intervenes again and explains that he will take those students who aren't well-behaved to the library so the rest of the class can watch. In

response to this a male student responds, "Shut up old man," to Mr. Tucker. Mr. Tucker responds in a not-too-serious voice, "Don't say that. Apologize." The student says, "Sorry, Mr. Tucker" in an obviously sarcastic voice. Then Mr. Tucker continues to banter back and forth with this student. "Do I call you ugly?" The student says, "yes." "Do I call you brainless?" The student responds, "yes." He ended by telling the student not to call him old. A female student chimes in, "Mr. Tucker's not old. He's got a pink shirt on, so he's hip."

Mandy attempts to get class started after this. She begins by having students come up to the SmartBoard and label the parts of a wave. A student does so and explains what she's doing while she labels. As she's labeling, Mr. Tucker continues to banter back and forth with the student that called him old. Mandy tries to get them quiet. She asks students to explain why if you're floating out in the ocean you don't move towards shore with the waves. A student responds. The male student who called Mr. Tucker old is still riled up and is carrying on with another student next to him. Mandy stops class and explains, in a stern voice, that this is an example of behavior that will result in going to the library instead of watching the movie. *There's a time to goof off and a time to be serious. Now it's time to get serious.* The class quiets down. Another student shouts out that he has an example he'd like to share. He says when he's been body surfing close to the shore, he has gotten pushed up onto the beach with the water. Mandy responds that that is because he was close to the shore rather than out in the middle of the ocean. Another student thinks of a similar example and then

a third student announces in a somewhat condescending tone, "See that proved your theory wrong." Mandy rebuts, "No it didn't" and begins trying to re-explain the information. The students began chiming in and arguing. Eventually she gets them focused on what she wants to be doing.

I called Mandy today to see if I could come and observe her teaching. She explained that she needed to ask Mr. Tucker if this was ok with him and told me she would get back with me in a day or two. Each time I contacted her about observing, she handled the situation in the same manner. Sometimes I waited multiple days to hear back from her and eventually ended up calling her back to see if she had gotten approval for me to visit. I made it out to observe the first day of her three to four week unit. The following is a description of what transpired throughout a portion of the class on that day.

As soon as you all sit down I'll pass the tests back. Jim. He responds, "I'm putting my stuff up." Mr. Tucker begins talking while Mandy continues standing at the front of the room as if she were prepared to continue leading class, "Monte was the gold standard here. Nobody beat him." Mr. Tucker gives Miguel something. Mandy mentions that this class had the most students who scored over 200 points. She also says that nobody in this class got all of the 10 extra credit questions on the test. Students don't really seem to be listening to her. Mr. Tucker asks if students know whose jackets are left in his room. Mandy continues passing back tests while Mr. Tucker tries to figure out whose jackets are missing. He has a private conversation with a student in the front left while she continues passing

back the papers. "Hey Mr. Tucker, Mr. Tucker, can I have a stamp?" a student shouts. Mr. Tucker continues to move through the room and chat with students while Mandy is passing back papers. A girl moves to the front and begins copying something off the screen in front. Another student raises his hand and says, "Hey Mr. Tucker, Mr. Tucker."

While Mandy finishes handing out the papers, she tries to get the attention of the class: Hey guys, look up here real quick. On Friday you're going to have a piece of paper to take home and you're going to have to teach your parent or guardian about tides. You're going to give them a pre-test and a post-test. This is going to be worth 30 points. Take it seriously. A student asks her, "How are you going to grade it?" Mandy walks around with a stamp. Another student queries loudly, "Do I have an 87 or an 86?" Mandy quietly says, "Shhhh..." and then responds to her question. Students chat quietly while she passes them out. She finally finishes passing out the papers and runs through how the test was scored. As she does, the class continues talking. She keeps explaining. Mr. Tucker weaves through the class passing out candy to students who earned A's on the test. Students want to know what the maximum score is. She says she thinks it's 212. She circulates through the room stamping students' tests that did well. Mr. Tucker goes back and begins talking to the student in the front left corner again. He looks through his test with him.

I'm passing out a sheet of paper. Don't write on it yet. Write your name on it. Students chat at a moderate level while she passes them out. She gives one to each student one at a time. Hey Mr. Tucker, can you make me some more. "Sure, certainly,"

he says. She tells students to write everything they know about water on Earth on the paper she just handed out. She takes time to describe 2 ground rules: 1. Please raise your hand if you have a question, comment, or response so everyone can hear. 2. When she asks a question students are not to blurt out the answer because she wants everyone to think about it and then she'll call on someone. She paces back and forth while some students write and some students chat quietly instead of writing what they know about water. Mr. Tucker is fixing a huge beach ball globe (at least 4' diameter) on the left side of the classroom about 5 feet from the students on that side of the room. Students turn to him and whisper quietly to ask what he's doing. A student blurts out a question, "Ms. Fleet, how deep is the water in the ocean." I can't hear you. He raises his hand and she calls on him. She doesn't know the answer so she looks to Mr. Tucker, who offers an answer. She asks students to begin sharing what they've written down.

As she continues leading class, Mr. Tucker makes his way to the back corner of the classroom and begins helping a student who needs to make up the test that was just passed back. He reads quietly next to the student making up the test for the next twenty-five minutes. After about thirty minutes he gets up to get on his computer and then continues patching the huge beach ball globe. As Mandy introduces the final activity, in which students pretend they are a drop of water and have to write about their travels through the water cycle. Mr. Tucker chimes in, "If I was going to start, I would say one day I was floating in

the ocean and almost got swallowed up by a fish when all of a sudden I was floating in the sky. Come on use your brains. Creativity." Mandy moves to talk to Ansley who was being loud a second earlier. Ansley asks, "Can I read mine, Mr. Tucker?" Another student is at Mr. Tucker's desk by the computer. Mr. Tucker doesn't hear or ignores Ansley's question. Mandy moves to the front row. "While sitting in the rain puddle one day....," Mr. Tucker chimes in. A student responds, "One day when I was sitting in the can?" Students get louder. Most of the students on Mr. Tucker's side of the room aren't writing. Mandy puts on the Magic School Bus clip of the water cycle and begins taking up water cycle stories. Students say, "Mr. Tucker, why don't we take field trips like that?" They start chatting and Mandy says, *Shhh....look where they're landing* [referring to the water droplets landing in London]. The bell rings and students start to stand up. Mr. Tucker reminds them, "Chairs up, please." Students hand her their papers on their way out of the classroom. Mandy goes over to Mr. Tucker and asks him a quick question that I can't hear.

Although I was only able to observe a total of six times throughout her student teaching experience, each time I came Mr. Tucker engaged with the class similarly for at least a portion of the class period. Although he certainly chimed in less near the end of Mandy's three week teaching block, every time I was there he always chimed in for at least a few chunks of class. Typically he did this in a way that [from my perspective] seemed unexpected by Mandy and

resulted in her having to redirect the students' focus on her and on what she wanted them to be doing.

At the end of one of my last observations, Mandy clearly seemed frustrated as I was leaving. Later she mentioned that it made her nervous to have me in the classroom while she was teaching. Your stress level automatically goes up a little because you don't want to be judged. Nobody enjoys being judged and you don't know what people are looking at. And you don't know what they're thinking and you don't want them to think badly of you. She explains this similarly to Riley during one of their last meetings. I get nervous when you're in there. I think I change when you come in there, honestly. Normally, I think I am more laid back. I really do get nervous about what people are judging me about. I think about a lot more things and I worry about a lot more. In the other classes, I let them have more social time and I know that class is different. I do have to do things differently here cause a little bit can get out of hand with them, but I am usually more laid back. I guess I just worry a lot because last semester I had one [a supervisor] and she was real strict. Classroom management was a big thing and talking when you're not supposed to be talking was not something that she allowed. I know that you might be different, but it's just I worry about the variance. Even though I might have management of the class are you going to think that they're talking out of turn? That's one thing. I get so nervous. And do you...do you think you change the way you teach when Molly's in there. Yes. Do you change the way you teach when Mr. Tucker's in there. I used to, but I've gotten used to him. It's gotten to be where I'm more laid back. I could handle it better - that nerve of wondering what they're thinking: judgment...being judged. Not so much what the kids think, because it is a peer thing.

Another aspect of student teaching that is really frustrating to me right now is the lesson plans I have to turn in to Riley. The form we have to use doesn't allow for much flexibility, which I believe is an important part of teaching. Every time I plan, everything changes when I actually teach it. I wonder whether I have to change my formal lesson plan for my supervisor or not. These lesson plans are stressing me out and are taking a ton of time. I wish I didn't have to do them or could do them in a way that worked better for me.

I've really begun focusing on how important it is to establish caring relationships with students before anything else. Although this was something I thought was important when I started student teaching, I now have a lot better sense of what can happen when you do not establish positive relationships. I wrote the following to Riley about what I was thinking regarding this. You are so right. If you take time to show you care about your students they definitely respect you and respond to you better. This week a lot of teachers on my team talked about how some of the students were giving them a hard time but they don't seem to be doing that with Mr. Tucker and me. They [the other teachers] actually got a little mad at us for this. After the meeting Mr. Tucker and I sat down and talked about how we show that we care about these students and show them in many ways how we like them. This is why they don't disrespect us like they do other teachers and this is also why they behave in our classes better than other teachers who do not show that they like

or care about them. So this week I learned the importance of showing your students that you care about them and making sure you take the time to talk to them to show you care

I feel really happy with how my lessons have been going throughout my unit. Practically every lesson has gone really smoothly and kids are getting into them. Yesterday, I had students read a section of the book with a group and then teach it to the rest of the class. I think having students teach the class is a great way to help them learn because they really have to make sense of what they're reading. Anyhow, some of the groups did really creative skits. Mr. Tucker even got out props for groups that needed them. The students loved it and it ended up being a lot of fun. I ended up at the end of each presentation having to elaborate on the section a little, but for the most part it went great.

My rendition of what transpired is slightly different than Mandy's. While students were working in groups, most of them appeared to be enjoying themselves. However, the degree to which each student made sense of the information and contributed to their group's final product varied considerably. Also, during skits and presentations, the rest of the class, although entertained, just sat and enjoyed the funny aspects of the presentations. Mandy mentioned periodically that students should take notes, but no one appeared to be writing much. However, they were certainly enjoying themselves. Mr. Tucker got the video camera out and recorded them as they presented. At the end of each presentation, Mandy would spend a minute or two verbally explaining key

information the student presenters did not emphasize or needed to clarify. In addition, Mr. Tucker chimed in and clarified things that Mandy said that were not accurate or not as developed as he would like. All of these comments were made orally.

It's been nice having access to Mr. Tucker's graphic organizers, resource books, and lesson ideas. Also, the day before I teach a lesson, Mr. Tucker and I always sit down and he shares ideas about what I am doing: he lets me decide whether or not I want to modify what I'm doing, but he helps me think through my plans and fill in any holes I might have. This has been really helpful. However, today was not the best. Mr. Tucker wanted me to get them [the students] ready for high school. So he was like, "Get them to take notes." So I wrote up this template on notes and all the main points. He was like, "No. Really let them take notes." That was awful. I will never do that again. It was miserable. They did not like it and all I heard was, "Can you repeat that?" And he was just like, "Well, if you repeat something twice they should know to write it down." They have no idea how to take notes. They've been spoonfed how to do things all their lives and all of a sudden I was just going to break them into taking notes and it was miserable. They wanted to write it down word for word. It was driving me nuts. So, I'll never ever do that again. I had this plan of a template where I'd put down main points to make sure they had them. And he was just like, "No, cause they're not listening. They're not paying attention. You've got to give it to them the hard way for them to learn." It was hard. I felt responsible for the fact that they weren't getting it. They cannot handle straight notes at that age group. You have to give them some structure

behind it. Some guidelines. You have to have main points on the board for them to know what to take notes on. That way just didn't really work at all. But he wanted them to actually take straight notes, which is a good idea. I understood, because it was towards the second semester and they were starting to slack off and thinking they could just fly by the seat of their pants through the rest of the year.

I really liked teaching the lesson on plankton, nekton, and benthos. It's the activity I'm most proud of as a middle grades science teacher. I was teaching them about the zones and plankton, nekton, and benthos. So I put up a big ocean floor with the zones on it. They had to go home and pick their favorite marine animal or marine organism or one that they wanted to know more about. I tried to find an exotic one just to weird everybody else out. And then they came and presented their organisms. I realized that other students weren't paying attention while the person was presenting so I made it into a guessing game where students had to guess what organism the other person was presenting. And they really liked it. Then I put all of their marine organisms up on the wall in the zone that they belonged in after they told me which zone they belonged in. They really liked that because a lot of kids came in after school and they were looking at it and pointing out to their friends their crazy, exotic fish that they brought in that they were so proud of. Why are you so proud of that? Because they really got into it and because they want to know why they're learning something and if that's your favorite fish and you want to know something more about it this is how you do it. They were into it. They got really into it. I told Riley the following were the strengths of my

lesson: It was very visual and interactive in a lot of ways. They get to bring in something that they enjoy, something that they like: their favorite marine animals. It hits on all the learners.

This is really the only activity I did that really stands out to me as one I'm really proud of. I really can't remember many of the other activities I did. They all start running together. But that one was near the end. That was probably the last one that I did. That's why I remember it.

Even though no particular science lesson that I taught really stands out to me, oh God, the questions the kids ask are sure something that stands out. They always ask questions. Content's big. I don't think in any way we're prepared to teach the stuff that we have to teach. We have to learn it and then teach it. So you can never have enough depth. I do think I did a good job of connecting science to the kids' lives, though. Riley told me this more than once in our work together. You always do a great job of connecting pop culture when you're teaching. Even if they don't even know what you're talking about then you tell them about it. And I think that is very natural for you. It's not like you have something stored away that you're going to go, "Ok, I'll bring up point A." you'll just be talking and you'll say, "Oh, like have you ever seen this? Or have you ever seen this?" And I love that, because then you have an opportunity with the kids who haven't to say, "You haven't seen that? You've gotta see it. That's your homework. You gotta go see it." And I love that, because they will.

What were some of the dilemmas you felt you faced in teaching science? As a science teacher? In science? [pause] Depth. It's been how long since I've had earth science? I can't remember when I had earth science. So just learning that stuff. And you really

are not prepared to teach middle schoolers. You might have the knowledge, but you don't know how to take that which you know and give it to them in a way that they're going to understand it. So that's probably the hard thing, just adapting what you can learn to what they can learn. And you'll never know what you need to know. They'll always catch you on something, which is fine with me.

When Riley and I talked about this lesson on plankton, nekton, and benthos Riley wanted to know why I thought it was important for students to learn about what I was teaching them. So why do you think it was important for them to learn about benthos, nekton, and what was the third one, other than for a test? Benthos, nekton, and plankton. To understand sea life. So they can have a better understanding of marine organisms and how they're classified. Why? Why? If I'm 14 and I live in Georgia, why do I care if I don't live on the beach? Just to be more educated: to be able to talk about things. So when you hear something like plankton and nekton and benthos you can actually know, well, they're that because of this reason. And maybe when you go vacation at the beach. Right. You'll be amazed how many times it will probably come back up now that you know what it really is. And that's what their assignment was, to pick out one of their favorite marine organisms or one that they wanted to know more about. If this organism is their favorite they should know everything about them.

And the importance of me asking you why [they have to learn this] is so you can say to them you sound better when you know [this information]. When you're at the beach with your family and you can engage in this conversation, they'll [your family] be impressed. If not for any other reason today, it's so you sound good."

I think everything I did other than the notes worked out really well. There was one other time that I was a little nervous about the test I was going to give students. I had planned to give a test with multiple choice, true/false, and fill-in-the-blank questions. But my mentor wanted me to do an essay test and I was a little nervous about the idea. So I made sure to review a great deal and made sure that all the help the students may need was available, like allowing them to bring me their essay and have them proof read and also by allowing them to come in before and after class to get extra help on a particular lesson. I guess all of the added help paid off in the end. Most of my students did very well on the test. I was pretty shocked at how well they did. I think that this test gave me a better understanding of what they learned during my unit.

Were there any things about science teaching that you were thinking a lot about? Or about middle grades teaching that stood out to you? No.

I can't believe student teaching is almost over. I met with Mr. Tucker and Riley today for the final evaluation meeting. They did most of the talking and asked me for my opinion on my strengths and weaknesses. I'm not very good at identifying my strengths and weaknesses. Mr. Tucker's comment will appear in this font.

Here's one of the things Mr. Tucker said about me. I agree with what he said. I thought your lessons went very well. I thought the kids got it. There were a couple of little gaps. You notice I stepped in a few times to make sure that they got the benefit of my experience and you're not going to have that next time you teach. So you've got to get your own depth. I'd be ready to do that. **I really**

didn't realize how much I would need to learn in order to be prepared to answer all of students' crazy questions. Even Riley commented on the number of questions students asked: I mean every time I was in here I heard one of them question you on something. I noticed this as well and felt like half of the time they asked questions they were genuinely interested in having answered and the other half of the time, they were trying to stump Mandy.

What sort of constructive criticism did you get that stands out to you and why does it stand out to you? **Sarcasm.** Yeah? Who gave that constructive criticism to you? **Riley.** She said to be careful not to be too sarcastic. But with that age group you...once again you know your kids better than they [university supervisor] know your kids. So you know that child can take it cause you've done it. You've seen it go between him and Mr. Tucker. There's certain kids that that's just how you show you can connect with them is if you can cut up with them. I'm one of those people. I like cutting up. I like when people cut up back with me. I don't like straight. That's just not me. And that's how some of those kids were. They really liked it when you cut up with them: were sarcastic with them, because that's how you showed affection to them. And Riley told me to be careful not to be too sarcastic. But I would know the kids not to do it with. I think you have kids that you can't do that with. They couldn't handle it. If you talk to the other kids normally they would think you were mad at them.

Did you agree with her constructive criticism? Really and truly we saw eye to eye about everything. Really? I mean, I'm not all about constructive criticism. Sometimes people [university supervisors with whom she's worked in the past as well as Riley] would say things and you're just like, "Yeah, maybe with another group. But not this group." And she

would tell me, "You know your kids better than I do. So you be the judge of it." She's like, "I don't want you to do exactly what I say, just think about it and see if it would work for you." So she was really cool. She was a lot better than some of the others.

Riley also told me that I needed to be more open to others' suggestions when learning to teach. I think you are very confident in your relationship with kids. But still be open to what other professionals are saying to you. Ok. I'm saying that because I feel like sometimes I'll say, "Well have you ever tried this?" And you'll be quick to say, "Well, it's because..." But even if you disagree just kind of listen to everything and that way you can pick and choose from what people are giving you suggestions about. And then you'll have an even better repertoire. **Mr. Tucker agreed with this comment and explained that:** Everybody's got a different way of doing it. And I find all the time somebody else is doing something I like better than what I'm doing even though I might have been doing it 15 years. Be really open to change. If there's a profession out there where people need to be open to change, it's teaching. If not you get in a rut and the only difference between a rut and a grave is the depth of the hole. Right.

I think the main thing I focused on during student teaching was gaining relationships with the kids: actually getting to know them. **This is one of my strengths:** relationships with kids. I've worked with them for a long time so I know how to build a relationship with the kids. That's probably my main strength with them. And I portray myself confidently. **I got to the point** where I really wanted to know them and understand them. Kids. They stand out more than anything. It's really weird that you get so into these kids when they're not yours and you really don't know who they are. But you really get into their lives and you really want to help them. And you get interested in things that they're doing. You really

build a relationship. It's amazing how much you build with kids in a short amount of time. You really start to connect with each other. So how about some other experiences that stand out. Obviously the kids were very important to you, but are there some specific events that happened that when you think of student teaching you're going to think of those things? Those are the main things. Not so much the things you learn. Yeah it's important to learn how to teach and I learned a lot of that, but the more important things are how to be a friend to the kids enough to respect them and show them that you care for them so they respect you and care for you back.

I think the biggest thing that stands out to me from student teaching is how hard it was learning to teach in someone else's classroom. I can't wait until I don't have to feel like the stepparent. Taking over a class that's not yours is miserable because you do feel like a stepparent. And for them to forget their teacher in that short amount of time...It's like you go into a classroom that's already built a great relationship with a teacher and then there you are. You're supposed to build that same relationship and not allow the other person to have any say so in it. And the kids go to them [mentor teacher]. Like they're drawn to them. And that's how I want them to be with me, too. I think it will be a lot easier when it's my classroom. I'll have my own kids and I'll be their teacher. They won't be somebody else's and I'm just there to help out. I think it will be a lot easier to do what I want to do with my kids. What do you think will be different about it? Like what do you see yourself doing differently? I can do whatever I want. I don't have to look over my shoulder and make sure somebody's approving. Do you have any sense of what sort of things you'd do that would be different? No. But you like the idea of being able to do what you want? Right.

Oh, one of my other favorite things is "You can't write me up." So, the first time I wrote somebody up they were like, "Oh. So I guess you can write us up." But that was probably the main thing. It stinks coming into a classroom that's not yours and them expecting you to control them like they're yours and to have total control like they're yours. So, how do you feel like you dealt with that as a student teacher? You give a lot. You don't do things that you think normally you would have done. Like what? You don't discipline the way you probably normally would. But I had a really good mentor teacher. I know other people were having a lot more trouble with it than I was having just because their teacher wasn't as giving as he was. The kids really listen to him and he would tell them respect Ms. Fleet and they would. So it's just discipline. Discipline's the main thing because you don't want to step on anybody's toes. You go into a class that has their disciplinary things set up and you definitely don't want to step on toes by writing people up at the wrong time and giving demerits when they're not really demerits and things like that. It's tough on the kids, too, because they don't understand you're stricter than another person so how are they supposed to know. That's really tough for them, too. Luckily it worked out with us because we kind of felt the same way about discipline. They should only be punished when it's a serious, serious offense. Otherwise you can talk to a child and reason with them.

So was there any other aspect of being in someone else's classroom that felt challenging other than discipline and the relationships with students? No. That was the main one. He really made me feel at home. And towards the end he started leaving the class a lot. So it really started feeling like home.

So would you say there's anything about Mr. Tucker and how he teaches middle grades science that you're not exactly on the same page with? No. He is what I want to be. He's amazing.

Can you paint me a picture in words of who you currently are as a middle grades science teacher? Since now you've had this whole semester to kind of find a little bit more out about that. I don't know. I think I'm ready for the challenge, but I think there's definitely things that have to be changed. I think my first year's going to be a struggle. It's going to be a challenge. It's not going to be easy. It's going to be just as hard as this year's been except I'm not going to have anybody to help me through it, except mentors that aren't in there with me when I'm doing things wrong. So. What specifically do you think will be hard about your first year? The age. I've been with 8th graders for two years. I've never been with any one younger than that so that's going to be really tough. But they're going to fix that. Mr. Tucker's sending me to go hang out with them [6th graders] for an entire week. All day, every day, hanging out with them instead of in the 8th grade. All right, so who are you as a middle grades science teacher? I don't know. I'm a first year teacher. I don't know. Just like my kids are going to be a first year middle-schooler, I'm going to be a first year teacher. I think I'm ready, but I think there's definitely some worries. So tell me what you're really good at as a middle school science teacher right now. I think I have good activities. Things that they're going to like. I like to hit all of the learners. I've got a lot of great ideas from Mr. Tucker. I got all his junk, so.

Ok, so you've got some good activities. What else are you really good at? Like what makes you different from me as a middle school science teacher? I

don't know. I mean I don't know. I think I'm going to be a fine middle school teacher. I think I'm going to get through it. So nothing really stands out to you about what you think you're good at? No, I don't think anybody can sit down and say I'm going to be great at this. I think they would be lying through their teeth. But I mean from student teaching you've seen to some extent maybe what you're good at. I mean I'm confident when I get up there. I don't think there's going to be a problem with me building a relationship with my kids and feeling confident about being there. But there's definitely things that I know are going to be difficult. I don't think anybody can honestly say they're going to be up there and get up there in front of those kids and have a great year with no problems. I mean they're just lying if they think that's going to happen, because realistically it's going to be crazy. And I don't know how I'm going to be. Like I know how I am now, but I have the backing of another person. And I mean he's already built a disciplinary system, so I can't really say that when I go to this other school with different dynamics and, I mean, I'm going from a school where it's 90% white to a school where there's a high Hispanic **population**. I just don't know how things are going to be. So honestly as a first year teacher I can't tell you how I'm going to be.

Ok, since we're not sure about what you're actually going to be like or who you are right now, what do you think you want your classroom to look like? I want it to be fun. I want the kids to always be interested. I want to have every one of them involved in some way like Mr. Tucker does in this activity or that activity. I know you can't have everything for each child, but I do want it to be fun and have interacting going on.

Are there some specific events that happened that when you think of student teaching you're going to think of those things? Lord no. I lost my life. That's

about it. I didn't have a life. I don't have a social life anymore. Student teaching is a lot like the practicum except we had longer hours and more kids.

Summary Model and Supporting Examples

Three primary D-identities are useful in considering Mandy's negotiation of student teaching identity: being seen as a *teacher*, *caring about students*, and being *like Mr. Tucker* (the teacher after whom she modeled herself). All three are critical in representing her negotiation of student teaching identity. Initially her predominant D-identities were being seen as a teacher and being like Mr. Tucker. However, she quickly realized she was unable to be successful in her bid for the *teacher* D-identity. In a conversation she had with Riley, her university supervisor, she made it clear that she did not see herself as a teacher. When Riley stated that Mandy *is* the teacher, but that she is just the student teacher, Mandy responds, "Right" (in a sarcastic tone that indicates she disagrees with this statement). She also relayed to me that during student teaching a student asked her if she was Mr. Tucker's assistant. She told the student: "You know I'm not the assistant." However, this speaks to her inability to accomplish her bids at being seen as a *teacher*. Even when she was teaching her three-week unit, she had difficulty making successful bids at this *teacher* D-identity. Mr. Tucker regularly interjected or involved himself in class even during this time and students continued to turn to him instead of Mandy for questions and compliments. Despite the way in which she was positioned, she continued to make bids at the *being seen as a teacher* D-identity throughout student teaching. She sent a student to the office at one point and mentioned that students saw her differently afterwards since they now knew she could write them up. To Mandy, her inability to achieve her bid at teacher made it difficult to learn about herself as a teacher: she explained that she had no idea what she would be like as a

middle grades science teacher in the upcoming year because everything she did during student teaching was backed by Mr. Tucker. Ultimately she concluded that student teaching was very similar to the practicum experience except that she had more kids and longer hours.

In conjunction with this, Mandy also made bids at being recognized as someone who cared about the students. However, because she was unable to successfully achieve her primary D-identity (being seen as a teacher), her secondary D-identity was more difficult to accomplish in a way that felt authentic to her as a future teacher. Thus, Mandy could demonstrate that she cared about students, but doing so as a *teacher* was more difficult. She explained to me in our final interview that this inability to develop the type of relationship she wanted to have with students was the most frustrating part of student teaching and that she felt like the stepparent. This comment aligned well with Mandy's description of how she wanted to interact with students in our initial interview. She liked to "goof off" with students, have fun, and be laid back *while* learning. Thus, to her the relationship was primary whereas the learning and subject were secondary. She reinforced this idea when she emphasized that she was frustrated about not being able to discipline students as she wanted. However, she did not emphasize lacking the opportunity to design instructional approaches that aligned with what she wanted to be doing. This comment also seems linked to her third D-identity: trying to be like Mr. Tucker.

Mandy thought Mr. Tucker was the epitome of middle grades science teaching: "He is what I want to be. He's amazing." As a result of this perception, Mandy's student teaching identity was heavily influenced by Mr. Tucker's instructional approaches. In fact, Mandy was satisfied mimicking these approaches throughout student teaching. She explained that copying Mr. Tucker's teaching was the best way to learn from him. She did not complain or perceive her mimetic relationship negatively in thinking about experimenting with desired instructional

approaches. During the initial part of her placement, when she taught by mimicking Mr. Tucker, she focused primarily on conducting the lesson in the same way Mr. Tucker had. When she forgot to mention something important, he would chime in and correct her or describe what she had forgotten to students, positioning himself as her teacher and the teacher of the students. When she taught her three-week unit, she spent more time generating her own ideas and then ran these past Mr. Tucker before implementing them. She explained that each morning before she taught she and Mr. Tucker would sit down and he would help her think through what she was doing and suggest ways in which she might want to modify her instruction. She then made modifications, if she desired, to her approach prior to teaching.

In addition to her belief that Mr. Tucker's instructional approaches were outstanding, Mandy respected the type of relationship he had with his students and tried to mimic this. For example, she loved the way in which he employed sarcasm in his class and interacted with students similarly during student teaching. However, because she was always "backed" by another person, Mandy never felt like she knew exactly how her approaches would be received in another context in which she was really the teacher. However, Mandy tended to believe that what she was doing in her interactions with students was working if it seemed outwardly similar to what Mr. Tucker did. However, Mandy's focus was on mimicking the "things" Mr. Tucker did. She did not question what factors made it possible for him to enact himself in this way, nor did she carefully examine the nature of these interactions with students. This is exemplified in a conversation she had with Riley, her university supervisor. (It is interesting to note that she tended to prioritize Mr. Tucker's ideas and feedback over those of her university supervisor). When Riley suggested she might want to be careful with her use of sarcasm in her interactions with students, Mandy rebutted this comment, explaining that she liked to be sarcastic and that

she was careful in her use of sarcasm. Also, she mentioned that she had watched Mr. Tucker's sarcastic interactions with his students and knew that this approach worked for certain students, which is why she felt comfortable being sarcastic as well. This same tendency to prioritize Mr. Tucker's way of doing things over the suggestions made by Riley was noticeable throughout student teaching: Mandy tended to dismiss Riley's ideas or explain why she and Mr. Tucker were not approaching teaching in the way Riley suggested. Periodically, Mandy did seem interested in Riley's ideas. However, I am unsure whether or not she implemented any of them.

Because Mandy's negotiation of student teaching identity resulted primarily from mimicking Mr. Tucker, it was very difficult to understand the ways in which the personal dimension was relevant in her student teaching identity. Throughout my work with Mandy, her negotiation of student teaching identity was driven primarily by the social context (especially by Mr. Tucker, but also by students). In addition, Mandy never achieved the D-identity she most desired, being seen as a teacher, and, as a result, was unable to make significant progress in establishing the type of relationships she wanted to have with her students as their teacher. This was one of the aspects of her personal teaching vision that she emphasized as highly relevant. However, she was able to glean many instructional approaches and things that worked while working with Mr. Tucker. Although she knew little about what she would be like as a teacher, she felt confident she could establish positive relationships with students and successfully employ Mr. Tucker's strategies in the future since they had worked for him. In summary, then, Mandy's negotiation of student teaching identity can be described as mimetic.

Chapter 7 – Tying It Together

“Everyone in teacher education needs the space and encouragement to raise questions that attend to the possible and acknowledge the uncertainty of our educational lives. For in doing so, we can begin to envision the discourses, voices, and discursive practices that can invite the possible” (Britzman, 2003, p. 241)

Revisiting the Study and Chapter Overview

We come again full circle. I began this study with the purpose of exploring the complexities of learning to teach middle grades science. I wanted to construct a representation of how beginning teachers negotiated their middle grades science teaching identities. Rather than broaching this topic using a cognitive perspective or one that focused on macro-level change (i.e. development), I applied a “negotiation of teaching identity” lens for the purpose of representing the intricacies of the *process* of learning to teach middle grades science for each of my participants. This lens forced me to stay focused on learning to teach as a socially-situated, highly personal endeavor (Wenger, 1998), rather than assuming that learning to teach is characterized by a somewhat seamless application of knowledge acquired in teacher education. In addition, it allowed me to focus on beginning teachers’ agency in their process of becoming teachers (Holland et al., 1998).

In applying this perspective, I utilized a case-based (Hays, 2004), inductive (Charmaz, 2006; Preissle & Grant, 2004) approach that incorporated some elements of narrative inquiry traditions (Chase, 2005; Connelly & Clandinin, 1990; Kramp, 2004; Polkinghorne, 1995). Collecting various forms of data (observation data, written reflections, interviews, conversations with other school and university personnel, notes from informal conversations and phone calls,

etc.) allowed me to focus deeply on both the social and personal dimensions as well as my participants' enactment of themselves as beginning teachers (teaching identities).

My analysis of data was conducted in part during data collection (Ezzy, 2002) and included open-coding and extensive memoing (Charmaz, 2006), categorization of codes using one of Gee's six building tasks (1999), construction of a narrative (Polkinghorne, 1995), identification of participants' primary discursive identities (Gee, 2001), identification of participants' tools of agency in cases where self-change was evident (Holland et al., 1998), and construction of models depicting participants' negotiation of teaching identity during student teaching. In this section, I discuss the constructed representations of participants' negotiation of teaching identity within the context of current scholarship and draw implications for teacher educators, middle grades teacher educators, and science teacher educators. In addition, I discuss possible directions for future research.

Conclusions and Implications

In the following section I draw conclusions using my participants' cases. These conclusions can be categorized into two groups. First, I focus on the generative nature of participants' negotiation of teaching identity. In other words, I consider how and whether these individuals' negotiations were integrated in some way so that the beginning teachers were able to enact themselves confidently in the way they wanted. Do these negotiations lead to "development" of "core teaching identity," as scholars suggest as important for beginning teachers' success in the classroom¹⁶ (Hammerness et al., 2005)? Or can this integration of

¹⁶ I have previously avoided describing enactment of self in the world as developmental in nature. However, because others have emphasized this extensively, I plan to consider development of core teaching identity in relation to my study.

negotiations be described in another way? In this section, I also draw implications from each participant's case. Second, I will explore the middle grades science aspect of teaching identity negotiation, which, until this point, has not been explicitly addressed. Implications regarding the middle grades science specific teaching identity negotiation are also included. Ultimately, I draw two primary implications that are not specific to participants' cases, but are a product of what I have learned as a whole throughout this inquiry.

Exploring Participants' Negotiation of Teaching Identity as Generative¹⁷ in Nature

In exploring my participants' negotiation of teaching identity during student teaching, I came to realize one of the most important contributions of the "negotiation of teaching identity" lens was its ability to detect the tremendous amount of identity work that transpired during student teaching as well as to discern the nature of this identity work for each of my participants. Lilly, Stacey, and Mandy did a considerable amount of identity work: They "tried themselves out" as teachers [or student teachers] repeatedly and made decisions about their future teaching identity as a result of their formative enactments of themselves as teachers. Whereas other scholars have described student teachers as having little opportunity to construct or develop their

¹⁷ Although I originally tried to draw conclusions regarding negotiation of teaching identity solely in terms of its relationship to development of core teaching identity, I had difficulty concluding in a way that satisfactorily represented my data. I found myself thinking about development in a very specific way that aligned with what I had read and experienced in working with preservice teachers. However, after being questioned on this choice of words by my committee I decided to rethink my choice of words, which allowed me to reconsider my conclusions regarding Stacey's negotiation of teaching identity. Thus, I decided to use the term generative as a more neutral descriptor of negotiations of teaching identity as able to produce something. Thus, the term generative has encouraged me to consider my analysis carefully in describing how negotiation of teaching identity was related to core teaching identity. Because I found it difficult to utilize this term in ways that were coherent and clear, I use both development and generative interchangeably throughout this section. By doing so, I encouraged myself to step outside the confines of how I had previously conceptualized "development" for preservice teachers.

teaching identities (what I have described as core teaching identity) during student teaching (Pittard, 2003, April; Smagorinsky et al., 2004), each participant negotiated teaching identity in various ways.

These approaches to negotiating teaching identity are relevant both for thinking about participants' identity work as a process that may lead to the generation of core teaching identity as well as their future negotiation of teaching identity once they enter the classroom.

Contemplating whether these negotiations lead to the generation of core teaching identity during student teaching and once beginning teachers enter their own classrooms (and perhaps in the absence of support) is imperative, as many describe core teaching identity as an "important part of securing teachers' commitment to their work and adherence to professional norms of practice" (Hammerness et al., 2005). Thus, in this section I briefly summarize the nature of participants' identity work and consider the generative nature of these negotiations. I begin with Lilly.

Lilly's case. Lilly's identity work would most likely be detected by the identity development or construction lenses employed by others (Luehmann, in press; Pittard, 2003, Smagorinsky et al., 2004). Across the experience of student teaching, she refined, reshaped, and reconstructed her vision¹⁸ of the type of teacher she wanted to be. Her core teaching identity was co-constructed with her negotiation of teaching identity, which always entailed filtering interpretations of what transpired in class through self and her personal teaching vision. My representation of Lilly's negotiation of teaching identity depicted student teaching as an

¹⁸ It is important to distinguish between vision and core teaching identity as I use the terms in ways that are difficult to differentiate. Vision can be defined as one's ideas about how one wants to be as a teacher and is a term that does not necessarily imply being able to enact this image. On the other hand, core teaching identity has to do with how we and others recognize us as certain types of people (Gee, 2005), meaning we have enacted ourselves as certain types of people consistently enough that we and others recognize us in this way.

emotionally and personally challenging experience – one in which Lilly had to make multiple decisions that called into question who she wanted to be and what she thought she could be as a teacher. She made modest attempts at achieving her original grand vision of self as teacher because she had to consider this vision within a social context with which she was somewhat unfamiliar as a beginning teacher and with which came many cultural norms and expectations. Her learning was always filtered through the lens of self (as others have described (Hammerness et al., 2005; Kagan, 1992)), or her personal vision of teaching. She was largely unable to interpret what happened in the classroom merely on a cognitive basis. Instead, her interpretations were in terms of her personal teaching vision: Am I being the type of teacher I want to be and are students seeing me as the type of teacher I want to be seen as? Her reflections on her teaching identity were always personalized and closely connected to self.

Throughout student teaching Lilly's victories and successes, as defined by her, occur in moments when she received confirmation either from an internal or external source that she practiced what she preached (that she was enacting herself in ways that aligned with her vision of self as teacher), that students were responding to her as the type of teacher she wanted to be, or that her vision of teaching was becoming more clear and focused because she ultimately saw who she wanted to be as a teacher. Periodically, Lilly had the frustrating experience of realizing her teaching identity was considerably out of alignment with who she wanted to be as a teacher. She responded to these moments by making efforts to mediate these discrepancies, all the while recognizing that her personal vision had to be tempered within the social context of the classroom. It was this dialogic tension between the social context of the classroom/school and her personal vision of teaching that characterized her negotiation. Thus, although Lilly made considerable progress in developing a recognizable socially-situated teaching identity, or core

teaching identity¹⁹, (Gee, 2005), the *process* she employed in order to accomplish this (her negotiation of teaching identity) deserves attention as it was the venue in which this development occurred.

I argue that Lilly's negotiation (especially of the "good teacher" D-identity), in many ways resembles Alsup's (2006) "borderland narratives." Alsup applied this label to narratives that beginning teachers participating in her study relayed to her. These borderland narratives were characterized by "cognitive and emotional dissonance" among "multiple cultural-contextual understandings of 'teacher,' personal beliefs and experiences, and understandings of professional expectations and responsibilities" (p. 126). Alsup identified this type of narrative as the most important of the five (i.e., narratives of tension, experiential narratives of teaching and learning, narratives about the embodiment of teacher identity, narratives about family and friends, and borderland narratives) in her work with beginning teachers and believed this sort of narrative might have been critical in the development of participants' teaching identities.

My work with Lilly falls in line with Alsup's fifth narrative model. Although Lilly's teaching identity did not always align with her vision²⁰ of the type of teacher she wanted to be, by maintaining a dialogic tension between the realities of the social context and what she wanted to be, Lilly's ideal of her teaching identity persisted and became considerably more clear to her throughout student teaching. Much like Alsup's borderland narratives, Lilly often told stories of her attempts to resolve the emotional and cognitive dissonance resulting from the onslaught of

¹⁹ As stated previously, I believe Lilly's negotiation of teaching identity can be described as leading to development of core teaching identity as Lilly came to recognize herself as a certain type of teacher as did her students.

²⁰ It is noteworthy that Lilly's teaching vision was well-defined and based on many concrete experiences. As Hammerness et al. explain (2005), "teachers need to have a sense of where they are going and how they are going to get students there" (p. 385).

tensions she was negotiating. Ultimately, Lilly came to honor her self (in many, but not all ways) throughout student teaching “*and be [a] good teacher*” (Alsup, p. 127).

Although Lilly’s negotiation of teaching identity allowed her to progress in the refinement of her teaching vision and development of core teaching identity, it seemed that particular “instances of support” (i.e., significant incidents when her interaction with individuals within her social context allowed her to clarify her actions as teacher) throughout student teaching prompted her to revisit or expand her personal teaching vision in ways she was unable to do on her own. Because Lilly’s primary source of feedback from and way of learning about the social context came from students’ responses to her, some aspects of her personal vision of teaching were less coherently held in dialogic tension with the social context or were more difficult to access explicitly in her reflections on her teaching (e.g., her desire to engage students in independent thinking).

An additional question to consider regarding Lilly’s negotiation of teaching identity and its link to core teaching identity is the role her focus on being seen as a teacher played in the development of core teaching identity. It should be noted that others have identified links between this focus and development of core teaching identity. Consider this example: “The participants in my study who had the most difficulty visualizing themselves in the teacher body – a body that looks and acts like the culturally preferred model of a teacher – experienced difficulty in developing a teacher identity” (Alsup, 2006, p. 185). Thus, the way in which Lilly made “being seen as a teacher” relevant in negotiating teaching identity during student teaching may be linked to the progress she made in developing her core teaching identity. Students saw her as a teacher, rather than as a university student that they should befriend and this was both

significant and enabling in her negotiation of teaching identity leading to the development of core teaching identity.

It is important to note that Lilly's use of the *being seen as a teacher* D-identity would likely have produced very different responses from the students if her negotiation had not been characterized as one of dialogic tension. Although she wanted students to see her as a teacher, she was never willing to do so at the expense of the students. She kept students' responses in dialogic tension with this desired D-identity. She did not step in as an authoritarian and try to scare the students into seeing her as a teacher. As such, students did not just respond to her as a teacher, but largely as the type of teacher she wanted to be.

Implications from Lilly's case. Many implications can be drawn in considering Lilly's case. First, Lilly's personal vision within her teaching identity was clearly a powerful tool she utilized in her negotiation. Without it, she would have been unable to hold this image in dialogic tension with the social context, which seemed key to the development of her core teaching identity throughout student teaching. By consistently focusing on being and being recognized as a certain type of teacher, she and her students came to see her as this type of teacher. For example, near the end of student teaching one of Lilly's students told her that even though all the students knew Lilly had a "teacher's voice" they also knew she [Lilly] seldom had or wanted to use it. Thus, Lilly refined, reshaped, and re-accessed this vision throughout student teaching and possessed a strong emotional attachment and commitment to this idea.

As teacher educators, then, it will be useful in working with students like Lilly to have a clear sense of beginning teachers' visions of themselves as teachers and use these as reference points in our efforts to support them during student teaching or any other phase of teacher education. This work suggests that university personnel responsible for mentoring or supervision

should focus their teacher education efforts on student teachers' goals, aspirations, and visions of who they want to be as teachers as well as their own professional agendas. Such an approach could help to eliminate student teachers' frustration with the expectations of university personnel that they may perceive as out of alignment with the realities of schools (or their own visions). In this model of teacher education, evaluative sessions would center on the student teacher's priorities. Such approaches could allow needed time and space for student teachers to explain their dilemmas regarding these visions as well as to think more deeply **with** their mentor or supervisor about how to make strides towards these goals within the context of schools. One characteristic of such interactions might be described as "finding openings" (Feiman-Nemser, 2001) in which the mentor or supervisor identifies key issues that are relevant to all teachers but that might not be obvious to beginning teachers. In addition, these "openings" might be framed in terms of the beginning teachers' vision of self as teacher, as these goals are important to the novice (much like Dr. Smith did for Lilly).

In addition, Lilly's case highlights the powerful role of beginning teachers' interpretations of students' responses to their teaching in learning to teach. For Lilly, whose way of negotiating can be described as one of dialogic tension, students' responses to her were highly influential in her learning. Initially she interpreted students' responses very differently than she did later in the placement as a result of the dialogic tension she maintained between her personal vision and this feedback. She used student feedback as a tool to revisit, re-examine, and redefine her personal vision. This result suggests that teacher educators should consider designing learning experiences in which beginning teachers are asked to provide multiple, varied interpretations of students' responses to what happens in their classrooms. More specifically, beginning teachers could be asked to construct video cases in which they, along with their peers,

analyze students' responses to what is transpiring in the classroom and consider alternative ways to explain these actions. In addition, it may prove beneficial to generate a written case that corresponds to the video case prior to working with a peer in generating alternative explanations. Focused work with beginning teachers on their interpretations of students' responses could promote increased confidence in negotiating teaching identity, which might lead prospective teachers like Lilly to refine, reshape, and reconstruct their personal teaching visions more rapidly during student teaching. Ultimately, such honing of the personal teaching vision would likely prove beneficial to prospective teachers like Lilly, who use this vision as a tool in negotiating teaching identity.

In addition to providing opportunities for beginning teachers to carefully examine students' responses while working in the classroom, it seems imperative that we, as teacher educators, find ways to position beginning teachers as teachers in their interactions with students much earlier in their programs of study. Opportunities to interact with students one-on-one, but as a teacher, rather than a student teacher, could allow for interpretations of student responses that might increase confidence once student teachers enter the classroom and might allow them to focus less on the social context at the expense of their personal vision of teaching. In another inquiry I conducted with beginning teachers involved in teaching one student for a period of a few weeks, many of the participants emphasized their surprise that even when working with one student they had a hard time keeping the student focused, which they expected with many students but not with one student. Such opportunities could allow beginning teachers valuable opportunities to interpret student responses prior to working with a group of students in a more official capacity during student teaching. Such approaches will be beneficial since student

response is always a relevant part of the social context beginning teachers negotiate in various ways.

Furthermore, videotaping beginning teachers' instruction and allowing them the opportunity to reflect on and consider their teaching in light of their personal vision of teaching and with an opportunity to view the social context as an outsider could prove useful. This had proved valuable for Lilly, who had been unwilling or unable to process Dr. Smith's feedback until after she had watched herself teach the lesson he observed and found her actions out of sync with her ideal teaching identity. In addition, this episode indicates that supervision and/or mentoring of beginning teachers might be most beneficial to the student teacher if multiple data sources are utilized in working with beginning teachers. Had Lilly met with Dr. Smith without a video to watch in contemplating his feedback, it seems likely she would have either accepted his feedback because he was the authority figure, which would have encouraged her to fall back into the role of a student, or rejected his suggestions since her perceptions of what was happening in the classroom were very different than his. Dr. Smith's feedback in conjunction with the video, however, proved a powerful way to promote Lilly's reflection on aspects of her personal teaching vision that had not been an explicit part of her focus prior to this point. Thus, utilizing multiple data sources in supporting beginning teachers' learning can position student teachers as professionals, rather than students, by allowing them to explore varied evidence, rather than accepting or rejecting feedback from university or school personnel, in analyzing their work in the classroom.

Stacey's case. Whereas Lilly's method of negotiating her teaching identity seemed linked to development of core teaching identity, Stacey's negotiations do not seem to have led as clearly

to this development²¹. Stacey had very few concrete stories to share regarding her successes in the classroom. When I asked her what lessons, activities, or interactions with students she was most proud of after student teaching, she explained that she did not think about what she had done in this way. Instead she reported that her examination of her practice focused on whether her approaches had worked or not worked. Thus, although Stacey had a relative sense of the positive or negative degree to which students had responded to those activities and approaches, she seemed to have made less progress in defining her core teaching identity. In other words, her negotiation of teaching identity did not seem to result in a clearer sense of who she was as a teacher (from her own or students' perspectives)²². Instead, her negotiation of teaching identity led her to identify whether or not her actions worked.

²¹ It is important to question whether development of core teaching identity requires an individual to filter action through a self-interpretive lens, like Lilly did, or not. Originally, my description of Stacey's negotiation of teaching identity (depicted above) assumed that less development occurred because she emphasized **how** she wanted to be as a teacher (a teacher who does things differently) more consistently than **who** she wanted to be as a teacher. However, how one enacts self in the world may or may not have to do with reflecting explicitly on how self responds to action. In Stacey's case, she thought about how students responded to what they did and whether or not her enactment of self had worked. Did this process lead to development of core teaching identity? Can development of **identity** be described in terms that seem removed from self? If so, the core teaching identity Stacey developed seems likely to be much more dynamic and easily-shifting than that of Lilly as Stacey's core teaching identity was based on how aspects of the social context responded to what happened in class. As students responded differently to her teaching identity, her core teaching identity seems likely to change in ways that allow her to enact herself so that what she does works. Thus, at this point I am not referring to the integration of Stacey's negotiations as development of core teaching identity since these negotiations were not filtered through self. However, I believe this point deserves further consideration in the future as teachers can come to be recognized in specific ways whether or not they think about what they do in terms of some personal vision of teaching. An additional important question to consider is whether or not a more clearly defined vision of teaching

²² One important note here is that although Stacey described herself as a certain type of teacher when talking to me, I recognized her as a very different type of teacher based on my observations in her classroom. Her description of self as teacher, to me, seemed out of line with her enactment of self (teaching identity), which was difficult to deal with analytically.

However, Stacey did negotiate teaching identity during student teaching. While in some cases progress (at the macro-level) seemed indiscernible or even reversed direction²³ (Flores & Day, 2006) a more elaborate representation of her negotiation of teaching identity lent insight into how she *did* practice being a teacher. Much like Boaler (2002) described in his work with math students, although it might appear that students were not learning something, they were always engaged in practicing themselves as mathematics students and therefore it was relevant to think about these practices in relation to identity. Similarly, Stacey was engaged in practicing herself as a teacher (Britzman, 2003) even when her leaning about becoming a teacher resulted in implementing, adopting, or accepting ideas that had originally been unappealing to her. Thus, her negotiation, or her practices were integrally connected to identity.

Stacey's trial and error way of negotiating resulted in her repeatedly trying out different incarnations of her teaching identity on students and making decisions about how she would and would not enact herself as a teacher in the future based on her interpretation of students' response to a given instructional session or activity. She made decisions about whether or not she would continue to fight some of the problems she perceived to be inherent with schooling and modified the ways in which she *did things differently* as a teacher so that her instruction would work better. Thus, Stacey processed considerable amounts of information through her *doing it differently* D-identity using a trial and error negotiation and redefined what she believed would work or not. Considerable identity work *was* taking place.

Stacey seemed to lack a clear sense of the direction of her instructional goals or how she was going to get students to achieve these instructional goals (Hammerness et al., 2005). She

²³ (e.g., When Stacey's sense of what worked was modified in ways that aligned with ideas she had originally described negatively such as using PowerPoint presentations and giving students notes much of the time.)

knew she wanted to do things “differently” from her conception of the typical classroom and she had a “bag of tricks” to try, but in negotiating teaching identity she failed to interpret what worked and did not work in the classroom in complex ways or filter these interpretations through some vision of self as teacher. She seldom questioned her initial interpretation of what worked or did not work, based on student response, unless she later found evidence that her initial interpretation was incomplete. Her desired D-identity was naturally separate from self: She did not want to do things like other teachers did them! But how **did she** want to do them? Thus, at the end of student teaching when Stacey had drawn some conclusions about what did and did not work as instructional activities, these conclusions seem likely to change or be somewhat fluid in nature as they are connected primarily to the social context and very little to the personal dimension. Because Stacey lacked a specific vision of who she wanted to be as a teacher to which she felt a deep personal attachment, it seems her negotiation of teaching identity did not lead to the development of core teaching identity as Lilly’s had. In other words, although Stacey enacted herself as a teacher, she did so less predictably than Lilly as her negotiation of teaching identity focused primarily on the response of the social context and less on some image of self as teacher. Thus, if core teaching identity developed, which I claim it did not, it was more dependent on the social context, more likely to fluctuate, and, as a result, less easily defined.

In addition, unlike Lilly, Stacey’s stories regarding her experiences during student teaching were typically recounted in a highly dualistic, as opposed to dialogic, manner (Britzman, 2003). Her negotiation of teaching identity caused me to describe her at one point as an “either-or” sort of person. In other words, she interpreted the experiences in which she participated as: right or wrong, good or bad, wonderful or awful. She described her instructional and interactive approaches as things that worked or did not work. She talked about her students

as “wonderful” and “evil.” At one point in her narrative, she and her university supervisor talked through an episode that had not gone well in the classroom. Stacey felt defeated because what she had done had not worked. At the outset of this conversation, she had felt that the situation was impossible to clarify since she had already concluded her approach had not worked and become frustrated with the students. Ultimately, this conversation provided Stacey with the support necessary to devise an answer as to why the instructional session had not been a success. Thus, Stacey’s tendency to interpret situations dualistically seems linked to her inability to develop core teaching identity during student teaching. Rather than considering multiple explanations or taking multiple factors into consideration in making decisions regarding her teaching identity, she tended to reduce complex situations to two opposing possibilities. As a result, her negotiation of teaching identity was not a robust practice but rather resulted in an outcome in which she either won or lost: There was seldom little middle ground. This dualistic interpretation of events transpiring within the classroom led to little that could be characterized as identity development. Each day was filled with positive and negatives and these reactions to the events of the school day ultimately cancelled each other out in the absence of dialogism or a clear purpose or vision of teaching.

Implications from Stacey’s case. Although beginning teachers’ vision of themselves as teachers are likely to be refined and reconsidered throughout student teaching and beyond, investing time in supporting beginning teachers’ construction of personal teaching ideals that can be utilized (i.e., these visions must be highly specific and based on concrete experiences, rather than abstract or theoretical) in negotiating teaching identity once in the classroom is a valuable endeavor (Alsup, 2006; Hammerness et al., 2005). Learning experiences like those described by Luehmann (in press), for the purpose of encouraging beginning teachers to consider trying on

new professional identities, may ground prospective teachers' construction of a useful ideal teaching identity, or vision of self as teacher. However, it seems imperative that these learning experiences be grounded in preservice teachers' personal responses to these potential identities, rather than leaving beginning teachers with the impression that these experiences might provide them with more "stuff" to add to their "bag of tricks." Although Stacey wanted to enact herself in different ways than the "typical" teacher, her vision of how she did want to enact herself was not as clear, which seemed linked to her lack of personal connection to her ideas and enactments of self as teacher. I wonder whether Stacey could have utilized a more specific vision of teaching (one to which she was more personally connected) in enacting self as teacher in the classroom. Without aiding beginning teachers in the exploration of their commitments and desired teaching identities, it seems likely many will approach teaching much like Stacey – by trying out their bag of tricks that might work or not. How can we as teacher educators encourage and support beginning teachers in negotiating teaching identity in ways that are closely linked to self? First and foremost, our work with beginning teachers must not fall back on methods as the means (Britzman, 2003; Segall, 2002) perspective. Beginning teachers must not leave their preservice teacher education programs assuming possession of knowledge will be adequate to ensure their success in the classroom. Self and identity must be at the heart of the work done in preservice teacher education (Alsup, 2006; Britzman, 1992; Sumara & Luce-Kapler, 1996). In other words, the focus in our work with beginning teachers must not stop at the knowledge dimension, but should include opportunities to explore the emotional dimension in relation to teaching. Furthermore, preservice teachers should begin considering (as Sumara & Luce-Kapler suggest) what aspects of who they are may be more or less difficult to enact in the classroom. Although Alsup and Sumara & Luce-Kapler suggest this can be at the heart of what transpires in the

university classroom and proffer some suggestions as to how this can be accomplished, I believe it is also important to allow beginning teachers to experience themselves in the world of teaching as often as possible. In doing so, beginning teachers will experience for themselves how they are received when enacting themselves as teachers, providing rich fodder for work in the university classroom. In order for such learning opportunities to best allow for beginning teachers to try themselves out as teachers and more clearly define who they want to be in working with students, preservice teachers must be positioned as legitimate peripheral participants (Lave & Wenger, 1991; Pittard, 2003; Smagorinsky et al., 2004). This is often difficult to accomplish in the classroom, as we saw in Mandy's case. However, it may be easier to accomplish if teacher educators begin contemplating how we can position beginning teachers as resources, rather than apprentices, in the schools. Perhaps beginning teachers could collaborate with practicing teachers in planning after school enrichment programs or working closely with students who need extra support in the classroom. Such opportunities could encourage beginning teachers to begin thinking of themselves as teachers and, as such, wrestling with the more personal, less knowledge-oriented, aspects of teaching.

In addition, designing instruction in ways that encourage beginning teachers to wrestle with and resolve multiple conflicting tensions is critical in our work with beginning teachers. Such approaches have been described as beneficial in scaffolding students' dialogic decision-making (Alsup; Sumara & Luce-Kapler, 1996). I believe this to be imperative in considering Stacey's case. Stacey was virtually unable to resolve complex tensions in a non-dualistic manner, which resulted in feelings of defeat and hopelessness. In the absence of professional support, students that negotiate teaching identity like Stacey will be less likely to progress in the development of a core teaching identity. Incorporating opportunities for viewing what happens in

the classroom in more complex ways could be one way to encourage beginning teachers like Stacey to move beyond dualistic negotiations of teaching identity. Preservice teachers enrolled in reflections courses (that happen concurrently with student teaching or other field experiences) could use the time in these courses to collaborate with peers and instructors in viewing seemingly simple events in complex ways. Creating cases regarding experiences in the classroom and allowing peers to respond to such cases may be one simple way to encourage beginning teachers to move beyond dualistic perspectives. In addition, it may prove beneficial to utilize multiple data sources in creating and responding to such cases as this would encourage both the beginning teachers and their peer collaborators to focus their conversations and work together on evidence rather than reactions to the frustrations of the classroom.

Stacey's conversation with her university supervisor near the end of student teaching regarding a very frustrating class period indicated Stacey's need to become more astute at generating multiple solutions to complex problems as well as considering these solutions in relation to the social context. The way in which Mary scaffolded Stacey in her negotiation of teaching identity at this moment was beneficial to Stacey as it allowed her to generate a solution when she did not believe she could do so. Thus, Mary's interaction with Stacey points to the need to support beginning teachers' negotiation of teaching identity. More specifically, allowing them to generate multiple solutions to problems as well as to consider complex responses from various aspects of the social context is imperative. As Alsup explained, "We [teacher educators] can encourage and support engagement with cognitive and emotional dissonance to teach students how to grapple with tensions, or simply to assure them that grappling itself is okay, even inevitable, in their chosen profession" (p. 146). Alsup and Sumara & Luce-Kapler outline various strategies that might be employed in preservice teacher education that structure learning

in ways that promote a concrete focus on the personal as well as encourage dialogic resolution of tensions. These are worth our consideration. Without additional support or guidance, it seems likely that Stacey's negotiation of teaching identity (dualistic, trial and error) would change very little during her initial years in the classroom, resulting in slow or inconsistent development as well as development that is disconnected from the personal dimension but is primarily cognitive in nature. Due to the dynamic environment of the classroom, such negotiations seem less likely to result in fulfillment for beginning teachers who may feel more like a dinghy tossed about by a stormy sea than a ship navigating the storm.

Mandy's case. Unlike Lilly and Stacey, Mandy negotiated her *student* teaching identity. Her circumstances were different than those of Mandy and Lilly in that she was unable to achieve a higher level of status than "student teacher" in the eyes of her students. Thus, in negotiating her student teaching identity Mandy found she was unable to focus on that D-identity that was of most importance to her: establishing a positive teacher relationship with her students. Although she could establish positive relationships with students, she was never able to do so *as a teacher* because the students did not grant her elevated status beyond that of a university student who had come to their classroom to learn to be a teacher. Within that classroom, Mr. Tucker alone was awarded the status of "their" teacher. Thus, Mandy's negotiation of student teaching identity was just that: negotiation of *student* teaching identity, which did not feel authentic to her, even though she was enacting herself as a teacher in numerous ways.

Much like Stacey, Mandy had very few concrete stories to share regarding her successes in the classroom. At the end of student teaching Mandy explained that she had little sense of who she was as a middle grades science teacher and explained to me that individuals who said they knew what they would be like as teachers after student teaching would be "lying through their

teeth.” Mandy also had difficulty pinpointing and describing activities or interactions with students that had been particularly meaningful to her. The example she did select in our final interview was an activity that she ultimately told me about because it was the activity she had done most recently: “They all kind of run together,” she explained. Thus, Mandy described most of her work in the classroom much less personally than the way in which Lilly described her experiences and negotiated her teaching identity primarily by mimicking what her cooperating teacher did and trying to establish herself as a teacher when she was in fact a student teacher.

Much like Stacey’s dualistic, trial and error mode of negotiation, Mandy’s way of negotiating student teaching identity, mimicking, failed to lead to development of core teaching identity. This is logical as the act of mimicking someone else is somewhat disconnected from one’s own ideal teaching identity. Instead of starting with one’s vision of teaching and using others’ approaches as a way to achieve this, Mandy started with Mr. Tucker, making it virtually impossible to develop core-teaching identity. Mandy did not continually reference her own vision of teaching (i.e., as Lilly did) because she had Mr. Tucker, her model, as a reference point. Thus, this way of negotiating self as a student teacher did not lead to the development of core teaching identity. In addition, this mode of negotiation will inevitably be less useful in negotiating self as teacher in one’s own classroom. Ultimately, this may mean that Mandy may have to find new ways to negotiate teaching identity, which could be an intimidating process if unsupported. Much like the students in Boaler’s study (2002) whose math practices were not easily applicable in non-school settings, Mandy’s negotiation of student teaching identity will likely be less parallel to the process she employs during the first year than it will be for Lilly, whose negotiation of teaching identity aligned well with her priorities as a teacher at that moment.

It is also noteworthy that the D-identity to which Mandy felt most personally connected (i.e., establishing good relationships with students) was the one in which she felt unable to focus her attention in authentic ways. She felt unable in this regard due to the overpowering presence of her cooperating teacher as the person to whom the students were already in a “good teacher-student relationship.” Because of this, her teaching identity will change significantly during her first year in the classroom as she will then be able to enact self in ways that align with all of her priorities as a teacher.

Implications from Mandy’s case. Because Mandy did not negotiate her student teaching identity in ways that clearly led to development of core teaching identity, the type of support Mandy receives during her first year of instruction is critical. During this year, she will negotiate her teaching identity for the first time in ways that feel authentic and that require her to take into consideration all of the complexities of teaching, many of which were not part of her negotiation of teaching identity during student teaching. However, because Mandy has graduated from the university, she will likely receive little further support from university personnel. Thus, she will negotiate teaching identity for the first time and may or may not be supported throughout this process (depending on the type of induction program or support systems available to her in her school as well as the ways in which she takes advantage of these).

In light of this, it is imperative that teacher educators make every effort to position student teachers as “legitimate peripheral participants” (Lave & Wenger, 1991) during their final field experience. This final field experience is typically the last time university personnel consistently support beginning teachers’ learning and identity work. By positioning them as legitimate peripheral participants, teacher educators will have the opportunity to scaffold beginning teachers’ ways of negotiating self (e.g., much like Mary did for Stacey) such that these

negotiations are integrated in ways that lead more efficiently to the development of core teaching identity. Without opportunities to negotiate teaching identity during student teaching, preservice teachers like Mandy are less likely to consider themselves professionals, or teachers, making it difficult to support their growth **as teachers** during student teaching, which feels like little more than any other part of the teacher education program. Had Mandy been asked to work through a case with a peer collaborator, she could have easily attributed much of what was happening in the classroom to being positioned as a student instead of taking responsibility for making sense of the complexities of her own classroom. As I mentioned previously, it is not always possible to place student teachers in situations in which they will be positioned as teachers. For this reason, it is imperative that we consider designing opportunities for learning to teach that take place outside the confines of someone else's classroom. Although such experiences cannot be considered substitutes for student teaching, they could be powerful additions to those experiences in which beginning teachers participate and try themselves out as teachers.

Although those factors identified by scholars as influential in the success of student teaching experiences (i.e. clear program goals, having the opportunity to see good practices and teacher thinking modeled by one's cooperating teacher, opportunities to practice teaching and receive consistent feedback and coaching, and reflections of practice) should be considered in designing such placements (Darling-Hammond, Hammerness, & others, 2005, see p. 410), allowing student teachers the space to negotiate their teaching identity also seems important. Based on Mandy's experiences as a student teacher, I believe the aforementioned factors are insufficient to ensure development of core teaching identity. Without being positioned as a "legitimate peripheral participant," student teachers are more likely to take on mimetic roles (or other negotiations that will not transfer well to future work in the classroom), feel unable to

wrestle with and enact those aspects of their ideal teaching identity that are most important to them (D-identities), and make little progress in developing core teaching identity. In instances when it is impossible to position student teachers as legitimate peripheral participants (and even when they are positioned in this way), it is imperative that teacher educators consider further collaborations with school personnel in developing support networks and induction programs for beginning teachers, who still have much work to do in developing their core teaching identities.

Middle Grades Science Teaching Identity Negotiation

At the outset of this study I described my purpose to focus on beginning teachers' negotiation of **middle grades science** teaching identity. Although I have explored participants' negotiations as well as their general teaching identities, I have not explicitly emphasized the middle grades and science specific aspects of teaching identity negotiation. This is due to the nature of my participants' negotiation of teaching identity. Throughout this study I wondered repeatedly when or whether my participants (especially Lilly and Stacey) would emphasize science in our conversations. However, repeatedly, I found **myself** trying to make science relevant in conversations with my participants. Although my participants' teaching identities could be described in more science-specific ways than the descriptions included at the beginning of chapters four, five, and six, I did not do so because my participants were not explicitly focusing on science teaching in negotiating teaching identity. How can this be since these student teachers were teaching science?

In considering their D-identities²⁴, which were my participants' primary foci throughout student teaching, none of my participants aimed to be recognized in science-specific ways. Although each focused on designing instruction in ways that allowed students to learn science content, none did so with the intention of being recognized as a certain type of science teacher. Stacey wanted to be a teacher who did things differently than other teachers. She did not emphasize a science-specific component to this *doing it differently* D-identity and even explicitly stated that she did not really know what it meant to be a good science teacher. Lilly desired to be recognized as a *good teacher*. However, she did not initially focus on being a good science teacher. The strategies she selected and the ways in which she enacted herself in the classroom were through a more general, good teaching lens.

This was surprising to me initially as both Lilly and Stacey were enrolled in a secondary science reflections course in which they completed many written assignments focused explicitly on what it meant to be a science teacher (these written documents were part of my data set). In these, they often wrote about how they were conceptualizing the *National Science Education Standards* (1996) in thinking about their own practice. However, when I asked Stacey whether or not she thought she was a good science teacher she asked me what I meant by this "science teacher business." Lilly responded slightly differently. She seemed to realize that good science teaching was defined in specific ways. However, she did not make these explicit in our conversations until she met with Dr. Smith. I found it interesting in our initial interview that she had much to say about her amazing science experiences and the inquiry-oriented Montessori

²⁴ I have excluded Mandy from this description since she was a student in the middle grades education program rather than the science teacher education program. As a result, I had fewer expectations regarding her desire to be recognized as a certain type of science teacher.

teaching, but when I prompted her after these descriptions to tell me what she wanted to be like as a middle grades science teacher she had a one word answer. She wanted it to be “fun!”

Thus, in conceptualizing these individuals’ negotiation of middle grades science teaching identity I found myself needing to rethink my original notions. Although in my own teaching I had focused extensively on being a good *science* teacher, I am likely recollecting only my last few years of teaching after completing my M.Ed. in Science Education, which I completed after my first two years of teaching. For these beginning middle grades science teachers, then, being a certain type of science teacher was not on their radar. Instead, their enactments of themselves as teachers were the result of a focus on the more general aspects of their desired D-identity (good teacher and a teacher that does things differently). Although both participants had considered the nature of science teaching in their coursework, this was not explicitly incorporated into their D-identities.

Implications of Middle Grades Science Teaching Identity Negotiation

This finding is significant to the work of science teacher educators as well as researchers in the field of science education. Many scholars have noted that beginning teachers’ implementation of inquiry-oriented practices is disappointing or inconsistent when compared to these prospective teachers’ descriptions of what they wanted to be like as science teachers, their knowledge of inquiry, their beliefs about science as inquiry, and their epistemologies (Crawford, 2007; Kang, in press; Windschitl, 2003). My exploration of middle grades science teaching identity negotiation offers an alternative way to explore this trend. Based on my participants’ formative D-identities, it seems student teaching may not be the most appropriate time to explore beginning teachers’ implementation of subject-specific practices. Even Lilly, who very much

wanted to teach using inquiry approaches and had experience in inquiry-oriented non-school environments (i.e., Montessori school and asking questions of the world), was not thinking about trying to be a certain type of science teacher. She was trying to negotiate being a certain type of teacher, which required all of her time and energy. Granted, she was also working in an environment in which inquiry was not the norm. But even if she had been in an inquiry-oriented classroom I wonder if this would have been her primary focus? Although her enactment of herself as a science teacher might have been characterized by additional or different inquiry oriented activities, they might not have been an explicit part of her *good teacher* D-identity. This can inform our work as science teacher educators by encouraging us to reconsider the ways in which we support beginning teachers' efforts in the classroom. If we focus predominantly on helping beginning teachers enact themselves as certain types of *science* teachers, perhaps we are underemphasizing aspects of these individuals' D-identities that are foremost in their thinking. If beginning teachers are struggling to enact themselves in ways that align with more general D-identities, science-specific suggestions and support may fall on deaf ears.

In addition, considering beginning teachers' practices within the context of their desired D-identity has implications for researchers who study practice in isolation of identity. Beginning teachers, who embrace the idea of teaching using inquiry-oriented practices and are placed in the room of a supportive, inquiry-oriented mentor teacher, might not employ inquiry because they are focused on more general aspects of their D-identity. On the other hand, beginning teachers who do employ inquiry approaches when in a supportive, inquiry-oriented environment, might be doing so less intentionally than we assume, focusing on more general teaching identity negotiation.

Science teacher educators, then, should consider ways in which to support beginning teachers throughout their induction years, rather than focusing their primary support during preservice and student teaching experiences. The identity work in which Lilly and Stacey were engaged during student, although not specific to science, was important. In addition, this finding suggests the importance of further application of the negotiation of teaching identity lens, which allows for the exploration of teaching identity as inseparable from practice. This lens has the potential to allow us significant insight into the efficacy of science teacher education programs and how they are structured and implemented.

In considering negotiation of middle grades science teaching identity it is also important to consider the implications of my participants' work with middle grades students. As I stated previously, both Stacey and Lilly based decisions about how to enact themselves as middle grades science teachers largely on students' responses to them. Throughout student teaching, they periodically voiced realizations regarding the nature of middle grades students that were influential in their enactment of self as a teacher. For example, in the initial interview, Lilly explained that the inquiry lab she had tried during her practicum the semester before student teaching had been a bomb and explained that middle grades students associated hands-on activities and labs with free time. She also mentioned discovering that her interest in learning about the wonders of the natural world did not necessarily align with her students' interests. When she taught the teacher-centered, lecture-based lesson on global warming, which she thought was interesting because she enjoyed the topic, she realized that middle grades students had a different conception of fun. To them, learning was fun if they were doing something, not just listening to her talk about science. These epiphanies are important as they re-emphasize Lilly's inability to define *good teaching* based solely on her own conceptions. She cared deeply

about her students' response to her as well as helping them mature as young adolescents (as she described in our initial interview).

This was also true of Stacey and Mandy. Stacey described her willingness to scrap what she had planned in order to allow students to share stories and be themselves, which she highly valued. She described middle grades students' quiet anarchy as a characteristic she loved. Mandy felt similarly, explaining that she loved middle grades students' willingness to say what they were thinking and generate independent responses that were very random in nature. Mandy explained that her purpose in working with middle grades students was to keep them engaged in school as she believed this was a vital age in terms of students' schooling and development. Those students who became turned off to school in the middle grades were much less likely to graduate from high school or attend college, she explained to me in our first interview. Thus, in looking across these three participants, one of the few unifying themes in considering their negotiation of teaching identity is their focus on students. Although Lilly was certainly focused on students as learners, she valued their ideas and opinions and considered these in enacting herself as a teacher. Mandy and Stacey were also focused primarily on students and emphasized that they chose to teach science because it was the subject they could most easily relate to students and that allowed them to design instruction in ways that aligned with their desired learning environment (e.g., Mandy wanted her classroom to be interactive and science was the subject she believed was easiest to make hands-on and relevant).

Thinking about these individuals' teaching identities using a middle grades lens, then, results in very different perspective on their progress as beginning teachers than the science education lens previously employed. These prospective teachers began actively engaging their students in learning (using various hands-on approaches), allowed opportunities for students to

interact with peers on a regular basis, valued students' independent thinking, incorporated students' stories and voices into what happened in the classroom while trying to make learning relevant to them, and used a variety of instructional approaches. All of these have been identified as characteristics of excellent middle grades science teaching (Anfara, 2007; Lawrence, 2007; National Middle School Association, 1995). Hurd (2000) would applaud these formative efforts as they begin to fulfill his vision of transformative middle grades science education in which adolescents should be recognized as the primary data source in reforming curricula. His perspective diverges from traditional curricula that are isolated from students as well as the world in which they must learn to adapt and function.

In thinking further about negotiation of middle grades science teaching identity, then, I find myself returning to my original question. What does it mean to be a good middle grades science teacher? Did these prospective teachers' accomplish this goal? These questions are worthy of consideration for both middle grades teacher educators as well as science teacher educators. Although the perspectives of the middle grades and science education reformers vary somewhat, I wonder in what ways these teacher educators could benefit from each others' agenda and how this might reshape our conceptions of quality teaching in the middle grades.

Overarching Implications

In considering my participants' negotiation of teaching identity I have come to realize the most important implication of this study to be the need for scholars to focus on the **process** of negotiating self as teacher or learning to teach, rather than thinking about teachers' practices as things that they do as applications of knowledge they possess. Practice is a **process** of becoming (Britzman, 2003; Cobb et al., 2001; Lave & Wenger, 1991). A focus on process discourages us

from ignoring the highly important personal visions and goals of beginning teachers, which are critical in the development of core teaching identity (Hammerness et al., 2005), as well as the socially-situated nature of practice (Wenger, 1998). By examining this process more carefully, we may be better able to construct representations of learning to teach that allow us to redesign our approaches in teacher education, much like Alsup (2006) and Sumara & Luce-Kapler (1996) suggest, in ways that encourage prospective teachers to engage in **processes** during teacher education that parallel those in which successful beginning teachers engage during student teaching and their induction years. Based on my case studies as well as others' work, I believe these processes must include an explicit and **concrete** focus on self as teacher²⁵ as well as development of the cognitive aspects of learning to teach (content knowledge, pedagogical knowledge, pedagogical content knowledge, etc.). In addition, these processes must include opportunities for beginning teachers to experience and resolve cognitive and emotional dissonance regarding university, their own, their peers', and the schools' perspectives, expectations, and agendas. Much like Lilly did, beginning teachers may benefit from learning to keep their personal vision in dialogic tension with multiple conflicting factors in order to be successful in their work in the classroom (Alsup, 2006). As such, we must ask beginning teachers to problematize what they are learning, rather than allowing them to consider the strategies, methods, theories, and experiences in teacher education as uncomplicated tools to be applied in the classroom (Britzman, 2003; Segall, 2002).

In light of this study, I would also encourage teacher educators and scholars to transform the notion of beginning teachers emerging from teacher education programs as “**ready** to begin a satisfying and successful teaching life” (Alsup, 2006, p. 126), into a more realistic perspective:

²⁵ See Alsup's (2006) grounded philosophy statement.

beginning teachers are learning extensively during their initial experiences in the classroom. Although the previous perspective seems the norm in research on learning to teach science, in which scholars have explored why beginning teachers do or do not implement inquiry-oriented science teaching practices (Crawford, 2007; Kang, in press; Windschitl, 2003), such a perspective focuses our energies on finding new ways to **prepare** teachers (in preservice teacher education programs) to implement reforms and assumes preparation as something that transfers somewhat seamlessly to classroom practice. However, in exploring my participants' negotiation of teaching identity, which was clearly a trying, emotional, challenging, growth-filled, and risky endeavor, I realized the need to reconsider how we support beginning teachers **during** their student teaching and **beyond** (Luft, 2007), in addition to how we can redesign current preservice programs. Rather than wondering why my participants were not implementing what they learned in teacher education, I learned to examine what **was** happening more carefully and realized that each of my participants desperately needed much more support than they received. This realization led me to question: How can we continue to support and help beginning teachers who negotiate their teaching identities in ways that do not lead as readily to the development of core teaching identities to negotiate their becoming in more effective ways. For those that do negotiate teaching identity in ways that lead to development perhaps we should consider Alsup's perspective: A "strong first step" is a step in the right direction. The student teachers "had learned to express transformative discourse that, in turn, affected their professional identities, and it was probable that they would continue to engage in borderland discourses throughout their careers in increasingly complex ways" (p. 127).

Limitations

As in any study, limitations exist. I outline these briefly in the remainder of this section. To begin, I did not explore the role of the cognitive dimension in beginning teachers' negotiation of teaching identity. Although I certainly observed and gained a general sense of my participants' content knowledge, pedagogical knowledge, etc., I did not explore these knowledge dimensions deeply. My participants seldom emphasized this dimension. I believe this would have been valuable, although entirely too complex to navigate for my initial work with identity as a construct. In addition, I only worked with participants for one semester of student teaching, which allowed me significant insight into their negotiation of teaching identity, but did not allow me as much time as I would have liked to construct their representations of negotiation of teaching identity. Furthermore, it would have been valuable (although probably not possible) to collect more data from all of my participants: Increasing the number of observations would have allowed me further insight into Stacey's and Mandy's negotiation of teaching identity. Finally, my conceptions of identity and the "negotiation of teaching identity" lenses were co-constructed throughout this study. Although I felt confident that I understood my original conceptions of this construct and lens, I realized throughout that this was less clear than I would have hoped. As such, I believe I might be able to collect richer data in future studies of a similar nature. However, because I have included a significant portion of my data in the narrative, I believe the reader may be able to determine for her/himself whether or not I have adequately represented these individuals' negotiation of teaching identity.

Suggestions for Further Research

Various research agendas naturally stem from this study. I believe the following endeavors have the potential to expand teacher educators' conceptions of their work with beginning teachers:

- It would be beneficial to conduct a similar study on a larger scale and investigate multiple individuals' ways of negotiating teaching identity in order to explore the nature of processes that seem to lead to the development of core teaching identity during student teaching.
- It would be valuable to explore the process of learning to teach focusing on both the cognitive and identity dimensions in order to explore in what ways these dimensions intersect in negotiating teaching identity. This may help us explain how we can better support students like Lilly, who explain they want to enact themselves in very specific ways within the context of the university, but are not doing so in the classroom.
- Furthermore, I believe it would be interesting to examine beginning secondary science teachers' negotiation of teaching identity in order to consider the degree to which science specific negotiation of teaching identity does or does not occur for these individuals. Would their identity negotiation vary considerably from that of the middle grades science teachers? If not, this might allow subject-specific teacher educators to refocus their support efforts as well as their emphases during teacher education.
- Also, it would be valuable to conduct longitudinal studies exploring the ways in which some of the previously described approaches to teacher education (i.e., engaging preservice teachers in learning that requires them to grapple with and resolve emotional and cognitive dissonance as well as consider their selves) do or do not become relevant in

beginning teachers' negotiation of teaching identity once they enter the classroom.

Although I believe things (i.e., strategies, methods, theories) learned might not transfer well to practice, I wonder whether practices (ways of practicing self in a complex world) may transfer to new settings (Boaler, 2002).

- Finally, scholars should consider conducting studies in which the social, personal, and action dimensions are more adequately represented (Wenger, 1998) as well as investigating and generating methodologies and analytical approaches that encourage focus on all three dimensions.

Closing Comments

“I am trying to conclude. Suddenly, as it was page 158 – and the third hour was ending, I realized that perhaps there must be ‘conclusions’ to my journeys...but there is no ‘conclusion’ to be found in writing’” (Cixous in Alsup, 2006, p. 191).

I originally approached my study on beginning teachers' negotiation of middle grades science teaching identities with the intention of constructing representations of the complexities of learning to teach and what this process entails. I wanted these representations to provide insight into teaching in keeping with my own beliefs about its complexity and the classroom reality. In my work with these participants, I have come to the conclusion that learning to teach and becoming a teacher is never as simple as applying the knowledge acquired or constructed during teacher education. The exigency created by the need to respond and react to the moment to moment activities in and around the classroom requires that our representations of teaching also account for the dynamic aspects of this practice. Therefore, in considering what people do with knowledge, we must overlook neither the personal dimension, the social contextual dimension, nor the action dimension. The personal dimension serves as an evolving dynamic

repository for ideals and vision about teaching. As such, ongoing examination of this aspect of a teacher immersed in instruction can provide access to the picture of how a teacher conceives of what it means to do this work. The social contextual dimension likewise is a label given to the individuals, cultural norms, and realities of schooling with whom and in which the act of teaching is done and from which teaching identity is inseparable. Examination of teaching identity within this dimension helps clarify the forces and pressures that impact and influence the day-to-day and minute-to-minute decisions that a teacher must make. The action dimension, though, encapsulates these other dimensions, and bounds them together in a space within which they act. The action dimension is the enactment of teaching. And as such the action dimension encloses the personal and social dimensions within the act of teaching. Within this boundary, the personal and social dimensions are constantly in a dynamic tension. This tension is the force herein referred to as “negotiation of teaching identity.” Examination of only one or two of these dimensions will inevitably paint an incomplete picture of the process in which beginning teachers are engaged, limiting the potential to effect change and make improvements to teacher education. A story a friend of mine relayed to me a few months into my study will provide a powerful springboard for my final remarks.

This teacher friend, who taught for over ten years in a local school district, quit teaching to become an administrator and returned to the classroom one year later as she realized she preferred to work with students rather than with adults. This individual had an excellent reputation in the community. Students loved her. Parents loved her. Her colleagues loved her. I doubt many, if any, of these individuals would not have said she was a wonderful science teacher. Because her previous position teaching seventh grade science was no longer available, she took a position teaching gifted language arts to sixth grade students. She thought extensively

about ways to incorporate science into her language arts instruction: She very much desired to teach language arts in new and unusual ways and bring it to life for her students rather than boring them with exercises from the grammar book. Perhaps they could dissect squid and write about what they had done. Planning to employ these and other approaches in her work, she started the year with a grand vision of herself as a beginning language arts teacher.

After the first two days of school, she radically changed her plan. As she related this to me I remember feeling extremely disappointed. Why couldn't my friend, who was a wonderful teacher with an incredible reputation, stand up to the system and do things differently? If anyone would be able to pull off this type of language arts instruction, she would be the one able to do it. She explained that she had realized if she wanted others to recognize her as a good language arts teacher she was going to have to do things a bit more conventionally at first.

This closing remark grounded me, once again, in my own experiences. Being a good middle grades science teacher, or any type of teacher for that matter, is an incredibly complex endeavor. Science education reformers hold a particular set of criteria for evaluating good science teaching. Middle grades educators employ another perspective. School administrators might hold an entirely different set of standards. Students and parents are likely to evaluate good teaching based on characteristics that diverge from many of those employed by the previously mentioned organizations and individuals. On top of these and many other expectations, each teacher has her/his own vision of what she wants to be in the classroom. Some of these visions are more grand or clear than others, but each individual has such a purpose in becoming a teacher. However, having this purpose and being able to enact it are two very different things.

In light of what I have learned throughout this study, I have come to believe that my goal as a teacher educator will be two fold: I intend to help beginning and practicing teachers clarify

their personal vision of teaching throughout their career while providing them with learning opportunities that encourage them to consider ways in which they can make this vision and purpose a bit more grand. But most importantly, I want to find ways to support teachers' implementation of this dynamic vision throughout their careers. My own experiences as a middle grades science teacher remind me of the difficulty of this work: the exhilarating roller coaster ride of teaching where one day you believe you are an incredible teacher that has touched her students in powerful ways and where the next you feel completely inept, insufficient, and unable to achieve your vision of the teacher you want to be. The intricacies of my participants' process of negotiating teaching identity lends insight into how I might begin trying to accomplish this goal. From here, I begin the journey my participants began this past winter: I begin negotiating my own teaching identity as a professor in hopes that this process will lead quickly to the development of a satisfying core identity. Perhaps what I learn along the way will remind me of my students and how I can best support their attempts at achieving their vision of teaching.

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Appendix A - Initial Interview Guide

The questions included below served as a guide. I tried to ask participants all of the primary questions. However, I did not follow up with all the sub-questions unless the interviewee had little to say and I was unable to ask a follow up question.

- Tell me a little bit about yourself. What distinguishes you from others? What perspectives do you hold or what are you committed to that is extremely important to you and who you are?
- Can you tell me your story of deciding to become a middle school science teacher?
 - What are some key experiences and events that played a role in your decision to become a middle school science teacher?
 - Can you think of any epiphanies (ah-ha moments) you had as you came to decide that you wanted to teach middle school science?
 - Why did you decide to student teach in a middle school?
 - Why did you decide against student teaching at the high school level?
- Tell me about any experiences you've had with middle schools that stand out to you.
 - Describe your ideas about what a great middle school teacher does in the classroom.
 - How do you see middle grades teaching as different from teaching in other grade levels?
 - Do you ultimately plan to work in a middle school? Why do you believe you want to work at a middle school?
- Tell me about your science background.
 - Why did you choose to teach science? Major in science?
 - Can you think of previous experiences you have had with science (inside & outside of school) that stand out to you. Why are these significant to you? Are any of these significant to your decision to become a middle school science teacher?
 - How would you describe the role science plays in your life?
 - When you think about science teaching, what comes to mind?
 - What do you believe a good science teacher is like and does with his/her students?
- Tell me about some experiences you have had in your field experiences (interactions with cooperating teachers, university supervisors, etc.) since you decided to become a middle school science teacher that have stood out to you. Why have these experiences stood out to you?
 - Have you had any experiences in your coursework at the university that stand out to you since you decided to become a middle school science teacher? Why have these experiences stood out to you?

- Have you had any experiences in your life outside of the university and schools that seem significant to you when you think about yourself as a middle school science teacher?
- What do you want to be like as a middle school science teacher?
 - How set in stone is this vision?
 - Why is this vision so important to you?
 - What factors (internal & external) have influenced the vision you hold for yourself as a middle school science teacher?
- Describe who you currently are as a middle school science teacher.
 - Can you share some specific examples/experiences you have had that support this description?
 - What concerns do you currently have about yourself as a middle school science teacher?
 - Can you talk about specific instances/experiences/dilemmas that have caused you to feel concerned?
 - In what ways do you feel comfortable with/confident in who you currently are as a middle school science teacher?
 - Can you talk about specific instances/experiences/successes that have caused you to feel confident/comfortable in your middle grades science teaching?
- Tell me about your first meeting with your cooperating teacher.
 - What did you and your cooperating teacher talk about initially? How do you feel this meeting went? Explain.
 - What have your interactions since then been like? Do any particular experiences stand out to you in the interactions you've had with your cooperating teacher so far?
 - Can you share your overall impression of what your cooperating teacher expects from you during this experience?
 - Do you feel you interact well with your cooperating teacher?
 - What do you believe you'll be able to learn from your work with your cooperating teacher?
 - What are you worried you won't learn in your work with your cooperating teacher?
- Tell me about the interactions you've had with your university supervisor. What are your meetings normally like?
 - Do any particular experiences stand out to you in the interactions you've had with your university supervisor so far?
 - What do you believe your university supervisor expects from you during student teaching?
 - What do you believe you'll be able to learn in your work with your university supervisor?

- What are you worried you won't learn in your work with your university supervisor?
- Tell me about your first meeting with this class of students – what was it like?
 - Can you describe for me your general impression of Madison Middle School? What experiences have stood out to you in your time at the school?
- Can you tell me some of your thoughts about your upcoming middle school science teaching placement?
 - What concerns do you have about middle school science student teaching?
 - About your placement?
 - What are you looking forward to while student teaching in a middle school science classroom?
 - About your placement?
- Is there anything else you want to tell me about middle school science teaching, your placement, your cooperating teacher, your students, your university supervisor, your school, etc.?

Appendix B - Second Interview Guide

The questions included below served as a guide. The majority of the second interview (for Lilly and Stacey) was focused on clarifying what they said in the previous interview, asking them about specific events I had observed in class, etc..

- How are things going for you right now as a middle grades science teacher?
- Tell me about some specific experiences that stand out to you in working with middle grades students. Why do these stand out to you?
- What do you really like about teaching middle grades right now? Working with middle grades students right now?
- What seems frustrating in teaching middle grades right now? Working with middle grades students right now? What dilemmas do you face in working with middle grades students?
- What are some experiences you've had recently that stand out to you as a science teacher? Why do these stand out to you?
- What do you really like about teaching science right now? What do you think you're doing really well as a science teacher right now?
- What seems frustrating/difficult about teaching science right now? What dilemmas do you feel you're currently facing in teaching science?
- How do you want to improve as a science teacher?
- Can you tell me a little bit more about what you meant when said...[used quotes from initial interview, written coursework, or recorded meeting with supervisor]. **This question composed the majority of the interview.**
- In our initial interview you talked a lot about...Can you share some examples of how you've tried to do this with your students? Tell me about experiences you've had with this that have gone well and some that haven't gone well.
- Tell me about your relationship with your cooperating teacher. What's it like? What stands out to you when thinking about this relationship?
- Tell me about the reflections class. What sort of assignments, comments, interactions have you had that stand out to you?

- What do you think you're doing really well as a middle grades teacher? Can you think of an experience or two related to this? As a science teacher? Experiences/examples?
- In what ways do you want to improve as a middle grades teacher? As a science teacher? Experiences/examples that pertain to this.
- In an ideal world, what would science learning look like? In an ideal world, what would science teaching look like?
- In your current setting, what does science teaching and learning look like?

Appendix C - Final Interview Guide

- Many open-ended questions based on previous conversations, observations, written work, etc. These questions were specific to each individual.
- What experiences throughout the last 4 months stand out to you? Why? (In general, as a science teacher, as a middle grades teacher). Get many examples!
- Tell me about moments, experiences, events, or activities that you are most proud of from student teaching. Do any different moments, experiences, events, or activities come to mind as a science teacher? Middle grades teacher?
- Least proud of? As a science teacher? Middle grades teacher?
- Tell me about some of the dilemmas you experienced during student teaching? Describe some of the dilemmas you faced in teaching **science** that stand out to you? Describe some of the dilemmas you faced in teaching middle grades students that stand out to you.
- What would you say you spent the most time thinking about during student teaching? (As a science teacher, as a middle grades teacher)? Are these the things you wanted to be focusing on (as teacher, science teacher, middle grades teacher)? Explain. Why do you think you spent so much time focusing on these things?
- Tell me about the constructive criticism you received during student teaching that stands out to you and why it stands out to you? Who gave it to you?
- If I were interviewing your cooperating teacher, your university supervisor and myself, what do you think each of us would say about you as a middle grades science teacher?
- What would you say each of these individuals focus on the most in thinking about middle grades science teaching? What would each of these individuals tell you was most important about teaching middle grades science?
- What did you feel pressured to do differently with your cooperating teacher in the room? With your university supervisor in the room? And with me in the room?
- Tell me about what you think about your cooperating teacher as a middle grades science teacher. What do you like about her teaching? What concerns you about her middle school science teaching? Why?
- What stands out to you about middle schools after your experiences as a student teacher?
- What stands out to you about science teaching after your experiences as a student teacher?

- What stands out to you about middle grades students after your experiences as a student teacher?
- Paint me a picture of who you currently are as a middle grades science teacher based on your experiences during student teaching.
- To what degree does this current picture align with who you want to be as a middle grades science teacher 5 years from now?
- Are there ways in which you wanted to grow as a middle grades science teacher that you found you had difficulty practicing/working on during student teaching? Tell me about these and why you had difficulty growing in these ways.
- What aspects of your student teaching experience seemed most constraining to you? Why?
- In an ideal world without any constraints, what would your ideal vision of science teaching and learning look like? Be as specific and concrete as possible. Why is this vision important to you?