

CONCEPTUALIZING SCIENCE TEACHER LEADERSHIP – AN AUTOETHNOGRAPHY

by

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(Under the Direction of Thomas R. Koballa, Jr.)

ABSTRACT

Though abundant evidence suggests that effective science teacher leaders in schools have the potential to positively impact current school reform efforts, additional research into the roles filled by science teacher leaders in context is needed. No generally accepted conception of science teacher leader duties exists, and science teacher leader roles are generally undefined by policy. This autoethnographic study examines how a science teacher leader constructed his identity in the context of a suburban high school in the southeastern United States. Consideration is given to identity construction, and through personal journaling, narrative, and interviews with teacher leaders in other disciplines a more complete picture of science teacher leadership is presented. Findings suggest that science teacher leaders play very important roles in the school hierarchy, serving as conduits, nurturers, department clerks, and resource managers.

INDEX WORDS: Teacher leadership, Identity construction, High School department chair, Metaphor, Autoethnography, Distributed leadership, School reform, No Child Left Behind, Science teacher leadership, Teacher leader duties and roles, Narrative, Science teaching, Teacher and administrator relations, Supervision, Mentoring and Induction.

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CHAPTER 1

What am I Doing Here Anyway?

“Sometimes the questions are complicated and the answers are simple.” (Dr. Seuss)

The Research Questions:

- 1. In what way is a science teacher leader’s identity performed and expressed in every day practice?*
- 2. What identity tensions does a science teacher leader experience in relation to every day practice?*
- 3. How do interactions with other stakeholders (e.g., administrators, teachers, teacher leaders) contribute to a science teacher leader’s construction of identity?*
- 4. In what ways does a science teacher leader’s critical dialogue with self about these tensions lead to a better understanding of the interaction between leadership and identity?*

Introduction

What am I doing here anyway? I had found myself asking this often as a science teacher leader. Some days I was completely unsure, and followed that question with its corollary; *why don’t you just tell me what it is you want me to do and I’ll do it?! What am I doing here anyway?* Was I a change agent in the school or did I sustain the initiatives of others? Did I lead or follow,

enact my expertise or function as only a clerk, affect change in ways I believed meaningful, or depend on my administration to identify what they would have me do?

A year or so ago I thought I had the answer. Change was in the air. A retreat at Stone Mountain¹ galvanized our instructional leadership team. We were united in a common purpose. We challenged the status quo, opened up new avenues of dialogue between administration and faculty, and ultimately developed a community of openness and trust. Everyone on the team was open to dialogue, willing to listen and try new ideas, and excited about the change that had come upon our school.

It was great. We were collaborative. We were a professional learning community, and convinced that real, radical change in the way we do school was within our grasp. We excitedly talked with each other about what we were doing. We sent e-mails and shared ideas, discussed problems and potential solutions, and walked freely into the administrative offices to offer our opinions and hash out differences. We were on the cusp of real reform. Later though it seemed we might have slipped back into the status quo. If only I knew what that meant.

I shared my thoughts with the principal and one of the assistant principals. I mentioned Stone Mountain and missing the collegiality that came from it. They didn't perceive things the same way that I did. They explained how valuable teacher leaders were to the success of the school and the assistant principal wondered aloud if a part of the problem might be that I had been out of the Instructional Leadership Team loop too long while doing my doctoral coursework. Possibly I had. It had been a long semester, but still I felt I was missing the

¹ Ostensibly the purpose of this trip to the Evergreen Center in Stone Mountain was to develop our Instructional Leadership Team. It was a team building "retreat" initiated by the school administration with the goal of collaboratively charting the course for our school reform efforts for the coming year.

collaborative spirit that we had experienced such a short time ago. Other teacher leaders felt similarly. It was as if our common direction and sense of purpose had evaporated.

I am a science teacher leader at Northside² High School. I am one of several department chairs in the school, serving alongside department chairs in the language arts, social studies, mathematics, and other departments. Together with selected teachers from each department we form the Instructional Leadership Team. As science department chair my responsibilities to my thirteen member science department are varied, but traditionally have included securing textbooks and supplies, enacting directives from the school or district level administration, and mentoring teachers in lesson and unit planning. From time to time I also assist individual teachers with issues of classroom management, parental concerns, or administrative conflicts.

The responsibilities I have assumed are not written anywhere, and I was not sure how to delineate my niche as science department chair. No one offered me a job description when I became the department chair; indeed, no such job description exists in the school board policies in my district. My position is defined within the context of its enactment. It has evolved from within the dialogues that have occurred within it, and it is only in doing the job that I have developed a working knowledge of what it means to be a department chairperson.

My decision to pursue this study on science teacher leader identity is born out of my experiences navigating the lifeworld of a science teacher leader. Though teacher leaders can serve in many capacities in schools including team leader, instructional coach, or department chair, each of these identities are at best ambiguous. My title, Science Department Chair, is by no means definitive, and depending on the school can include some, all, or none of the

² Pseudonyms are used throughout to maintain confidentiality.

responsibilities of the others. I have learned that I exist between the administration and the department but have no administrative authority. Though by training an instructional expert, my input is frequently marginalized, often sought to validate a course of action rather than initiate one. And though I serve on various committees, leadership teams, and professional development programs, I am at the mercy of the occupational boundaries that Goldstein (2004) suggests are between teachers and positions of authority.

All of this ambiguity has led to my feelings of uncertainty. *What am I doing here anyway?* My desire to know myself as a science teacher leader and how my identity was constructed in the context of my school is the purpose of this research. *What am I doing here anyway?* According to many researchers including Gee (2000-2001), Valimaa (1988) and Taylor (1991) identity is a construction within the context of dialogues with others. What I am doing here is therefore dependent on what I have done here, and with whom I have dialogued about it. McCarthy and Moje (2002) suggest that our identity helps us make sense of the world and our experiences in it, with these experiences determining in large part how we interact with each other. *What am I doing here anyway?* was answered in the midst of my analysis of my interactions with other stakeholders in my school, and how those interactions resulted in my constructed identity as a science teacher leader.

As I began this research I learned very quickly that the uncertainty I experienced as a science teacher leader is not unique. Zepeda and Kruskamp (2007) for example, found that high school department chairs experience role conflict and ambiguity, and were often not aware of the expectations of others. These researchers suggest that the meaning of instructional supervision is not formalized and is determined intuitively by the department chairs themselves. A lack of

emphasis by the administration and little training were cited as reasons that the department chair roles were so ill defined and underutilized.

York-Barr and Duke (2004) describe a lack of definitional clarity in conceptualizing teacher leadership, suggesting that principal support of teacher leadership is more readily espoused than enacted. Clarifying the domains of teacher leadership, the domains of principal leadership, and areas of common ground are especially difficult areas. Harrison and Killion (2007) were able to identify ten different roles filled by teacher leaders in different contexts. The foundation laid by these researchers suggests that my work might prove helpful to others as they attempt to resolve their own tensions related to role confusion or ambiguity, provide for more effective development of science teacher leaders, and even increase our understanding of science teacher leader identity construction.

I chose an unconventional methodology to answer my question. Because my study is about my constructed identity as a science teacher leader in the world I inhabit, I chose autoethnography as the methodology. Though I elaborate on autoethnography in chapter two, for now I offer Roth (2009) who suggests that as an autoethnographer I am a “people writing the people” (p. 4). I exist in my experience and through the writing process conceptualize it. As described by St. Pierre (2008) “... writing *is* thinking, writing *is* analysis, writing *is* indeed a seductive and tangled *method* of discovery” (p. 484). I wrote as “the people” to understand how my identity was constructed in my context and what it means for me to be a science teacher leader in my school.

In deciding to do an autoethnography of identity construction in the context of my lifeworld, it was important for me to see the value in it. I needed to know how anyone, including

myself, might benefit from this type of study. Bullough and Pinnegar (2001) propose a reason I found meaningful, suggesting that if researchers in colleges of education are to study the development of teachers they should also declare their own role in that development, and not absolve themselves of responsibility for outcomes. As such a researcher my voice should be made known. More should be learned about science teacher leaders and who they are, what they do, and how they exist in the communities they inhabit. Responding to my *what am I doing here anyway* question does so while adding to the existing literature and sharing my experiences constructing my identity as a science teacher leader. Likewise, my work might ease the tensions experienced by other science teacher leaders, facilitating their development.

Mullen, Greenlee, and Bruner (2005) present another reason for me to tell this story. They describe a theory-practice binary that exists between practitioners and theorists. I live in both worlds. As a practitioner, I exist in the world of a science department chair. I experience the role ambiguity, confusion, and the uncertainty that is very much a part of teacher leader experience. As a theorist, I have become well versed in constructed identity, what it means to be a teacher leader, and the efforts that have been and are being enacted to give meaning to teacher leadership. I walk the fence. I am comfortable on either side. Who better than me to tell this story?

What Comes Next? A Preview of Remaining Chapters

Chapter Two: Conceptual Framework and Literature Review

There is a rich and varied body of scholarship that informs this study. Five broad areas are explored and reported in chapter two. These include the conceptual framework, contextualization as a theoretical framework, identity construction, autoethnography as a

research methodology, teacher leadership, and metaphor to inform practice. In the first section of the chapter I present the conceptual framework for the study with a presentation of the constructivist framework and how it has influenced our current understanding of contextualization as a theoretical framework and identity construction in context. Current understandings of identity construction have been informed by a variety of theorists including Gee (2000-2001), Valimaa (1988), and McCarthy & Moje (2002). Their work is highlighted. The major emphasis is that identity is constructed in context, and through conversation our identity is developed.

The third section of chapter two explores autoethnography as a methodology. The theoretical foundations of the methodology are considered, and a description of the autoethnographic process is described. Emphasis is placed on autoethnographic data, the use of narrative in autoethnographic research, and issues of validity in self-study research. Next, I present an overview of the literature on teacher leadership. This includes placing teacher leadership in its historical context, a discussion of the existing boundaries and their influence, a description of the roles and duties of teacher leaders, and ways to more effectively enact teacher leadership in schools. Finally, a section of the literature review considers the role of metaphor in educational research, and provides justification for the use of metaphor in this study.

Chapter Three: Methodology

As previously described, my desire to research science teacher leadership is an outgrowth of my experiences as a science teacher leader. My experiences in this context influenced me to consider research methodologies that allowed me to be both a researcher and a participant. Because of the very personal nature of my study, I selected autoethnography as my methodology.

I begin chapter three by describing the reasons for studying my experiences in my context, and my rationale for identifying autoethnography as an especially appropriate methodology for this work.

Following this introduction, I present the concept of a *bricoleur* (Crotty, 1998) and how my effort mirrors this description. As a *bricoleur* I participate in a type of research that emphasizes reflection and musing over the object of study, and find ways to integrate heterogeneous objects into a meaningful whole. Among the many objects for my study were my personal journal, e-mail communications, written narratives, and audio transcripts made while walking or driving. Additionally, I interviewed a variety of other stakeholders in my context including school administrators, district level administrators, and fellow teacher leaders.

The next section of chapter three describes grounded theory as a research methodology and how I used it as a means of data analysis. Following the protocols suggested by Charmaz (2006) I explain the processes I went through to arrive at my codes for analysis and the categories that resulted from those codes. Additionally, I present background information for my study including the study setting, a description of the participants in the study, the research questions informing my study, and the relationship between these research questions and the data sources used to respond to them.

Two topics are addressed in the final section of chapter three. First, I provide an overview of my subjectivities in doing this type of research and the biases I may possess that could flavor the results of my work. Hopefully, this acknowledgement will enable a more complete picture of science teacher leadership in light of the very personal nature of the methodology. Second, I argue for the trustworthiness of my work, and share the steps I have taken to insure that my work

will be a meaningful contribution to the existing literature on teacher leadership. Finally, I provide a rationale for conducting the study as I have, including an argument of the use of contextualization as a theoretical framework.

Chapter Four: Presentation of the Data – Stories that Inform

It is in this chapter that I present the data that I have collected over the course of the past 18 months. I begin the chapter by describing a conversation I recently had with a math instructional coach who claimed authority to do nearly anything he wanted to do in his role, but more than anything else wanted direction. I go on to explain that this ambiguity is the source of much of the tension that teacher leaders experience, and that the purpose of my writing is to address and hopefully alleviate these tensions. I describe tensions that I have attempted to ease in my own practice and the impact of my efforts on my peace of mind and effectiveness in my role.

From this introduction I provide evidence of the various roles I have served as a science department chair. I conceptualize myself in many ways, including conduit, nurturer, and organizer. I describe enacting directives established elsewhere in the bureaucracy, and discuss the potential power I possess as a science teacher leader to impact the success of administrative initiatives. I present examples of teacher leader practice through journal excerpts, interview quotes, and other sources.

Finally, I present myself as a teacher leader within four distinct contexts. These contexts are myself in the hierarchy, myself in the district, myself in my department, and myself and my teacher leader colleagues. Each of these facets of my experience serve to paint a broad picture of who I am as a science teacher leader, the struggles I have encountered, the work I do, and how I have attempted to construct my identity in my lifeworld. I believe the work to be inclusive, and

indicative of teacher leader experience. I hope it is valuable for others in similar situations, those who develop teacher leaders, and those under whom teacher leaders serve.

Chapter Five: Theoretical Considerations – What I Believe it all Means

The purpose of chapter five is to extend the analysis of the data presented in chapter four and to theorize build theory from it. In order to accomplish this, I isolated tensions that existed in each of the four contextual themes (myself in the hierarchy, myself in the district, myself in my department, and myself and my teacher leader colleagues). From the group of nine tensions that I identify I discuss the implications that each of these tensions might have on the construction of identity. An introductory chart identifies each tension and the contextual area(s) in which it is evident.

Chapter Six: Conclusions and Recommendations

In this final chapter I present an overview of this study, present the conclusions that I have drawn from it, and make recommendations for future research efforts. I chose metaphor to present the conclusions and as a means of conceptualizing³ my identity as a science teacher leader. Two major metaphors are presented. First, science teacher leader as conduit describes the myriad identities that science teacher leaders assume in their practice. Science teacher leaders frequently are involved in facilitating communication between teachers and departments and the administration and are instrumental in initiating the programs and policies established by the administration. Science teacher leaders are also important liaisons between individual schools and their districts.

³ As used in this paper the term conception adheres to the meaning described by Koballa, et al (2000) and means to describe categories of description that highlight salient features of a group of individuals without explaining their cause, function, or source.

Another important role assumed by science teacher leaders is captured by the metaphor science teacher leader as nurturer. Perhaps more important than any other role that science teacher leaders fill is the work they do to create collegial and productive work environments. They frequently are involved in reassuring teachers who have experienced setbacks, helping teachers to solve pedagogical or behavioral management issues, and mediating between teachers and the stresses in the teaching environment. Teacher leaders who successfully navigate this role are able to create cohesive and collegial departments where teachers work together, help each other, and have a holistic view of their place in the department.

In addition to these major roles, there are other seemingly more routine identities that science teacher leaders assume. Science teacher leader as department organizer captures the day to day book keeping and the management of supplies and equipment that teacher leaders frequently assume. Science teacher leader as department organizer captures the work science teacher leaders do scheduling, getting classes covered during absences, and leading department meetings. And all departments receive very meaningful benefit from department chairs acting as social directors who organize and facilitate times of community building and fellowship in their departments. While many of these roles can be and are filled by science teacher leaders serving as mentors, instructional coaches, or lead teachers, emphasis in this effort is placed on my role as a science department chair in a secondary school.

CHAPTER 2

Conceptual Framework and Literature Review

In this chapter I provide an overview of the conceptual framework and a review of the relevant literature. There are three major constructs. First, I present context as the theoretical framework for this study and provide a rationale for its use. Second, I describe how my identity was constructed within four contextual areas: myself in the hierarchy, myself in the district, myself in my department, and myself and my teacher leader colleagues. Finally, I provide a description of autoethnography and its use as a research methodology. Relevant literature for the study include a justification for contextualization as a theoretical framework, a presentation of the existing literature on identity and autoethnography, and a review of the current literature on teacher leadership. I also provide a brief introduction into the use of metaphors as a means of conceptualizing science teacher leadership.

Context

In choosing context as the theoretical framework around which to build this study, I drew from the description of situated learning presented by Ackermann (2001). Ackermann suggests that situated knowledge is a social construction that lives and grows in context. Referencing the work of Seymour Papert, Ackermann suggests that learning occurs within a context as the learner is actively engaged in constructing a public entity. In my case, the entity being constructed is my identity as a science teacher leader. While I exist broadly in my role as a science teacher leader across many contexts within my high school, I found that my experiences were most effectively described and understood within the four contexts mentioned above. By

moving my analysis from a general consideration of teacher leadership to my identities in specific contexts, I hopefully have been able to present a much deeper understanding of the various identities I assume as a science teacher leader in my school.

The work of Nilsson and Ryve (2010) on developing analytical tools for studying mathematical communication in collaborative activities provides additional support for the use of contextualization as a theoretical framework for analysis. These researchers explain that it may not be possible to explain even simple things in a completely exhaustive way, and that contextualization provides a mechanism to restrict the ways to look at or experience the living world. Their study considered context as a constructivist perspective referring to the personal, cognitive context shaped by the learner's interpretations. Through context, they argued, researchers could analyze their subjects most effectively.

As I considered contextualization as an analytical choice for this study, I attended very closely to the various experiences I had in my lifeworld and the ways I might restrict my analysis of them. It became evident very early in my analysis that natural borders existed among those experiences. I realized, for example, that the relationships I had with the teachers within the science department were very different from the relationships I had with other faculty members. Within the department I was generally the nurturer, while outside of the department in relationship with my teacher leader colleagues I was a peer, confidant, and collaborator. These realizations lead to the contextual areas of *myself in my department* and *myself and my teacher leader colleagues*. Likewise, I experienced one type of relationship with the local school administration, and another with administrators at the district level, leading to the *myself in the hierarchy* and *myself in the district* contextual areas.

Theoretically, Nilsson and Ryve (2010) explain that contextualization finds its origins within the constructivist research tradition. This tradition holds to the philosophical belief that people construct their own understandings of reality (Oxford, 1997). Constructivists argue that objects and events in and of themselves have no absolute meaning. Instead, individuals construct meanings of events based on previous belief and experience (Hannafin, Hannafin, Land, & Oliver, 1997). Crotty (1998) states that constructivism describes humans engaging with objects in the world and making sense of them.

An extension of constructivist thought regards learning as a social activity occurring within personal cognitive contexts shaped by personal interpretations of an activity. Kim (2001) explains that constructivists believe that reality is constructed through human activity, that knowledge is a human product, and that learning is ultimately a social process. This interpretation is generally regarded as social constructivism. It implies that reality is constructed through human activity, with members of society inventing together the properties of the world, and the meaning created as people interact with each other and their environment.

Because social constructivists find cognitive constructions essentially social in nature, they adhere to rules that are held by a particular sociocultural group (Phillips, 1995). Dewey also alluded to the social nature of knowledge construction, identifying the knower as an integral part of the situation in which the learning is occurring. He argued that knowledge is built not as a spectator who is watching from the outside, but as an active participant who is engaging from the inside as society provides the reference point from which to make sense of experiences (Oxford, 1997).

As an epistemology, or way of understanding how it is that our world is known, social constructivism suggests that persons are introduced to a body of knowledge through discourse within a context (Oxford, 1997). Cobern and Loving (2008), in writing about the importance of epistemological realism, present the argument that social constructivists value knowledge for its utility, and that knowledge is acquired from experience. We know because we have experienced something in a particular context.

In regards to this present study, it is through my dialogues within my context as a Science Department Chair that I have been able to construct a body of knowledge of my identity as a science teacher leader. My identity has been constructed socially through my interactions with others in my lifeworld, and I have come to know my identity in my context through the process of enacting it. My identity as a science teacher leader is a socially constructed identity and has been built through the conversations and interactions I have shared with the various stakeholders in my context including fellow teachers, teacher leaders, and school and district level administrators.

Identity

This is an autoethnographic study on science teacher leader identity construction. While contextualization provides the theoretical framework for analysis, identity construction provides a conceptual framework on which I built my understandings of science teacher leadership. In reading Valimaa's (1998) description of his study on culture and identity in higher education, I was intrigued by his use of *identity* as the intellectual device around which he built his study on the cultural differences in academic communities. For this study, *identity* functions much the same, as the device I use to conceptualize myself as a science teacher leader within various

contexts. But identity can be a very slippery concept. Dictionary.com offers ten separate definitions for identity including “the condition of being oneself or itself and not another” and “condition or character as to who a person or what a thing is” (Dictionary.com). De Ruyter and Conroy (2002) provide a better definition for my purposes, stating that identity is constructed at the intersection of the horizons of interpretation made possible by society and the individual’s interaction with those horizons. Said another way, a person’s identity is a construction with others serving as mirrors that allow a person to see who he or she is.

Valimaa’s (1998) study of academic worlds argues that identities are cultural entities based on social constructions of reality. In this study, Valimaa (1998) cites Charles Taylor (1991) arguing that identity is a process based on continuous dialogue with significant others. Taylor suggests that questions such as “who am I” and “where do I belong to”? (p. 131) structure our self-understanding throughout our lifetime. In conceptualizing identity in this way important questions to ask include; Who are the significant others? Where are they? How does culture determine the groups that exist? Who am I in the midst of this culture? Valimaa describes identity as an interactive process between individuals and various significant others, and states that it is important to identify the significant others in each case. In my context, significant others have included fellow teachers, school and district level administrators, and other teacher leaders.

Gee (2000-2001) articulates identity somewhat differently. First, Gee argues that identity is constructed within context, and a person is recognized by others as being a certain “kind of person” (p. 99). For example, a person could be identified as homeless, a gang member, community activist, or something else. This identity is entirely subject to context. It can change between given times and places and moment by moment. A second type of identity suggested by Gee is more universal and exists across contexts. This natural identity (N-identity) relates to a

person's internal state and is not performed. It is assigned by nature. Physical characteristics, race, or other facets of who a person "is" all relate to this natural identity. The first type of identity, performed identity, is of relevance to this study.

To arrive at an understanding of performed identity, or what it means to be a "certain kind of person" (p. 100), Gee provides three avenues. These include the I-Identity, the D-Identity, and the A-Identity. The identity assigned by institutions is the institutional perspective (I-identity). In contrast to the N-Identity, the institutional perspective is a position assigned by some authority. The authority is a "power" to which a person is "subject" (Gee, 2000-2001, p. 102) that assigns a person's I-Identity. For example, a person is a teacher or professor as assigned by a particular school or university. In my case, my institutional perspective (I-Identity) as a science department chair was assigned by my school principal and is recognized by the faculty in my school, the science department, and the district where I work. Conferred with my assignment as a science department chair is a position I fill, replete with traditions and responsibilities, as well as with privileges.

Gee describes I-Identities as "... on a continuum in terms of how actively or passively the occupant of a position fills or fulfills his or her role or duties. (p. 103)" On one end of the continuum is an I-Identity as an *imposition* in which the position is forced upon the person, and at the other end of the continuum is the *calling* in which the holder actively attempts to do his or her best to fulfill the requirements of the position. The clerical and administrative duties I do as a science teacher leader might be described as *impositions*, while the opportunities I have to work with teachers, affect positive change in the science program, and actively contribute to instructional improvement are areas within *calling* I perceive for myself.

The second performed identity described by Gee is the discursive perspective (D-identity). This identity emanates from within the discourses surrounding the person. In other words, it is the identity assigned to a person through the dialogue of other people. The “power” that determines this identity is not subject to an institution or authority, but is subject to the dialogues of other people. The “power” involved in the D-Identity is the *recognition* by other individuals that a person possesses a particular trait or characteristic. Subject matter knowledge and helpfulness are two examples of D-Identities that might emerge through discourses in the educational setting.

A particularly interesting facet of the discursive perspective is that it can be maintained without the overt support of the institutions in which it a person exists. It arises rather as a property of the ways that a person’s words and/or deeds are recognized by the actors in a person’s context. A person can be perceived as a teacher leader not because of an institutionally assigned title such as science department chair, but because of the conversations in context that identify him or her as a teacher leader. Like the I-Identity, the D-Identity can be actively or passively reinforced through the reinforcing actions of the person. For example, a person might choose to be helpful to other teachers in the department as a result of dialogues about his or her helpfulness.

The third identity construct, the affinity perspective (A-identity), is actively chosen by the person. Though institutions are often instrumental in initiating affinity group formation, the “power” that determines a person’s A-Identity is not an institution or a set of discourses. Instead, a person’s affinity to a particular group is the result of an allegiance to and participation in a specific set of practices. Participation or sharing these practices is the primary focus of a

particular social group, and secondary to that are the other people within the group. It is the distinctive practices that create and sustain the group, rather than institutions or discourses.

There are a variety of examples of affinity groups that exist in one form or another in a school setting. Some of these groups are “institutionally sanctioned” (Gee, 2000-2001, p. 107) and include many of the groups formed under the banner of school reform. Communities of learners, critical friends groups, and professional associations are all examples of groups that may be formed at the behest of school administration. “Not institutionally sanctioned” (p. 107) groups include those groups that are less directly the product of the workings of an institution. In order for an affinity group to impact a person’s identity it must be actively chosen by the person. Regardless of the perspective, Gee’s work on identity construction demonstrates that identity is a social construction that emanates from our interactions in institutions, in discourses, and in the affinity groups to which we are aligned.

Within the science education community several researchers have leaned heavily on Gee’s work on constructed identities. Brown, Reveles & Kelly (2005) drew on Gee’s idea of the discursive identity to develop understandings of science literacy. They argue that theories of scientific literacy need to consider the sociocultural contexts of language as related to science literacy. They argue, for example, that views of science literacy need to acknowledge the communities that students belong to and how those communities impact the way these students are engaged and the social activities they use to employ knowledge. To date, these theories have not been prominent in discussions of scientific literacy but should become more so as our understandings of the relationship between dialogue and science literacy grows.

There are several interesting constructs that have emerged from this work however, and are subject to further study. First, research has identified a relationship between language and knowledge acquisition. Language is a resource students use to learn appropriate science discourse and engage each other in practices of persuasion. While this is true, engaging in these types of discourse practices is not a neutral activity. Science is a discourse-rich subject and discourses related to appropriating scientific knowledge carry implications for how students and teachers perceive themselves. Students who learn to use appropriate science discourse develop deeper understandings of science than those who do not develop such discourses.

A second theoretically relevant application of Gee's work in the area of science education is in attending to the affinity identity of students in the classroom. Students considered to be college-bound possess a particular set of cultural practices and teachers of these students likewise draw on interactional, developmental, and historical markers that identify them as college-bound. Students who are aware of how their discourse practices mark them as particular types of people may use those practices consciously. Additionally, a student's development of scientific literacy may be very closely tied to how teachers and students co-construct the discursive norms that define the classroom they share.

A second study by Brown (2004) examined how the cultural practices within high school classrooms created intrapersonal conflict for ethnic minority students, and that these conflicts impacted how they constructed their identities. Among the findings of this study is that students differentially appropriate applications of scientific discourse in response to co-constructed discursive norms in the science classroom. A range of domains of discursive identities resulted including *opposition* status in which the individual avoided the use of science discourse as a rule. Students demonstrating *maintenance* status employed science-specific discourses but moved into

non-science specific genres to maintain cultural identity. Students exhibiting *incorporation* status demonstrated short-term mastery of science discourses and attempted to maintain those discourses. Finally, students exhibiting *proficiency* status engages in extensive use of science discourse. In each of these cases, these students exhibit an adherence to an identity created through discourses in various contexts.

Carlone and Webb (2006) applied the work of Gee to science education in their study of the hierarchies that exist between universities and schools. This study describes the authors' experiences facilitating a collaborative project with elementary teachers of science and how, in spite of efforts to the contrary, discourses maintained the hierarchal relationships between university professors and elementary teachers. Among the findings were some very interesting difficulties the researchers experienced in the midst of their discourses with the teacher participants. One of the authors (Heidi) relates how she inadvertently established herself as the group's leader through discourses, and how one of the teachers likewise sought identity in solidarity with the other teachers present. Though neither of these participants actively sought to promote themselves at any level of the hierarchy, both did so through the discourses they initiated.

Other discourses also impacted the groups' hierarchal relationships including those that were unarticulated but present nonetheless. The discipline of science itself for example has a historical discourse that identifies scientists as intellectually gifted persons who embody a culture of power. This is in contrast to elementary teachers who are often very uncomfortable teaching science as a subject in their classrooms. The inherent differences in teaching and education research also lead to hierarchal concerns. Education research is a very analytic enterprise, while

teaching is much more normative. These differences lead to differences in discourse and differences in identities of the participants in the group.

Of particular interest to me as a researcher of science teacher leader identities was discussion of the implications of Gee's institutional identity among the participants. One of the teacher participants, Susan, related that her institutional identity as a lead teacher was ascribed to her by the institution where she worked as opposed to something that she actively pursued. Her identity as lead teacher was the result of institutional power and not something that she had strived to attain. The power of this position resided in the authority assigning the power and not necessarily in her desire to be in the position.

Another study conducted by Heidi Carlone and Angela Johnson (2007) within science education focused on the science identities of successful women of color. This study developed a model of science identity as a method of making sense of the science experiences of 15 women of color who had succeeded in science-related careers. An important finding of this study was that the successes these women experienced could be attributed to seven identity building factors. These factors include strong pre-college experiences, family support, teacher encouragement, intrinsic motivation, perseverance, and growing up in small, supportive communities. Of these three dealt with recognition by others, making recognition a key influence on students' science identities.

Many other researchers within the field of science education have explored the formation of identity among science educators. Brickhouse and Potter (2001) found that the success of young women in a science program could be attributed to the identity formation the young women experienced in science courses. Experiencing marginalization was found to negatively

impact membership in school science communities while students who were perceived as ideal science students were more successful in science settings. Eick (2009) describes the transition period beginning science teachers experience as the views they hold of themselves as students are replaced by views of themselves as teachers, and how they identify themselves and their purpose through their socially constructed teacher-self. Volkamnn and Anderson (1998) conducted a similar study of how a first-year chemistry teacher constructed her professional identity, and Grier and Johnston (2009) describe the development of teacher identities among STEM career changers.

Beyond science education, a variety of other researchers also ascribe importance to identity construction. Snyder and Spreitzer (1984), in their study on identity and commitment to the teacher role, argue that humans act based on subjective meanings, and those meanings are derived through social interaction and modified through interpretive processes. They suggest that others construct images of how they expect us to act and we reflect on how we appear based on our perceptions of others' beliefs about us. Self-identity is thus a process of role construction as we align our identity to what others believe us to be. Snyder and Spreitzer found that a person's commitment to teaching can be reinforced by collegial relations, mutual esteem, and a quest for community.

De Ruyter and Conroy (2002) also stress that individual identity is socially constructed. In their study on the importance of ideals in the formation of identity they suggest that identity is constructed at the boundary between what is possible in society and one's interaction with those possibilities. They define identity as the configuration of the defining characteristics of a person and present the notion that the identity of an individual is related to what is not yet realized. An important part of this understanding is the idea of an "ideal identity" (p. 512) which consists of

ideal images of what a person would like to be, persons they may want to emulate, personal situations to which they aspire, or ideal character traits. These aspirations towards an ideal identity are realized as they are incorporated into a person's identity through cognitive or emotive processes.

A different perspective on identity is presented by Maclure (1993). He presents identity as a form of argument for justifying, explaining, or making sense of one's conduct, career, values, or circumstances. This model suggests that identity can be described either as what one is, or as what one is not. A person might describe himself or herself oppositionally as 'not sexist' for example, or conversely as someone who believes in equal pay for equal work. Stein (1977) refers to this as defensive identity, and insists that "Any assertion of 'who I am' is simultaneously accompanied by an insistence on 'who I am not'" (p. 351). McCarthy and Moje (2002) also view identity as socially constructed, citing Anzaldua's (1999) description of identity in terms of a "cluster-of-stories" metaphor (p. 231). This metaphor presents identity as a mass of unresolved tensions emanating from "... the clusters of stories we tell ourselves or that others tell about us" (p. 231).

An important question to answer about science teacher leader identity is why it matters. McCarthy and Moje (2002) offer two meaningful responses. First, identity is an aspect of how humans make sense of the world and their experiences in it. Analysis of the critical dialogue that occurs with self in the formation of science teacher leader identity will lead to a more thorough conception of these identities. Second, people are viewed in particular ways by others, determining in large part how people interact with each other. An understanding of those interactions could lead to better relationships between teacher leaders and administrators, and more meaningful uses of science teacher leader skills and expertise.

McFee (1975) argues that other equally powerful forces are at work in identity formation. Included in her list are the social contexts from which a person originates, self-concepts brought into adulthood, and even the role conflicts that arise from upbringing. According to her, identity is a complete package. Black (1974) would concur, suggesting that acknowledging her southern life experiences was the first step in uncovering her true identity. Identity is thus a multifaceted construct, including the entirety of life experience, interactions with others, and even a person's upbringing. This depth of meaning residing in a person's identity make it a topic worthy of this consideration.

Regardless of the context under consideration, identity construction is a powerful means to develop understandings of how people respond to each other in social contexts. Analysis of the various facets of experiences in these contexts, including discursive identities, institutional perspectives, and affinity perspectives allows researchers to develop a thorough picture of constructed identities and how members of various contexts cohabit these shared spaces.

Autoethnography

Because I am a practicing science teacher leader, I sought a methodological approach that accommodated my involvement as both participant and researcher. According to Duncan (2004), autoethnography provides a means by which personal thoughts, ideas, and perceptions enter into the research process, thus giving the researcher voice. In autoethnography my voice becomes data. Duncan (2004) describes this as externalizing internal dialogues, during which researchers make their lifeworlds and internal decision-making processes public. As someone who is researching and writing about myself as the primary participant in the experience, the use of autoethnography was a natural choice. Autoethnographic research places value on the

researcher's personal experience in a situation, rendering issues of accessibility, permissibility, and unobtrusiveness less of an obstruction to gaining knowledge (Duncan, 2004).

Because autoethnography emphasizes a commonality of perspectives among participants, autoethnographic research reaches beyond voice of the researcher. It also includes participant observations, reflective writing, interviewing, and gathering documents and artifacts, or other data sources (Duncan, 2004). As Duncan suggests, doing autoethnography makes it possible for me to consider my voice within my larger social and professional context. The multiple perspectives represented in autoethnographic data allow me to build understandings through many lenses. This capacity to capture the broader range of the voice of the community under study is what sets autoethnography apart from other genres. Though the loudest, my perspective is but one of the many voices that may be heard.

Autoethnographers write about personal experiences as they relate to the culture of which they are a part (Hamilton, Smith, & Worthington, 2008). This type of analysis allows professional identity and knowledge to be revealed in the context of the existing culture. Even though self is emphasized in autoethnography, the purpose extends beyond self. The researcher draws on personal experience, cultural competence, and linguistic resources to conduct research in ways that outsiders cannot (Neri & Phillips, 2008). In doing autoethnography I am able to use the variety of voices in my lifeworld to describe how I exist within my culture.

Even though autoethnography can capture many voices, the emphasis is on self-observation. Wall (2006) states that personal data, including short stories, personal essays, and journals, are all considered data to be filtered through conversations with other participants, interview transcripts, or other pieces of evidence. Muncey (2005) adds to the list to include snapshots, metaphors, artifacts, and journeys as data sources used to create a "...patchwork of

feelings, experiences, emotions, and behaviors that portray a more complete view of (my) life” (p. 10). Autoethnographers use their most intimate thoughts and perceptions to create vivid pictures, useful in capturing the nature and essence of the focus of their research. In my case, my personal journal, narratives, e-mail communications, and other artifacts became sources of data to filter through the perceptions of other stakeholders leading to my understanding of science teacher leadership in the context of my school.

Though self is a focus of this type of research, autoethnography is not autobiographical. Roth draws on etymology to distinguish the two, defining autobiography with the Greek roots “auto” for “self”, “one’s own”, and “by oneself”. In other words, an autobiography is a biography an author writes himself about himself. In contrast to this, “ethno” finds its roots in the Greek word for “nation” or people, making autoethnography a writing about a people by the people (Roth, *Auto/Ethnography and the question of ethics*, 2009). In an autobiography the emphasis is on the author’s personal experiences. In autoethnography on the other hand, the focus is not on self, but on the commonalities between the author/researcher and the other participants in the study. It is from within this relationship that knowledge emerges.

As a methodology, autoethnographic research finds its origins within the postmodern tradition. Postmodernists reject the modernist and postpositivist systems of thought emphasizing established methodologies and generalized, indisputable truths (Crotty, 1998). Instead, postmodernism assumes that confusion exists over the nature of valid knowledge, as well as the way such knowledge is discovered or constructed. Postmodernism creates contexts of doubt and subjects all methodologies to critique, but offers the possibility of gaining knowledge in many ways (Wall, 2006). No single right form of knowledge exists and many different viewpoints are acknowledged and valued as truth (Duncan, 2004). To the postmodernist, even if objective truth

is possible, there are limits to it (Bentz & Shapiro, 1998). As a methodology, autoethnography emphasizes a process of reflective deconstruction of existing contexts to arrive at new understandings or meanings.

At its core autoethnography finds meaning in individual perceptions. Data take the shape of personal writings and reflections, the stories of others, interviews, and an understanding of the relevant literature (Wall, 2006). As Wall explains, these studies of self begin "... with a question that has been a personal challenge for the researcher" (p. 4) awakening and inspiring the researcher to make contact with his or her own inquiries. The challenge in my case has been to conceptualize, as much for my own peace of mind as for any other reason, where I exist in the culture and hierarchy of the school. The answer to this question existed in my relationships with my colleagues and administrators and the conversations that have defined my role in my school. As Wall suggests research began as I wrestled with these questions, beginning with initial engagement and culminating in creative synthesis.

Wall (2006) further suggests that the freedom of a researcher to speak as a player in research, and to mingle his or her experience with others, is precisely what is needed to move research forward. Only through autoethnographic research is this accomplished. Erickson (1984) argues that ethnographers who are a part of a society hold points of view that affect their descriptions of that society. These views are part of who the researcher is and cannot be set aside as the researcher enters a study site. As Erickson says,

"It was *I* who was *there* doing the field work, not somebody else. My fundamental assumptions and prejudices are part of my *me*. I cannot leave them home when I enter a site. I must study the place as me. But you are not me, and you are not there. It's I who have *been there*. So I should at least make explicit to you the point of

view I brought to the site and its evolution while I was there, as well as the point of view with which I left” (p. 60).

Autoethnography brings Erickson’s “I who have *been there*” into the realm of data, making this “I” as much a part of the collected data as any other data source. The experiences I have had as a science teacher leader very much flavor the research I have been doing, but that need not diminish its value. By doing autoethnography I bring to light my experiences in my context as seen through my *me*. These understandings are valuable in and of themselves as a part of our growing knowledge of science teacher leadership.

A very important method of presenting my lived experience as a science teacher leader is through personal narrative. Though skeptics may find these personal accounts inadequate methodologies, proponents find value in these stories as a means of learning the terms on which others make sense of their lives (Spigelman, 2001). Diamond (1992) suggests that in today’s education research the voices of teachers are often lost in the voice of the researcher, thus silencing the lived in world of the school culture. As teachers, myself included, interpret their own experiences through narrative their voice is restored, presenting the practical and experiential knowledge possessed by the teachers themselves. It is a further testament to the value of narrative that mainstream journals increasingly include them in their pages, and self-study research has grown in influence on teacher education (Bullough & Pinnegar, 2001). Perhaps there is no more fitting methodology for capturing my voice as a science teacher leader than to write my story through narrative.

Other researchers also emphasize the value of narrative. Watson (2009), for example, states that narratives provide the means to link individuals to discourses that include the entirety of the self. In her role as researcher, Watson’s discourses include interviewing people, analyzing

data, or writing papers, which subsequently are compared to her narratives. Through reflexive examination, this comparison provides a means of understanding the self-engaged in practice. Bentz and Shapiro (1998) describe the hermeneutical quality of narrative analysis whereby texts are interpreted from within the stories they tell. In either case, stories mean something, and through careful analysis researchers are able to learn about the world through them.

As with all research, validity is an ongoing concern in autoethnography, made more so due to the subjective nature of the data. Watson (2009) argues that validity is simply the truthful representation of the object of research, something the postpositivists argue is beyond the realm of self-study research not dependent on textual authority. Spigelman (2001) counters that there are no truth claims for autoethnography or other personal writings. Instead, researchers acknowledge and celebrate the ways in which experiential evidence destabilizes certainty, encouraging contradictions and open to interpretation. Though this freedom of interpretation exists, Feldman (2003) suggests that our interpretations may be based on a distorted view of the world. We cannot know the accuracy of what we know or see and we may have flawed findings.

Feldman proposes that in order to overcome these issues of validity, we need to demonstrate that our research is well founded, and that it can be trusted. Subjecting our inquiry methods and representations to our own critiques provides a foundation upon which to make validity claims. Further, we can provide reasons why others should trust the findings of our research. Specifically, we can provide clear and detailed descriptions of how data are collected, what counts as data, and how our representations are constructed. Additionally, we can extend triangulation to include multiple representations of the self-study that both support and challenge one another.

As an autoethnographer I am the object of my own research. I am studying how I have constructed my identity as a science teacher leader in the context of my school. The data I have used include my personal journal, narrative writings, audio transcripts, copies of e-mail and other communications, meeting notes, and interview transcripts. From within these data my voice and the voices of the other participants in my lifeworld have emerged. I (as Roth would say) am a “people writing the people”. In keeping with postmodern tradition, I do not seek the truth, but only my interpretation of it. My voice is but one of many voices, and my interpretations may help foster a greater understanding of what it means to be a science teacher leader.

Teacher Leadership

Perhaps my greatest tension as a science teacher leader has been to situate myself within the larger hierarchy of the school. Though I have a set of responsibilities that I enact as a science department chair, there is another set of activities in which I participate that are nowhere articulated. It seems that my role has been created through trial and error, in the midst of my discourses with colleagues and the school and district level administration. Attempting to understand who I am as a science teacher leader in my lifeworld has required me to familiarize myself with how we arrived at our current understandings of science teacher leadership in the context of the reform minded school of the 21st century.

It is important to acknowledge that our current emphasis on teachers as leaders is a relatively new position. Traditional views of school hierarchies⁴ were built on the premise of a single strong leader in the form of a dynamic, heroic principal keeping a school in check (Kurtz,

⁴ By “traditional views of school hierarchies” used here, I am referring to views from the 1970’s and earlier. These views were in place before No Child Left Behind Legislation and our current emphasis on measurable school reform.

2009). In fact, much of the school leadership literature in the 1970's and 1980's established the school principal as the primary change agent in the improvement of schools. Finch (1981), quoting a variety of scholars in the field, used terms like "from without", "from the top down" (p. 322) and "... the principal is the major decision maker" (p. 322) to describe teacher leadership. Camburn, Rowan & Taylor (2003), stated that much of the research throughout the 1980's focused on the centrality of a strong principal to the success of a school.

Beginning in the 1990's, restructuring, site-based management, career ladders for teachers, and mentor teacher programs began to replace hierarchal views of instructional leadership and school reform. Increased teacher participation in the decision-making processes of schools was promoted, and leadership roles began to be distributed more widely across a variety of incumbents. This new view of teacher leadership emphasized the experience and expertise possessed by teachers, and the important contribution they could make to the success of the school (Camburn, Rowan & Taylor, 2003; Kuntz, 2009). This recognition of teachers as leaders seems to have stemmed from new understandings about organizational development and leadership, suggesting that individuals at all levels must be involved for change to take hold (York-Barr & Duke, 2004).

Though it cannot be stated with certainty, the education reform initiatives that began in the 1990's seem the most likely stimulus for this new perspective on teacher leadership. York-Barr and Duke (2004) note that beginning in the 1980's notions of teacher leadership filled much of the teacher professionalism and teacher quality literature. Kurtz (2009) tells us that this time period signaled a paradigm shift, with effective principals beginning to work collaboratively with teachers to enhance teaching and student learning. Camburn, Rowan & Taylor(2003) also cite a shift toward teachers as instructional leaders during this time period, with leadership

responsibilities spreading to a variety of stakeholders including teachers, external change agents, and other participants. Smylie (1995) even identifies teacher leadership as the defining characteristic of the professionalization of teaching and school reform, and Feeney (2009) believes that No Child Left Behind (NCLB) legislation may have been instrumental in initiating the shifts in our conceptions that view teacher leadership as a means to locate leadership in processes among people rather than in the hands of a single leader.

But conceptual change has not occurred rapidly or comprehensively, and teacher leaders still find themselves confronted by boundaries left over from previous views of school leadership and culture. For example, in spite of rhetoric to the contrary, most secondary schools remain highly centralized internally (Ingersoll, 2007). Teachers generally have little influence over a variety of important decisions in schools including the instructional program, class sizes, textbook selections, or the classrooms or offices they will occupy. In fact, the data suggest that compared with other professions teachers have limited power over the decisions that influence their work. Though leadership responsibilities may have been spread across a greater number of persons in a school, the power and control over workplace decisions still rest firmly in the hands of the privileged few (Ingersoll, 2007; Fitzgerald & Gunter, 2008).

New initiatives, though seeking new roles for teacher leaders, often maintain these traditional views (Darling-Hammond, Bullmaster, & Cobb, 1995). Teachers are often viewed as implementers of decisions made elsewhere in the bureaucracy. Though there are teacher leaders who engage in new kinds of decision making or other leadership practices, for the vast majority nothing has changed. Smylie (1995) suggests a cause for these misunderstandings is that most studies on teacher leadership are guided by “policy logic” (p. 4) consisting of descriptive assumptions that fail to explain relationships as they exist. Rather than emphasizing the

assumptions in policy, Smylie argues that a more in-depth picture of teacher leadership is needed to promote effective utilization of teachers in leadership capacities, and studies should consider the entirety of context including the work teachers do, the broader context of teacher workplaces, and the functions of schools.

Boundaries to effective teacher leadership can be overcome as we acknowledge that they exist and that change is needed. Among the boundaries that need to be crossed are hierarchal and/or occupational boundaries (Goldstein, 2004), relational boundaries (Robertson, 2009), and boundaries of dialogue (Glover, 2007). Goldstein suggests that occupational boundaries between teachers and administration exist and are ingrained in the culture of education. The boundaries are hierarchal in nature and without any foundation in science. Indeed, the current system of public school administration was imported from the factory model of the century old industrial era (Goldstein, 2004). Quoting Little (1990), Goldstein presents a situation in which lead teachers “engage in a precarious form of improvisation... for an audience whose sympathy is far from certain” (p. 177).

Crossing relational boundaries requires trust, and all levels of leadership must move away from an “everything is fine around here” façade (Robertson, 2009, p. 41) that often inhibits participants from revealing areas of weakness where growth is needed the most. Administrators must be comfortable with reduced control and be willing to adopt a leadership model that views leadership as a mutual influence process. Likewise, principals themselves must take the initiative to break down barriers to effective dialogue. Suspending individual opinion and remaining open to hearing what others think fosters open discussion and dialogue with teachers in a school, whereas debate places limits on teacher empowerment (Glover, 2007). Finally, Raffanti (2008) points to a variety of other boundaries to effective teacher leadership including insufficient and

inappropriate preparation and ongoing education for teacher leaders, cultural contexts that inhibit distributed leadership, and hostility from colleagues unwilling to accept peer leadership.

Be all that as it may, and even with a genuine desire to foster teacher leader development, a great deal of confusion still exists about the nature of teacher leadership, the roles teachers fill in schools, and where teacher leaders fit in the culture and hierarchy of the school. Johnson and Donaldson (2007) state that teacher leader roles are seldom well defined and teacher leaders are often marginalized in school hierarchy. Funding for teacher leader positions is often from grants or other soft sources, creating the impression that they are easily eliminated. Many times the premise of peer expert knowledge is questioned by other teachers, and principals often perceive teacher leaders as little more than sources of extra help. Other issues surrounding teacher leadership include undefined qualifications and selection processes, resistance or opposition from colleagues, and strained relationships resulting from interactions between teacher leaders and other teachers in the school.

From the standpoint of administrative acceptance of teacher leadership, Donaldson (2007), cites Ackerman and Mackenzie (2006), stating that many administrators, school board members, citizens, and even teachers themselves don't understand teacher leadership. Multiple conceptions of teacher leadership exist across various levels of administration in a district, and even in a single school, and tension occurs as teacher leaders are unsure of their identities. Jago (1982) describes leadership as something for which multiple interpretations exist, with each providing some insight into the role of a leader but remaining incomplete and inadequate to fully explain the nature of leadership. Harking back to Gee's (2000-2001) D-Identity, both Jago (1982) and Fitzgerald and Gunter (2008) describe teacher leadership as a discursive process

existing in schools in which teachers are seen as leaders as a result of the discourses surrounding them.

Another variable emanating from the idea of conversations establishing persons as leaders are the parameters of formal vs. informal teacher leadership. Several writers suggest that leadership need not only be assigned formally by title or position, but that many persons are identified as leaders based solely on the informal roles they fill in their school setting. Charlotte Danielson, writing in *Education Leadership*, suggests that formal teacher leaders fill roles such as department chair, master teacher and instructional coach, but that informal leaders arise spontaneously from within the teacher ranks (Danielson, 2007). These informal teacher leaders have no positional authority, but because of their practice and expertise have earned the respect of their colleagues. Donaldson (2007) suggests that informal teacher leaders arise from amid the many relationships that occur as teachers work together.

Becky Martin (2007) further separates teacher leadership, identifying three distinct layers. Two formal layers exist: those who are assigned and those who volunteer. These formal roles would include department chairs, team leaders, or others who have been selected for a position because of their knowledge or expertise. Informal leaders include those teachers who lead by example. They have excellent classroom management techniques and productive students. Martin, citing John Gabriel (2005), states that teacher leaders, whether formal or informal, fulfill four vital roles including influencing the school culture, building and maintaining a successful team, equipping other potential leaders, and enhancing student achievement.

Meyer, MacMillan, and Northfield (2009), in writing on the effects of principal succession on teacher morale, credit informal school leaders with providing direction and stability in the absence of stable leadership in the principal's office. These persons were seen as critical in maintaining school morale by focusing the attention of the staff on students. Additionally, these writers found that new principals who were unaware of informal leaders or chose to ignore them created problems for themselves both during and after their initial phase of entry into the principalship. Even more revealing, without the approval of key staff members new principals faced both passive and open resistance to change initiatives. All of these findings affirm the very strong influence informal leaders have on the culture of the school.

In the midst of this discussion of teacher leadership, and most especially my conceptions of science teacher leadership, it is important to provide an overview of what it means to be a science teacher leader, whether formal or informal. For convenience sake, this is presented as the traits and duties/roles of a teacher leader. Traits are considered as the personal and professional characteristics generally possessed by teacher leaders, duties are presented as the formal assigned responsibilities enacted by teacher leaders, and roles refer to the less formal but no less important activities performed by teacher leaders.

A variety of traits characterize teacher leaders. Raffanti (2008) presents several, but makes the point that teacher leadership is co-constructed between colleagues, and colleagues must provide the potential leader with the authority to impact practice. Fostering relationships with peers is seen as an especially significant trait for teacher leaders. Teacher leaders also possess content knowledge of their fields, classroom management skills, and demonstrate effective instructional methods. Additionally, teacher leaders display enthusiasm for teaching

and learning, serving and empowering others, and are also seen as having collaborative and reflective tendencies.

Duties of teacher leaders vary widely. Department chairs⁵ report being involved in a variety of managerial responsibilities including bringing forward concerns of the department, ordering supplies, and delivering information to answer teacher questions (Feeney, 2009) as well as selecting textbooks, overseeing the budget, allocating resources, writing reports, securing substitute teachers, and completing work as assigned by the administration (Zepeda & Kruskamp, 2007). Some of the formal roles filled by teacher leaders would include peer coaching (Little P. , 2005) and mentoring beginning science teachers (Forbes, 2004). Informal roles are many and varied and range from serving as role models to sharing ideas and strategies.

The substance of all of this is that beginning with the reform efforts of the 1980's and continuing until the present time, teacher leadership is seen as an integral part of the school improvement process. Administrators at all levels have rethought the role of teacher leaders in the culture and hierarchy of schools, and increasingly seek the involvement of the teachers in their schools as agents of reform. The teachers themselves are willing participants in reform efforts and enjoy the challenges and rewards that accompany a greater voice in school improvement initiatives.

Even though teachers, administrators, and other stakeholders are on board with teacher leaders as agents of school reform much remains to be done to adequately conceptualize the roles of teachers in schools. Differences in duties, perceptions, and expectations exist among stakeholders. Teacher leaders, administrators, and other colleagues in schools need clarity in

⁵ It should be noted that as written in this dissertation, the terms "teacher leader", "science teacher leader", and "Science Department Chair" are generally interchangeable and refer to the formalized role of Department Chair as currently understood in my district. This would not apply to any referenced work, but only to my writings.

understanding the roles that teacher leaders fill, the administrative authority that is afforded to them, and the responsibilities they hold for making schools more successful. Hopefully, this present study will play a part in the process of conceptualizing who teacher leaders in science are, the roles they fill in the overall culture and hierarchy of the school, and how their skills, expertise, and interest in the success of their respective schools might be best utilized and appreciated.

Metaphor

Metaphors play an important role in this study, being an important means of describing science teacher leader identity. Their usefulness in providing insight into teacher beliefs and practice is well supported in the literature. Berliner (1990) explains that metaphors can affect the way we think about others and ourselves. Nichols, et al (1997) state that metaphors serve a variety of functions including helping to conceptualize teacher and learner roles, facilitating conceptual change, framing events, problems, and solutions, and facilitating changes in teacher belief and practice. Kagan (1989) describes the evaluative significance of the metaphor of teaching as an aesthetic medium, and Tobin (1990) used metaphor as a means of conceptualizing teaching roles and guiding the practices adopted by teachers.

Many other examples of the use of metaphors in research exist. Collins and Green (1990) for example, suggest that a “web of meaning” illuminates the dynamic and constructed nature of life in classrooms and a coherent set of metaphors can describe life in these classrooms (p. 77). Included in this set are the metaphors of constructing the classroom, the teacher laying a foundation, and teachers and students building meaning together. As constructivists, these authors believe a classroom is not a static entity, but something whose meaning evolves over

time as people interact within it. Teachers and students work together to build a common understanding of everyday life in the classroom, and the meaning of the term classroom varies across groups of students and teachers. Developing an understanding of what it means to be a part of the classroom, and by extension developing an understanding of the beliefs and practices of the teacher, requires developing what is to be known, done, understood, or interpreted to participate in the group.

Munby and Russell (1990) suggest the metaphor “seeing as” as a way of describing the process by which teachers reframe puzzles of professional practice (p. 117). In this process, an event over which the teacher has puzzled is perceived or seen differently, leading to a new approach to the puzzle. As an outgrowth of this understanding, the researchers have gained insights into how professionals construct their worlds. This insight has led to deeper understandings of the process of reframing and its importance in acquiring knowledge of professional practice.

Murphy (2001) proposes a teaching as persuasion metaphor to inform research on teaching. Persuasion is a process of evoking change in someone’s understanding or judgment as it pertains to a particular idea or premise. The teaching as persuasion metaphor implies the same. Students learn in response to the persuasive messages of the teacher. Murphy suggests this is a three-step process. First, what students learn is at least partly dependent on what they bring to the learning process. Second, a well-crafted persuasive message brings ideas to the foreground and stimulates reflection. Finally, this message, whether in text or discussion, has the capacity to transform or alter individual conceptions.

Organizational theory has also found application in education research, and a metaphor originating from this framework is teacher as supervisor of complex technology. This metaphor, proposed by Cohen and Lotan (1990), considers instructional materials and methods as the technology of the classroom and the classroom as the organizational unit. This view of technology suggests that the curriculum, materials, instructional methods and practices, and even existing professional knowledge form the instructional technology that teachers must manage. Classrooms supervised under this metaphor attend to two dimensions of technology, differentiation and uncertainty. Differentiation in technology refers to the diversity of elements in operation within the classroom, and uncertainty refers to the predictability of the tasks at hand. Uncertain tasks do not follow standardized procedures, do not have immediately obvious outcomes, and encourage the use of hypothesis, experimentation, and trial and error.

For this study metaphors are an important methodology for framing thoughts and perceptions. I have conceptualized my enacted identity using a variety of metaphors including *conduit*, *nurturer*, and *department clerk*, and have conceptualized my relationship with other participants as *co-travelers* on a *journey*. These conceptions provide a mechanism for reflection on my self in context and my position in the hierarchy of my school. As a vehicle for understanding, metaphors provide an important analytical tool and a window into my lifeworld.

Chapter 3

Methodology

Introduction

Marginalized...

Life on the edge...

Neither leader nor follower...

Caught in the middle...

Where do I go from here?

I wrote those lines in my journal at 7:00 a.m. on October 28, 2009. They were a synopsis of my feelings at the time; I had been marginalized, I felt like my opinion really had not mattered, and I perceived myself as neither teacher nor administrator. I was caught in the middle. Much like York-Barr and Duke (2004) describe, I experienced a very real lack of definitional clarity in conceptualizing myself as a science teacher leader and was unsure of my place in the social and administrative hierarchy of my school. In line with Zepeda and Kruskamp (2007), my experience was one of role conflict and ambiguity, and I was unsure of the expectations held by either the school administration or my colleagues in the science department.

These feelings left me questioning my reasons for becoming a science department chair in the first place. I was first offered the position as science department chair when the former science department chair retired. In retrospect I think the administration may have selected me for the position because at that time the other teachers in the department were either nearing retirement age or were in their first year of teaching. I was, I suppose, uniquely qualified because

I was the only mid-career science teacher in the building. At any rate, I was very hesitant to accept the position, having had poor experiences managing people in “my other life” in the transportation industry. I spent several days weighing my options before finally agreeing to give the job a try. Such were the circumstances surrounding my appointment; I was reluctant to assume responsibility for anyone besides myself.

After I got over my initial reluctance I did develop some level of comfort about the possibility of serving as a department chair. There were some definite perks associated with the job. I was able to choose my own schedule and my own planning period. I had a voice in the decisions that were made that impacted the department. I also was able to order lab materials that I previously hadn't requested, and I would be able to add a new line to my resume.

Once the appointment came a lot of it felt like much ado about nothing. I didn't have to commit a lot of time to the effort of the task, and found the two really busy times of the year to be the very beginning and the very end. During these times I had to develop budgets and schedules, order materials, insure that everyone in the department had the materials they needed, and make sure the year started and ended smoothly. Beyond that it was pretty much business as usual. Because of the relative ease in which I migrated from department member to Department Chair my initial perceptions were positive. It was only after I had spent several years in the position that I began to question my identity as a science teacher leader.

I chose autoethnography for my methodology because I wanted to deepen my understanding of my experience in this context. As Duncan (2004) suggests, autoethnography allowed me to make sense of my world. The space I inhabit as a science department chair is undefined and can mean different things to different stakeholders – even in a single school. In

my situation, no one had ever articulated my role as a science teacher leader, but rather it had emerged as I enacted it. In the midst of this ambiguity I experienced significant tensions. Because autoethnographic inquiry is so personal and introspective in nature it allowed me to resolve my tensions and understand my place in my school. Though this understanding is specific to my lifeworld, it may nonetheless be instructive to other teacher leaders experiencing similar tensions.

I conceptualized myself as a bricoleur in accomplishing this work. According to Crotty (1998), a bricoleur is a makeshift artisan who uses parts and pieces of something to create a new whole. Crotty suggests “(A) *dialogue with the materials. Interrogating all the heterogeneous objects. Indexing their possible uses.*” (p. 51). I have dialogued with a variety of materials collected over a twelve month period. These materials include my daily journal, my time logs, and my e-mail communications. I have taken notes on informal conversations with colleagues, and have documented the various meetings in which I have participated. I have transcribed digital recordings made while driving or walking in the woods, and I have interviewed many of my colleagues, school administrators, and district level administration. Finally, I have collected historical artifacts, including job descriptions, memos, and meeting agendas. All together, I have collected in excess of 600 pages of data, which I subsequently numbered chronologically and stored in a four inch three ring binder. Table 1 below describes the materials I used in this study.

Table 1. Data for Analysis

Data Type	Time Frame	Use
Daily Journal	February 20, 2009- January 28, 2010	Provided space for reflection, a means to describe daily activities, related thoughts, perceptions, concerns, and successes
e-mail communications	August 21, 2009 – February 23, 2010	Provided a record of electronic communications between myself and the other participants in the study including science teachers, department chairs, Instructional Leadership Team Members, and school and district level administration.
Meeting Minutes or Notes	July 2009 – May 2010	Notes or copies of the meeting minutes for department meetings, department chair meetings with the administration, Instructional Leadership Team meetings, School Improvement Team meetings, and Process Group meetings.
Historical Artifacts	Various Dates	District level job descriptions, Testing data, Master Schedules, Budget data
Interviews	Various Dates	Eight interview participants including department chairs, local school administration, and district level administration
Recordings and Memos	Various Dates	Approximately ninety pages of transcriptions of recordings made while I was walking or riding in my car and memos written as a result of reflections on other data.

A comparable analytic approach was undertaken by Duncan (2004) in her autoethnographic study of hypermedia design. Using a notebook of handwritten accounts over a period of one year, Duncan was able to “...externalize assumptions and reactions to people that might otherwise have remained unacknowledged” (p. 6), while at the same time crystallizing her ideas, resolving inner conflicts, and ultimately developing a theory of hypermedia design. In addition to her notebook, Duncan used a variety of other materials, including computer screen images, storyboard sketches, loose notes and diagrams, and visitors’ comments, letters, and e-mails.

I began my data analysis with the understanding of coding as presented by Charmaz (2006),

Coding is the pivotal link between collecting data and developing an emergent theory to explain these data. Through coding, you *define* what is happening in the data and begin to grapple with what it means. The codes take form together as elements of a nascent theory that explains these data and directs further data-gathering. By carefully attending to coding, you begin weaving two major threads in the fabric of grounded theory: generalizable theoretical statements that transcend specific times and places and contextual analysis of actions and events(p. 46).

My coding strategy followed Charmaz's practice of mining the data early for analytic ideas followed by the creation of codes for each segment of data using gerunds. Initially, I coded using a variety of the methods described by Charmaz to include line-by-line coding, in vivo coding, and incident to incident coding. Though each of these coding methodologies did contribute to the categories of data that ultimately resulted, they were most effective as exercises for me as I learned the nuances of coding in practice.

Among the initial (open) codes I developed were standing in the gap for teachers, acting as a counselor, building community, addressing teacher concerns, validating, sharing struggles, being a friend, fostering collegiality, casting the vision, and sharing leadership. I quickly found that even though coding appears straightforward, in practice it is a very time intensive and analytic process. Reading through my data multiple times with multiple coding lenses was productive however, and allowed me to develop an aptitude for deriving meanings from my data.

Ultimately, I developed what I believed to be meaningful open codes and wrote each on a separate index card. At first I developed over one hundred such codes, which I sorted multiple times and asked another teacher to do likewise. Using a different color pen and new cards I repeated the process. Each time I repeated the sorting process I refined my codes before finally arriving at stacks of cards of categories for writing memos.

After completing the card exercise, I returned to my data and analyzed each segment of the data referenced on each card. Romo (2008) describes a process of continuous reading and rereading that lead to the categories emanating from her data. I have done similarly, and have identified four categories that have emerged from the data: myself in the hierarchy, myself in the district, myself in my department, and myself and my teacher leader colleagues. Interactions between myself and the school level administration formed the *myself in the hierarchy* context. *Myself in the district* includes my district level interactions including curriculum planning, textbook selection, and other tasks. Interactions within my department formed the *myself in the department* context, and my interactions with my teacher leader colleagues formed the *myself and my teacher leader colleagues* context. Table 2 describes the data used in each category.

Table 2. Relationship Between the Data Source and the Context

Context	Data Source Supporting Context
Myself in My Department	Daily journal, e-mail communications, memos and recordings
Myself in the Hierarchy	Daily journal, e-mail communications, historical artifacts, meeting notes and memos, transcribed interviews with school principal and assistant principal, and Mathematics, Language Arts, Foreign Language and Science Department Chairs.
Myself in the District	Daily journal, e-mail communications, transcribed interviews with district level Director of Student Learning, meeting notes
Myself and My Teacher Leader Colleagues	Daily journal, e-mail communications, transcribed interviews with school level Mathematics, Language Arts, Foreign Language, and Science Department Chairs, meeting notes and memos

To insure that my categories captured the breadth of data I had collected, I attempted to saturate my categories with data by returning to the data and writing narratives of experiences within each category. The major sources of data for the narratives were my journal and transcripts from interviews with colleagues and the administration from my school and the district. I tried to identify specific stories to tell to illuminate particular facets of my work as a department chair. Finally, from these narratives I developed a set of metaphors to articulate the findings of my research and the theory that results from it.

Setting

The primary setting for the study has been Northside High School⁶ in a southeastern state. Northside is a predominately middle to upper middle class suburban school, with approximately 1650 students. As the Science Department Chair in this school, I am responsible for the oversight of the activities of thirteen science teachers. In addition to my leadership responsibilities in the department, I am also involved in the Instructional Leadership Team at the school. This team is comprised of two representatives from each discipline, and is responsible for initiating and supporting the instructional agenda of the school.

The school is supervised by five administrators, including the Principal, the Associate Principal/Registrar, and three Assistant Principals. Each of these administrators has oversight of a particular discipline, as well as specific responsibilities for student management, textbooks, grounds and maintenance, and other duties. At the district level, the Director of Student Learning is most closely involved in local school and curricular issues. Department Chairs from all the

⁶ A Pseudonym

district high schools meet with her by discipline several times per year to discuss curriculum, policy, and other school related matters.

Participants

At the local school level, participants in this project included the thirteen teachers in the Science Department of Northside High School (myself and twelve others), the members of the Instructional Leadership Team, and the school administration. Pseudonyms have been assigned to maintain confidentiality. The majority of the teachers involved in this study hold advanced degrees, and most have been teaching for ten years or longer. Taken as a group, they are very knowledgeable of their subject areas, and very dedicated to their students and the mission of the school. The administration of the school could best be described as progressive, and school administrators are generally on the forefront of change in the district. In addition to local school personnel I also interviewed another science department chair in my district as well as the district level Director of Student Learning.

In selecting the participants for the study I attempted to capture as broad a spectrum of perspectives as possible while remaining within the confines of my context. To accomplish this I sent out letters requesting participation to all of the teachers in the science department, all of the teachers on the Instructional Leadership Team, all of the department chairs, and all of the local school administrators. Beyond the confines of the local school I also sought as participants the district level Director of Student Learning and a Science Department Chair from another district high school.

I selected the members of the Science department for participation as these are the people with whom I am most actively involved with on a day-to-day basis. My responsibilities as a

Science Department chair are acted out with these persons, making their participation critical to an accurate portrayal of myself as a science teacher leader. Likewise, capturing my interactions with the administration was an integral component of the data I collected. I made the decision to include the members of the Instructional Leadership Team because I wanted to access as data the notes I had taken during conversations with the team during our regularly scheduled meetings. Because of the common experiences between myself and the other department chairs in the building, I sought their input as well.

My decision to pursue data sources outside of the school building was based on the shared interactions I have had with these participants in the course of my activities as Science Department Chair. I have participated in a variety of curriculum, textbook selection, and department chair meetings lead by the Director of Student Learning, and believed that her perspective was an important part of a complete picture of science teacher leadership. Choosing to interview a Science Department Chair from another school in the district helped me to validate my thoughts, feelings, and emotions. My decision to select the department chair I chose and not another was strictly a matter of convenience. Her school is within only a few miles of my own while the other schools in the district are much further away.

Selecting participants to interview was also deliberate. Of the five administrators in the local school four returned consent forms and agreed to participate. I chose to interview two of those. I selected the principal because of his responsibility of the school, and I chose one administrator who held primary responsibility for leading the Instructional Leadership Team. I conducted the interview with these participants concurrently, as they were working under very strict time constraints. Because of my previous working relationship with the Language Arts and Foreign Language Department Chairs I knew intuitively of their desire to be interviewed

together. I did so to accommodate their desires. For my last in school interview, I interviewed the Math Department Chair independently and at his convenience.

Shared experience with me as a teacher leader was the final variable in interview participant selection. While I depended heavily on my daily journal and e-mail communications to document my interactions with the teachers in the Science department and the Instructional Leadership Team, I relied on interview data to capture the experiences of the teacher leaders in my study. The Mathematics, Language Arts, Foreign Language, and Science Department Chairs live in a lifeworld very similar to my own. Within my school, each of the department chairs I interviewed shared my experiences with the administration and faculty, while the experiences of the Science Department Chair from the other school mirrored my own experiences working with science teachers and local and district level administrators.

I conducted the interview with the Director of Student Learning at her office, and I interviewed the Science Department Chair from the other school in her classroom on a teacher work day. The local school administrators were interviewed in the principal's office, and the other participants were interviewed in their classrooms. I attempted at all times to be as accommodating to their schedules as possible and was very attentive to the other commitments each participant had. Upon completion of the interviews I sent all participants a thank you note and a pack of Twizzlers candy.

Research Questions

Because my desire was to conceptualize my identity as a science teacher leader in my context, I wrote my research questions to capture the day-to-day experiences and tensions I undergo in my role as a science department chair. The research questions guiding this study are:

1. In what way is a science teacher leader's identity performed and expressed in every day practice?
2. How do interactions with other stakeholders (e.g., administrators, teachers, teacher leaders) contribute to a science teacher leader's construction of identity?
3. What identity tensions does a science teacher leader experience in relation to every day practice?
4. In what ways does a science teacher leader's critical dialogue with self about these tensions lead to a better understanding of the interaction between leadership and identity?

Subjectivities

Working on this study over the course of the last 18 months has afforded me an incredible opportunity to critically analyze my experiences within my context as a science teacher leader. From this analysis I have been able to arrive at some meaningful conclusions of what it means to be a science department chair, and have I developed an understanding of science teacher leadership that might prove instructive to others studying similar contexts. Though my experiences in this context form the foundation for this study, in the spirit of full disclosure I find it important to consider the effects that my past relationships and experiences may have had on my interpretations of my data.

One of the most important subjectivities I have identified within myself is that I am a relationship oriented person. Though I participate in a variety of tasks in both my personal and professional life, those tasks are not an end in themselves, but rather they are a part of my life in relationship with other people. I mow my grass not because it needs to be mowed, but because I want my house to look warm and inviting to the members of my family. I change the oil in my wife's car because I want her to have safe, dependable transportation. Changing the oil is a task I

complete as a result of living in relationship with my wife. The same can be said for my activities professionally. I strive to create meaningful lessons for my students because I value them and I want their experience in my classroom to be fulfilling. As a Science Department Chair it is far more important for me to provide my teachers with the materials they need than it is to complete task of ordering what they request. I exist in relationship with other people.

Beyond the scope of my life in relationship with others I considered the work of Peshkin (1988) who writes of the process of uncovering his subjectivities as they manifested themselves in the midst of his research, taking the form of warm and cool spots, or positive and negative feelings. In keeping with this perspective, I found it very informative for me to go through a similar process. One realization resulting from these reflections is that my experiences in my “former life” as a blue collar worker may have some influence on how I currently interact with school or district level administration. As I worked as a dock worker, billing clerk, and truck driver, my perception of my supervisors was typical of my blue collar working peers. People in management were generally to be avoided, and interactions between workers and supervisors were typically cursory, serving primarily as a means for managers to provide instructions to the workers. It was only after I finished college and began teaching that I ever seriously considered interacting with my supervisors at any level beyond that. I suspect that some measure of distrust of management still lingers in the depth of my subconscious in spite of the open relationships I currently enjoy with my administrators.

A second area of concern emanates from these same experiences. Given my propensity to view supervisors with some measure of suspicion, it has been hard for me to personally assume the supervisory role. In mind I suspect that those I supervise consider me much the same way that I used to view my supervisors, and I do not want to be thought of in this way. Because of

this I do not enjoy the supervisory component of my role as a Science Department Chair. When tasked with initiating or enforcing administrative directives, I frequently find myself explaining to the department that the directives have not originated with me, but rather emanate from above my pay grade.

My reluctance to be viewed as a supervisor might also explain the emphasis I place on the other facets of science teacher leadership including my roles as nurturer and organizer. Enacting these roles is a pleasure for me as it allows me to act on my desire to live in relationship with others. I provide a service to my colleagues in the department. I find myself much more comfortable providing this kind of support. In fact, I very much enjoy being of service to other science teachers, especially inexperienced science teachers who need ongoing support and encouragement.

Though I believe the subjectivities illustrated above formed the primary areas of concern for me in the midst of my research, Peshkin (1988) offers some other ideas that are worth my consideration. One important caution he suggests is that ethnographies have a way of becoming too autobiographical. Since I am doing an autoethnography my voice is necessarily the loudest, so becoming too autobiographical is a definite concern. My hope is that my conversations with other teachers, teacher leaders, and administrators have tempered my perspectives, and that the breadth of teacher leader experience has emerged and is evident in my writing. Though it is imperative that my perspective be illuminated, I hope that an understanding of the larger context of identity construction in teacher leadership emerged as well. Every thought from every participant, including myself, should provide fertile ground for others to meaningfully reflect on teacher leadership, and should be a source of understanding of this complex issue.

There are other underlying perceptions I possess that may also bias this research. I believe for example, that in spite of my reluctance to assume administrative authority, the quality of science instruction in my science department should be one of my major concerns. I find the current emphasis on measurable student progress often comes at the expense of attentiveness to good instructional practices and effective classroom management. I believe that many administrators fail to recognize the importance of good instruction on the science learning experiences of students, and often base their expectations for science teachers and science teacher leaders on inadequate understandings of the instructional process.

Though I am confident that other influences on my research will continue to emerge over time, for now I will strive to be attentive to these. Given the nature of qualitative research, there can be little question that my experiences will continue to influence my work. My hope is that my ongoing reflections on these experiences will help to lessen their impact on the quality of my scholarship.

Trustworthiness

As is the case in all research, it is important to attend to the trustworthiness of the autoethnographic research presented here. As Feldman (2003) suggests, the findings presented in this research should be more than believable, there must also be good reasons to believe them true. As the researcher and a primary voice in the research, I find what I have written to be true and believe that it is an accurate representation of my experiences as a science teacher leader in my specific context. But, in keeping with the accepted traditions of qualitative research in general I have attempted to demonstrate the trustworthiness of these data in several ways.

It is important to emphasize before proceeding however, that neutrality need not be a goal of autoethnographic research (Spigelman, 2001). No truth claims are made. Instead, I present personal experiences from my perspective. These experiences lie outside of the confines of validity. Again referring to Feldman (2003), self-study research delves into the existential ways of understanding being in a particular context. My research is my analysis of my experience in my lifeworld, no more, no less.

With that said, in the midst of the analysis of my experience, I found it meaningful to validate my perceptions by capturing the perspectives of other stakeholders in my context. This process of triangulation is described by Bentz and Shapiro (1998) as a means in which several theories, methods, techniques, or researchers are used in the same research situation. Using interviews from a variety of perspectives in my lifeworld allowed me to validate my perceptions through different lenses. Among the variety of perspectives I attempted to capture through interview were fellow teacher leaders in my school and another, local school administrators, and district level administration. Additionally, I integrated data collected through field notes of conversations and e-mail communications with other teachers in my department.

To further validate the efficacy of my interview data, I followed Maxwell's (2005) advice and sought validation of my data from all of my interview participants. Using this system of respondent validation or member checking, following each interview I sent interview transcripts to all participants and asked them to validate the substance of the interviews. It was only after I received their confirmation of the accuracy the transcripts that I used their data in my analysis. Additionally, as questions emerged through my data analysis, I returned to individual participants and asked them to clarify statements made during the interviews. Maxwell suggests

that this type of feedback from participants is inherently more valid than relying simply on their interview responses.

Finally, I validated my research by following the advice offered by Glaser and Strauss (1967). These researchers state that through the continual intermeshing of data and analysis the researcher becomes convinced that his or her work forms a systematic theory that is a reasonably accurate measure of the matters studied. I am thus convinced. I further believe, again following the advice of Glaser and Strauss, that my findings are meaningful and there is no reason to change them. My core categories have become saturated, and I believe my work is now sufficiently formulated to be presented here.

My Rationale for Using Context as a Method of Analysis

Several researchers have conceptualized borders as a means of articulating the space that exists between various cultures in a specific context. Bradbury and Koballa (2008) in a study on the mentor-intern teacher relationship, state that people cross borders as they move from one culture to another. Aikenhead (1998) explains that subcultures exist in all cultures, and that students move between cultures as they learn science. Olugbemi and Aikenhead (1999) argue that people live in a world of border crossings. Although the conception of borders has played an important role in contextualizing my lifeworld, it is the notion of distinct subcultures within cultures that has proven most meaningful to my work.

It is between definitive borders that these subcultures are found. As I considered the borders that I have encountered in my own experiences I realized that borders existed between myself and the administration and myself and many of the teachers in my department. From within my reflections on borders in my school I began to discern the subcultures that were

present. School administration for example, form a specific subculture, as do teachers, teacher leaders, and district level administrators. By acknowledging the borders that separate various groups within my school setting, I was able to differentiate four distinct contextual areas for analysis.

As a means of facilitating the reader's understanding of the four contextual areas I selected as a method of analysis (myself in the department, myself in the hierarchy, myself in the district, and myself and my teacher leader colleagues), I believe it is appropriate here to extend the argument I initially presented in chapter two. As a preface to that argument however, I would interject that in choosing the four contextual areas I depended heavily on my understandings of the grounded theory processes as described by Charmaz (2006). This ultimately led to what I found to be the saturated categories described earlier. It is from within these categories that the contextual areas presented in this study ultimately emerged.

That said, in an effort to further explain my use of context as a theoretical framework for analysis, I return to the ideas of situated learning (Ackermann, 2001) and contextualization (Nilsson & Ryve, 2010). Ackermann effectively argues that knowledge is situated (i.e., lives and grows) within a specific context and thus should not be separated from that context. Nilsson and Ryve explain that contextualization as a means of analysis emerges from within context and provides the researcher a means to establish a set of premises and assumptions from which he or she is able to conduct meaningful analysis. Simply stated, contextualization provided a way for me to limit my data to facilitate meaningful analysis.

I would now grasp firmly the roots of postmodernism and suggest that working within this understanding of contextualization, *any* method of restricting my data to a specific context

would have been an appropriate methodology for analysis. The contexts I selected were therefore among many that could have been suitable. I could have contextualized my data according to task for example, and created a supervisory context, an organizational context, a materials management context, and a curriculum context. I might also have contextualized the data according to time of year, purpose of activities, or the impact my efforts had on myself and other stakeholders.

I believe ultimately the four contexts I selected for my analysis were influenced to a large extent by my subjectivity to live in relationship with others. I believe very strongly that I exist first and foremost in relationship with others. That my contextual areas are relational is representative of the way I view my world. My analysis is constructed around the relationships I have had because my worldview includes my perceptions of the differences in the ways I relate with my department, other teacher leaders, the local school administration, and the district.

By returning to the ideas of Erickson (1984), Roth (Auto/Ethnography and the question of ethics, 2009), and McCarthy and Moje (2002) I can effectively validate this argument. As Erickson argues, as an autoethnographer I am writing my *me*. I am the person in the midst of my experience, and it is I who interpret the character of that experience. In selecting relationship oriented contextual areas for analysis I did as Erickson suggests, and brought to the forefront explicitly my point of view. Extending this idea, I argue that I know implicitly the natural divisions that occur within my relationships with others in my lifeworld and the contextual areas that arise from within those divisions.

Furthering this argument, I draw on Roth's description of autoethnography. As an autoethnographic author/researcher I focus on the relationships that exist between myself and the

other participants in the study. Relationships within my science department varied considerably from the relationships I enjoyed with my teacher leader colleagues, the relationships I experienced with the school level administration, or the district level administrator. My interactions with the members of my department were much more collegial than my interactions with the administration for example, and I depended on these seemingly innocuous divisions to establish areas for contextualization. My expression of my lifeworld is very much interwoven with the relationships that exist within that lifeworld.

Finally, McCarthy and Moje present a “cluster of stories” metaphor that explains identity as “... the cluster of stories we tell ourselves or that others tell about us.” (p. 231). The stories I had to tell about myself and those that others told about me fit neatly into the contexts I selected. I write about myself within the contexts of the relationships I had with other people. My writings cluster around my relationships with my department, my teacher leader colleagues, my local administrators, and my district.

Lastly, I briefly want to explain why I made the decision to use metaphor as a means of presenting my conclusions. I believe that metaphor as an analytic tool provides fertile ground for reflection on the findings of the study. Berliner (1990) tells us that metaphors are powerful forces that affect the ways we think about ourselves and others. As I have conducted this study over the past year, I have found them especially meaningful in my analysis for that very reason. Through using them, I have been able to develop a holistic conception of who I am in my lifeworld. I believe they might facilitate understandings by others interested in science teacher leadership.

CHAPTER 4

A Presentation of the Data – Stories That Inform

Recently, I had a conversation with a friend who lately had become a Mathematics instructional coach in a neighboring district. When I asked him about his position he related that the most difficult part of the job was dealing with ambiguity. He explained that his role had never been adequately defined, and shared that “I can really do whatever I want to do”. No one had ever told him what his job was supposed to be. He assumed they expected him to know who he was as a mathematics coach, but figuring out what he was supposed to be doing in the job had proven to be most difficult for him. As he said, “I would like direction.” The experiences of this coach mirror my own experiences as a teacher leader as well as the experiences of many of my teacher leader colleagues.

Identity development in a particular context is not automatic. Instead, identities in context are constructed over time in the midst of interactions with others who share your lifeworld. In the case of the mathematics coach, he had no previous experience either as a coach or working with coaches. Because he had just begun the job he likewise had not had the benefit of interactions with others in his world. Instead, he struggled to construct his identity in the midst of enacting it.

A personal story from my own experience further illustrates this. Early in the year a student requested to leave my room to go to his locker. His locker was right around the corner from my room so I was very agitated when he returned ten long minutes later. Upon questioning

him about his whereabouts he stated that he had gone to another science teacher's room to get some Tylenol. Student misbehavior notwithstanding, this statement created a very serious dilemma for me as her department chair. Teachers are prohibited by law from administering any sort of medication to students. If the teacher in question had given this student Tylenol it was a very serious infraction, and one that I could not ethically ignore.

But I was at a loss as to how I should address the issue. While speaking to the teacher privately seemed at first to be the best solution, I knew that if I were aware of her infraction and did not report it I was neglecting my responsibilities as a Science Department Chair. On the other hand, telling the administration would definitely have a negative impact on my relationship with the teacher. I knew the situation had to be addressed but I didn't know how to go about doing it.

Conflicting identity perspectives pulled me in different directions. My affinity perspective (Gee, 2000-2001) most definitely aligned me with my teacher colleague. I was very hesitant to do anything that could jeopardize the relationship I had established with her. On the other hand was my institutional perspective. I was assigned by my institution to a supervisory capacity over this teacher and I was bound by that perspective to respond to her potential error. I didn't want to do so. I valued my relationship with her. What I really wanted to act like the whole event had never happened.

Ultimately, I went and spoke to an administrator. I explained the situation and asked him to define my role. Was I to address this kind of thing, or should I refer these kinds of incidents to him? He decided to address the issue and handled the situation very tactfully, but nonetheless was asked by her why I didn't come to her directly. She felt that I had somehow violated her trust. Truthfully, I felt the same way. I went and talked to the teacher privately and explained

why I made the decision I made. I believe we parted friends. At any rate, as it turned out the student had been lying and she had done nothing wrong in the first place.

Regardless of the outcome, the situation created tension. I did not know the types of interactions that were within my purview and those I should defer to the administration. I initiated a conversation with the administrator and he stated that I should feel free to make decisions regarding small things, but that I should refer to him the very kinds of issues that I had just referred. I asked where my authority ended. Did I, for example, have the authority to give someone in the department permission to leave early to go to a dentist appointment? Could I give teachers permission to miss a School Improvement Team meeting if they had an acceptable excuse? Yes, it turns out this administrator wanted me to make those kinds of decisions. But another administrator might not have.

The purpose of this study is to articulate my constructed identity as a science department chair within the context of this lifeworld. In presenting my findings I acknowledge that my existence in this particular time, space, and place is unique, but would likewise argue that my experiences within my context would have application across a broad spectrum of experience. I would expect these findings to be useful to others who are exploring constructed identities within specific contextual areas, as well as those that are attempting to develop a more robust conception of science teacher leader identity construction.

As previously described, as a means of restricting the data for analysis, I have contextualized my lifeworld as a science department chair into four contextual areas. *Myself in the hierarchy* considers my constructed identity within the construct of my relationship with the local school administration. *Myself in the district* contextualizes my relationships with district

level administrators, *myself in my department* relates how my identity has been constructed working with the teachers in the science department of my school, and *myself and my teacher leader colleagues* articulates the unique relationship I have with other teacher leaders and how that relationship affects my constructed identity as a science teacher leader. These contextualizations are relational. The borders that separate these contexts are borders of relationship. I interact differently with my department than with the administration or my teacher leader colleagues. A different relationship exists. To explore each of these contexts is to explore four types of relationships and how the role they have played in the construction of my identity.

Myself in the Hierarchy

Of the variety of tensions that have impacted my constructed identity as a Science Department Chair are many that have emanated from within my relationships with the administration. For much of my experience as a science department chair I misunderstood my place in the school hierarchy. It is not that the administration had articulated any particular role. Instead, I arrived at my conceptions on being a science department chair through my own reflections. I believed that as Science Department Chair that I should be involved in those decisions that impact the Science Department and science teachers. Likewise, I believed that I should play a pivotal role in the development of school wide initiatives. I have subsequently learned that these perceptions of science teacher leadership were a source of tension for me, and they did little to develop either my capacity or my identity as a science teacher leader.

Several examples exist in the data to illustrate the tensions that developed as a result of my perceptions. Perhaps the conversation that ultimately lead to the reconstruction of my identity in relation to my school administration began the Sunday night before school was to begin. I

received a phone call from one of my science teacher colleagues, Jim⁷, who had been drafted by the administration to represent the department in the planning of a new initiative called Power Period. The period was created to provide a space and a time in the regular school day for students to be either enriched or remediated as needed. Jim had called to forewarn me that the administration had decided to administer school-wide benchmarks in each content area during the first few days of school. In the science department I learned we were tasked with creating and administering a benchmark on science process skills.

I didn't like the idea from the moment he opened his mouth. While it could be argued that benchmarking could be a useful tool in identifying and remediating at risk students, administering an un-validated process benchmark test school-wide on the first day of school did not seem like the best method of data collection. A group of us in the department had just begun to consider how to effectively infuse scientific process skills throughout the curriculum, and the administrative mandate to test scientific process skills seemed premature and ill advised. The longer I talked with Jim the less I liked the idea, but eventually he convinced me that administering the benchmark was the path of least resistance.

There is a range of dialogue to consider in the scenario with Jim and the benchmarks. When Jim called me on that Sunday night it was the first inkling I had that we were to be expected to administer benchmarks. I had heard nothing from the administration concerning benchmarks, and the discussions we had in Instructional Leadership Team meetings were inconclusive regarding the final outcome of the Power Period initiative. Much of the conversation concerning the development and administration of the benchmarks had been made in my absence, leading me to feel very much like I was not appreciated as a leader in the school.

⁷ A pseudonym

I felt that I, along with the other department chairs, should have been included in discussions with such school wide impact. Feelings of marginalization resulted as a consequence of my understandings of my place in the school hierarchy. I believed myself to be a part of the decision makers in the school.

A second piece of data reinforces this. My first journal entry of the new school year complained that the first day began with a faculty meeting that seemed to last forever, but in reality was only about an hour and a half. The administration shared data, data, and more data. They presented the state High School Graduation Test scores and End of Course Test scores. They compared our newest scores with scores from previous years. They assigned us the task of developing goals to meet each of the specific strands of each of the tests and to create a plan in each discipline for continued improvement. My journal entry for August 4, 2009 stated simply, “(n)ot much room for discussion or consensus building. I really don’t like being here today.”

As in the case of Jim and the benchmarks, what bothered me most about this first day is that neither I nor any of the other department chairs were consulted. Our expertise was not sought, and the views of myself and my colleagues were not even included in the decision making process. The administrative team had acted without the input of any of the department chairs, and we were expected to pick up the torch and follow their lead. I began the year feeling marginalized and for the rest of that first week at school I, along with all the other department chairs, dutifully carried out an agenda established by the administration. We held goal setting meetings with our respective departments, set numerical goals for student improvement on standardized tests, and developed specific teaching strategies to support the department goals. Particularly troubling to me was that we were required to submit our goals to our respective administrators for final approval, in spite of our superior content expertise.

Soon the Power Periods began. Those students in need of remediation were placed in Math, Science, Social Studies, or Language Arts “help” classes. The students not currently in need of remediation were given the opportunity to participate in a variety of enrichment courses ranging from Introduction to Astronomy to The Science of Chocolate. One of our beginning science teachers, Carol, was slotted to teach the Introduction to Astronomy Power Period in spite of the fact that she had never had an Astronomy or Earth Science course. She was completely overwhelmed. I went to the principal to seek a remedy, only to be rebuffed and told that she would have to handle it for the next six weeks.

My conversation with my principal was very troubling to me. I felt like the needs of our beginning science teacher were being superseded in the name of expediency. I didn’t believe that the difficulty this teacher would experience in teaching unfamiliar content was justified. Even more disconcerting were my feelings at the time that our content expertise as teachers was being ignored. I perceived the entire conversation as illustrative of an administration that did not consider the needs of teachers when enacting new initiatives.

By September my journal entries were increasingly pessimistic. Quoting another department chair, I complained that “(M)r. Carnes is really doing the vision casting here.” My September 27, 2009 entry is almost caustic. I write that “autonomy ends at policy” in response to being denied permission to have students carpool to meet me at the local wastewater treatment plant to tour the facility. I complained that if I were truly autonomous I would be able to make the decisions about the kinds of experiences I believed most meaningful for students. Continuing on the same date I write that “(a)ll of the ideas, decisions, and aspirations I have are filtered through the administration. Those they like are approved and I can proceed, those they don’t like are not approved. They really don’t even have to provide justification.”

The situation with the waste water treatment plant tour was particularly troubling to me. The policies established by the board regarding field trips in which students provided their own transportation were so burdensome that it proved impossible to follow them. If I were to take students on this trip and allow them to drive, each student had to drive individually behind me in a convoy from school and return to the school. With thirty potential participants that meant trying to keep thirty teenagers following me to and from the waste water plant. It just didn't seem possible. Again, the result of the conversations surrounding this event was to leave me feeling marginalized and my abilities questioned.

A real shift in my thinking occurred in early November, causing me to reevaluate how I conceptualized my role as a Science Department Chair. My November 5, 2009 journal entry describes an Instructional Leadership Team (ILT) meeting in which Mr. Carnes was reviewing his plans for an upcoming School Improvement Team (SIT) meeting. I stated that I felt like members of the department might view his plan to present a video protocol intended to "keep everyone on the same page" as intrusive and controlling. After assuring me that this indeed was not the case, he challenged me that regardless of the perceptions of the department that I "should have his back" (personal journal November 5, 2009).

The discussion that ensued from this exchange set my thinking on an entirely new course. One of the assistant principals, Mrs. Mathis, shared with the group that she did not believe that the members of the Instructional Leadership Team (ILT) were "...indicative of the rest of the faculty" (personal journal November 5, 2009). In stating this she was sharing that she believed in us and that she believed that we had the best interests of the school and the students in mind. Another assistant principal commented on the professionalism of the group, saying that he was very pleased with our efforts to date. So surprised was I by this exchange that during the analysis

of the journal entry I write boldly in red pen “should it be such a surprise when we are validated?”

By the middle of December I had reflected on that exchange many times, but until I conducted an interview with Mr. Carnes and Mrs. Mathis that I did not fully appreciate my place in the hierarchy of the school or the value the administration placed in teacher leaders. One of the points made by the principal was that the teacher leaders in the school inspire both the students and the other teachers in the school. He stated that the teacher leaders he worked with were constantly pushing themselves to be innovative, they were self-starters who took the initiative to do what was best for students, and knew the depth of the content for their respective areas. This was a real challenge to my perception of the administrative perspectives on teacher leadership.

The principal also shared the importance he placed on relationships. He believed that it was imperative that department chairs develop and maintain relationships of trust with members of the department. He had no expectation that I would *spin* or *sell* [italics added] the administrative agenda if I had reservations about it, but rather he expected me to speak with him directly about my concerns. He stated that he totally trusted his teacher leaders and believed that he could count on each of us to be honest and open with him and the other members in the department.

Both Mr. Carnes and Mrs. Mathis placed great emphasis on teacher leaders serving as conduits. They related the importance of teachers being able to approach teacher leaders who could likewise approach the administration. They were well aware that teachers are often hesitant in approaching the administration, and they counted on teacher leaders to share the concerns of teachers who may be less willing to come forward with ideas or concerns.

The overriding emotion I took from the interview with Mr. Carnes and Mrs. Mathis was validation. They described both formal and informal teacher leaders as good communicators, well organized, trustworthy, and dependable. They spoke of the value they placed on shared leadership. By the end of the interview I was feeling more than a tinge of guilt, and left with an entirely different perspective of how administrators conceptualized their department chairs. We were trusted and valued partners in the growth of the school. We were the main line of communication between the administration and the department members, and we were the people in the building administrators most relied upon to move the school forward. Though tasked by policy with the final say, Mr. Carnes was not authoritarian. He valued mutual decision making serving the best interests of the school community. Surprising though it was, these administrators conceived teacher leadership much the same way that I did.

While the conceptions of Mr. Carnes and Mrs. Mathis did much to enlighten my understanding of the administrative perspectives of teacher leadership, I found it equally informative to consider the differences and similarities that the data reveal exist between conceptualized and enacted visions of teacher leadership. During the interview several ideas emerge that illustrate these differences. These ideas are worth consideration in presenting a comprehensive view of teacher leadership.

One of the first ideas espoused by the administration was the belief that teacher leaders, because of their willingness to take the initiative to innovate, were somehow inspirational to both students and their teaching peers. Though little in the data suggests that teacher leaders do inspire fellow teachers, there are at least two interchanges between colleagues that address this belief. In the first example, during an interview a teacher leader responds to my question about tensions she experienced in her role as a teacher leader by saying that she felt deep resistance by the

teachers in her department as she tried to move forward the school vision (personal interview December 8, 2009). She in no way felt inspirational to her colleagues. Responding to this, another teacher leader in the same interchange questioned whether what she did really didn't mattered to her department, remarking "(d)oes anybody care? Does anybody listen?"

In this case the administration had great confidence in teacher leaders to lead their departments by example, but these two teacher leaders felt that they were not able to do so. They felt that they did not have the respect they needed or the capacity to positively influence their departments. In another example, another teacher and I were able to positively impact several members of our department (personal journal May 20, 2009). On this date we held a meeting to determine if there was any interest in the department to implement a process-oriented curriculum pilot program. In addition to us, four other science teachers volunteered and shared their excitement of being able to try such a program. From that initial meeting we were eventually able to influence teachers across our district.

The first point made by the school administration, that teacher leaders are innovative teachers who inspire their colleagues is something not evidenced in these data as occurring across departments or among all teacher leaders. So much of the influence that teacher leaders have may be subject to the willingness of those being lead to accept and act on that influence. This is a very interesting construct of teacher leadership and one that is beyond the scope of this current effort. It is safe to say however, that teacher leaders are in a position to provide that influence should they have audiences willing to accept it.

A second construct identified by these administrators as indicative of teacher leadership is the content knowledge possessed by these faculty members. My journal provides several

examples of this. On August 5, 2009 for example, I lead a meeting to identify the content areas in each discipline that were most in need of reinforcement. On August 21 I communicated via e-mail with a teacher asking my advice on the best ways to teach his Environmental Science content. On September 11 I participated in a group discussion of an article we had read together. On other days I participated in school and district wide curriculum meetings, oversaw the development of frameworks for the content areas, and other content related tasks. Taken together, these activities are demonstrative of the administrative conception that teacher leaders are content experts.

One final conception described by the school administration is of note. Teacher leaders are conceptualized as conduits between the administration and their departments. Mr. Carnes described this as "... being where the rubber meets the road, like when you get down to your wing where the science teachers are you're the one I'm trusting to make it happen. You're the go to person for that... you're the one they go to first before they come to us because they can't quite often (personal interview December 10, 2009)." This conception of teacher leaders as conduits between the administration and the teachers in respective departments is enacted by teacher leaders in departments on a daily basis. The accuracy of this conception cannot be overstated.

Within the context of *myself in the hierarchy* two important constructs emerge that will be explored more fully in the following chapter. The first is the role that marginalization played in my construction of my identity as a science teacher leader. The perceptions I held of science teacher leadership, including my belief that I should be a part of the decision making process on matters that had school wide impact ultimately lead to the feelings of marginalization I experienced. Additionally, my perceptions that the needs of teachers were secondary to

administrative expediency were an outgrowth of the feelings of marginalization I was experiencing at the time. The same could be said for my comment during the Instructional Leadership Team meeting in which I argued that some teachers might feel that the principal's plan to conduct a video protocol was an effort to exert undue control over them.

My need for validation is the second consideration in the construction of my identity to be considered more fully. It was a direct result of the validation offered by the administration that I began to view myself differently as a science teacher leader. Evident in the dialogues used by the administration to describe teacher leaders were that the department chairs were totally trusted, that there was no expectation that we spin or sell anything to our departments, and the value the administration placed in mutual decision making. We (teacher leaders) were described as innovative, content experts who the administration could count on to carry forward the school initiatives. In making these comments the administration validated my perceptions about myself and facilitated my construction of my identity.

Myself in the District

Though my identity within the context of the local school hierarchy is enacted primarily as I support the administrative initiatives and work to see that the Science Department fulfills the tasks assigned by them, my enacted identity in the context of the district level administration is much more content oriented. A majority of the district level activities I am involved in revolve around curricular issues. These activities range from serving on curriculum committees for various science courses, the selection of textbooks with each adoption cycle, and the district level planning involving the Science Department Chairs from all of the area high schools.

To capture the district level perceptions of my identity I conducted an interview with Rita Carson⁸, the district level Director of Student Learning. In her position as Director of Student Learning, Dr. Carson oversees curriculum in all content areas in grades 9-12. When asked to characterize teacher leadership, she stated that she believed teacher leaders should first and foremost be exemplary teachers and role models for peers, colleagues, and students. Beyond that she expected teacher leaders to have what she termed a “keen understanding” of the goals and mission of the school and an ability to define pathways to those goals through their actions and attitudes. She believed that teacher leaders are primarily responsible for providing the support and oversight teachers need to effectively teach the curriculum to kids. In doing so, they need exemplary content knowledge, the ability to utilize varying strategies to convey content, and what she described as an “...uncanny ability to say that kid’s not reaching it the way I’m presenting it, how can I come up with a better way to present this to that person?”

In considering Dr. Carson’s responses regarding the role of teacher leaders as curriculum specialists I asked her to elaborate on her perceptions regarding curriculum. My interest was in ascertaining her view of curriculum. I wanted to know if she perceived curriculum as the documents and established standards, the enacted curriculum that teachers teach, or the curriculum that students actually learn. In response to this Dr. Carson stated that curriculum included instruction as an important part of the learning process. Instruction, according to Dr. Carson, was the means by which presenting the curriculum is accomplished or achieved. This view suggests that curriculum refers to the information that students are expected to learn and the instructional processes that will be used to accomplish it.

⁸ A pseudonym

In order to more adequately conceptualize her beliefs about curriculum and learning, I also asked Dr. Carson to elaborate on her stated views of the nature of knowledge. I was interested in asking because her initial interview responses suggested that her view of learning was something that was conveyed to students as opposed to something that students construct in interaction with the content. During her interview Dr. Carson stated that she believed content to be building blocks that students used to build knowledge. This content was presented to students during formal education as well as other experiences, and students constructed their knowledge as they interacted with this content.

This perspective suggests that Dr. Carson believes the curriculum to be a guide that teachers use to help students build understandings. Teacher leaders who are curriculum specialists for their respective disciplines must therefore know not only curriculum as a roadmap for learning, but must also be expert at the methodologies for effectively creating situations wherein students can interact with the content and construct their own knowledge. To identify teacher leaders as curriculum specialists is to paint a very broad picture of teaching. This view includes the knowledge of students and the ways they learn as well as the actual content the standards task teachers to present to students.

Regarding the relationship between administration and teacher leaders, Dr. Carson described teacher leaders as liaisons to administrators, especially those who lack confidence in a specific content area. Citing herself as an example, Dr. Carson shared that she was not the content person for science and depended heavily on her science department chairs to provide insight and direction into content. Relationally, Dr. Carson shared much the same perception as Mr. Carnes and Mrs. Mathis. She stated that it was very important for all teacher leaders to feel comfortable coming to her and sharing problems, concerns, or issues with her. She feels like if

she is not approachable she has failed to create the type of collegial atmosphere she believes is an imperative.

Dr. Carson made one statement that gave me pause. Referring to teacher leaders as “instructional guideposts” for their departments, she described them as being “administrators without the added burden of being a supervisor and an evaluator.” While as a department chair I have not been given authority to evaluate or supervise the teachers in my department as a matter of policy, the conversations that have occurred between myself, science teachers in my department, department chairs from other disciplines, and various levels of administration leave little doubt that I am a *de facto* evaluator and supervisor. Frequently I am asked by members of my department for input on issues ranging from classroom management to curriculum. Likewise, I feel a responsibility to know what the faculty in the science department are doing, and work within the department to seek solutions to problems individual teachers experience with instruction or classroom management. Regardless of policy considerations, department chairs definitely fulfill supervisory and evaluative roles in their schools.

Though the information that Dr. Carson shared does present a unique perspective on teacher leadership, it is important to contrast her perceptions of teacher leadership to the actual day-to-day activities of teacher leaders in their respective schools. The responsibilities that department chairs fulfill in the various schools in the district have been defined more by discourse than by any other means. Teacher leaders fulfill the expectations of various levels of administration, the teachers in their departments, and their teacher leader colleagues not because of roles assigned elsewhere in the hierarchy, but more by the conversations among stakeholders in the schools attempting to address particular concerns. Teacher leadership is enacted in context among the variety of stakeholders in the local school.

Though my conversation with Dr. Carson spoke of teacher leadership in a general sense, it is important to emphasize that at the district level the teacher leaders that Dr. Carson works with are primarily the department chairs from each discipline in each of the high schools. During her interview, her discussions of teacher leadership were in reference to her experiences with these department chairs. The understandings she articulates during the interview should be interpreted as such.

Finally, capturing my identity in the context of myself in the district is an essential element in developing a comprehensive view of my identity as a Science Department Chair. I believe it is important to acknowledge that the dialogues constructing my identity in relation to the district are primarily content oriented, and that at the district level my most important function is to serve as a consultant on curricular matters. Along with other department chairs I help select materials and resources appropriate to content area, identify and initiate courses of study, and develop and implement curriculum maps. Conversations within this context have established my identity as a key voice in curriculum development within my district.

Myself in My Department

Journal Entry December 9, 2009:

“Bob, am I doing a good job?” she asked. She was in tears.

It was a parent. He had been giving her an extremely hard time because of what his daughter had been telling him. But the teacher had “covered her bases” and had photocopies of the girl’s work, e-mails, etc which demonstrated that the issue lay not in the teacher’s lap, and not in the student’s. The parent was at fault.

All that I could really do was listen. Of course I told her she was doing a good job. She is. She works very hard to create good experiences for her students and she succeeds. But when you're the one that a parent is out to get, it really doesn't matter that the department chair says you're good. What matters is that you believe the administration has your back.

I asked her how they had responded. She said that the administrator responsible for the science department had been very affirming and helped her to be sure that she had her bases covered. She hadn't heard from the principal yet, but the parent had assured her that he was going straight to him. We'll see.

I told her that I had heard nothing from either administrator and that I usually do when something is up with one of the science teachers. I shared with her my experience with "the parent" this year when one of my students was injured on a field trip.

I sure hope they are standing behind her. That's always the fear when parents are involved. Will the administration support the teacher or the parent? She's a good teacher. She doesn't deserve tears. She deserves them to stand behind her. I hope they do.

This short vignette serves to illustrate a very important part of my identity as a science department chair. As a science department chair I am a nurturer. When science teachers in my department experience problems with their students, with parents, with teaching colleagues or with administrators, they often turn to me for validation and support. I am frequently the person they turn to when they need to hear from someone that they are valued and that the work they do is meaningful. Such was the case with this teacher. She needed to hear that what she was doing is appropriate and that I believed in her.

Another (paraphrased) journal entry from November 12, 2009 reinforces this idea of science department chair as nurturer:

I had a conversation with Carol (a twenty-two year old first year teacher). One of the older more experienced inclusion teachers had been heavy handed with her. When Carol told me about it I really went into defender (i.e., nurturer) mode. She was bothered that she is the content expert but the inclusion teacher was telling her things she needed to do, expected her to get tests ready two days early, and insisted she alter the tests for the special education students in the classroom. This was a really tough situation for her.

Carol commented that maybe she should talk to the special education department chair about it. I asked her if she would like me to and she jumped at that offer. The special education teacher that challenged her is brash, but not mean. I believe that probably she views Carol as a kid... at 22 she really is very young. But she is competent and has been given authority in her classroom. And she deserves it. She's a good teacher.

This is a power structure thing. The inclusion teachers are perceived as helpers by many content teachers – Carol included. The inclusion teacher in question has been very involved with decision making in another teacher's classes and may have assumed that she could do the same with Carol. But she can't boss her around. One forceful person with a young teacher...

Later in the afternoon after a meeting I saw the special education department chair in the hall and explained the situation to her. Ultimately we decided that the best thing would be for me to suggest to Carol that she ask the inclusion teacher to produce the tests and share them with her for revision. We concurred that this inclusion teacher was not mean spirited, brusqueness was just her way. Carol is young, small, and inexperienced and is having to work with someone

who is older, bigger, and more experienced. This will be a good opportunity for Carol to grow a little more into her profession.

Several important ideas emerge from these exchanges. In the first exchange, it is evident that though the teacher went to her administrator and did everything she needed to do to defend herself against an abusive parent, she still sought validation from me. She very much needed the support of the administration in defense against the parent and to reassure her that she was doing her job correctly, but she sought validation from me as her department chair. She wanted to hear that I believed in her and in her teaching and that I valued her contribution to the team. When she found me to be a non-judgmental advocate on her behalf she was encouraged...even nurtured.

Carol's experience is somewhat similar. Her challenge came, not from a parent, but by someone whom she perceived as a colleague. That this colleague challenged her to do things differently was a challenge to her expertise as a teacher, though there was no evidence that it was anything more than a request for cooperation from the inclusion teacher. Carol hoped to hear from me that her work was adequate and that she could continue to direct the course of her classroom. The alternative that the special education teacher and I developed did not entirely validate what she had been doing, but it allowed her a means to ameliorate the situation.

Being a first year teacher is hard. Though Carol had excellent credentials and a very good student teaching experience, she still was entering into a very new and stressful situation. She took charge of the learning of over one hundred students and took that responsibility very seriously. She frequently stayed after school late to work on lesson plans or grade papers, and as a rule she was carrying work home every night. I became very worried that she was going to

burn herself out. Finally, after coming into school one morning and finding an e-mail she sent me late the previous evening I responded with this:

Would you quit working so hard?!

For the next thirty years you will never be “done” with your teaching work. If you look for it you will always be able to find something more to do. The reality is you will have done your job with these students if at the end of the year they know something about the periodic table and the nature of chemicals and do well on the Science portion of the (state) High School Graduation Test.

You sent this at 9:49 p.m. – probably after you got home from church or class. You have a home and a husband. You are working on your Masters. You have a life outside of teaching. Thirty years from now all of the effort you have put into these kids will be forgotten, but you will still have your home and your husband.

Make them your priority – teaching is just your job. I am worried that at the pace you are doing things you will use yourself up and get out of teaching. That would be tragic. You are much too good a teacher to do that. Slow down. Do what you can when you can do it – without compromising your time at home and your family.

Carol’s response to this e-mail from me was simply:

Thanks Bob! I needed that. I know... I am a workaholic.

Though that is all that she said much more happened. Carol learned an important lesson about time management and prioritizing. Had I not approached her in a nurturing manner with the purpose of slowing her down, she might have continued to overwork herself at the expense of

her home life. As a result of my comments to her, she slowed down and began to think of ways to reduce her workload without sacrificing the quality of her teaching. She talked to me about how she might lessen her work load, and actually listened to some of the suggestions I offered.

Another example of my role as a nurturer is found in a note written to me on January 26, 2010. It was written by a teacher out for maternity leave:

Bob, I cannot thank you enough for your help! Please let me know when the long term sub is in place and I can talk with that person. I am so grateful to have friends and colleagues like you to help in a time of need.

This note was written from home the day after she had given birth to her first child. She was completely overwhelmed with learning to be a new mother, and she had given herself the added burden of trying to provide lesson plans for the entire six weeks of her maternity leave. I called her and told her she was done with school for six weeks and that we would be handling her lesson planning. Knowing that another teacher was paying her a visit, I insisted that she return all of the teaching materials to the school via this teacher. I told her that she was to stop worrying about school, and start learning about being a new mother. She was so relieved. She sent the note with the teaching materials she returned to me.

Sometimes the nurturing nature of science teacher leadership is more collective, and serves to build community in the department. There are two activities that I hold every year with the express purpose of this type of community building. The first, held annually in October around Halloween, is the department hayride and bonfire. For the event, we prepare a bonfire at my farm, have a potluck dinner, and take a hay ride through the forest and around a local cemetery. The children of the faculty have grown to love the event, and even the faculty

themselves seem to enjoy loading onto the trailer and taking a ride in the dark. Though I am in the cab of my truck pulling the trailer, I can hear the laughter from both the children and adults and can see everyone coming together in fellowship. Following the hayride, we light the bonfire, roast marshmallows and make smores, and listen to the coyotes howl until it's time for the parents to take the kids home. The second event is just a simple potluck dinner to celebrate the conclusion of the year. Everyone gathers at my farm for a few hours and unwinds, the kids run around looking at the animals, and more than anything else we bond as a department.

Building cohesiveness is very much a part of what I do as a department chair. While hayrides and bonfires are great places to begin the process, it is in the midst of professional learning communities that our department challenges and is challenged by each other. We meet as a department at least monthly to participate in some activity, often following established methodologies such as Critical Friends⁹ protocols. The purpose of these meetings is to challenge the established norms of our collective practice in order to improve the professionalism and effectiveness of all of us. I also initiate informational department meetings on an as needed basis. Generally, I call these department meetings when new information becomes available from the administration, new policies or procedures are being implemented, or when specific tasks are required.

There are other important roles that I fulfill in relation to my department members. Budgeting, for example, is a very important part of my role as a science department chair. In establishing the budget I ask department members to submit requests for the materials they want me to purchase. From these requests I develop the department budget. As the first line of

⁹ Critical Friends groups are relatively new approaches to professional learning. The CFC procedures were established in 1994 by the National School Reform Faculty. See <http://www.nsrffharmony.org/faq.html>

scrutiny, I ask for validation of especially expensive items, or items I perceive of only limited value. Ultimately, I compile and submit the department budget to an assistant principal. The department budget then becomes a part of the overall budget for the school that is submitted to the board for approval and funding.

From the standpoint of personnel issues I have two major responsibilities within the department, creating the master schedule of classes and interviewing and recommending candidates for openings in the department. In developing the master schedule I am provided with the number of sections of each science course and the number of teachers available by the registrar. With this information in hand I seek the input from individual teachers, requesting they express their desires for courses to teach, planning periods, and other concerns they may have. Once I have heard from everyone I compile the master schedule and submit it to the registrar.

A second responsibility to the department arises when open teaching slots exist in the department. For several years I have been the person in the school responsible for interviewing and recommending candidates for open science teaching positions. The principal does the initial screening and subsequently provides me with a number of candidates whose qualifications match the position to be filled. I then identify a committee of colleagues from within the department, peruse the resumes, and identify candidates of interest. These candidates are contacted and interviewed, with me leading the process. Following the interviews the committee and I submit the name of the candidate we would like to hire to the principal.

My identity within my department has been constructed in and out of the various services I provide for my department members. As a nurturer I provide support and encouragement as teachers need it, as well as validation of their efforts. I schedule and budget for the department

and serve as a conduit between them and the administration. Throughout all of this I operate in relationship with my department members and act with their best interests in mind. I nurture them.

Myself and My Teacher Leader Colleagues

Some very unique and meaningful relationships have developed between me and some of the department chairs in the other disciplines. Through conversations over our years together we have grown to support each other. We seek each other for advice, and trust each other to respond honestly and forthrightly. Because of the value I place in the opinions of these colleagues, I decided to sit down with three of them to discuss what it means to be a department chair within the context of our school.

The first person I sat down with, Roger, had been involved as a teacher leader for mathematics. He had served in a variety of capacities, first as department chair and later as instructional coach and instructional leadership team member. Because Roger's room is so close to my own, we frequently bounced ideas off of each other, brainstormed, and discussed our roles together.

During our interview, we discussed a variety of issues surrounding teacher leadership, chief among them the tensions that we had experienced and how we had overcome them. From an affinity perspective, both of us considered ourselves very much teachers with no aspirations to enter into school administration. Because of our affinity to the teachers in our respective departments, one of the real tensions we experienced was being called upon to act in a supervisory capacity. Though no administrator actually articulated a supervisory role, and indeed Dr. Carson stated in my interview with her that teacher leaders had no authority to enforce

change, we both recalled instances where teachers were not meeting the needs of their students and where we were tasked with correcting their inadequacies. As peers and colleagues with the teachers in our departments it was very difficult for us to challenge others to improve practice, while at the same time maintaining the collegial relationship we both valued.

Roger expressed the tension he experienced in being tasked with instructional improvement with no authority to enforce it. He recounted an ongoing pedagogical problem with a teacher. His efforts to encourage and coach the teacher to correct the problems proved ineffective. Left with no other alternative, he was compelled to refer the issue to the administration. Having to do this created a very serious tension for him as he met with this teacher in the halls and at lunch. Eventually, his perceived responsibility as coach seriously impacted his relationship with this person. This bothered Roger immensely. He very much enjoyed his relationships with his peer teachers and was disheartened that fulfilling his responsibility as a teacher leader had negatively impacted this relationship.

Serving as a conduit also was often a struggle for Roger. He struggled with a feeling of being “in between”. At times he felt like his responsibility was to disseminate information from the administration, and at others he felt like he did nothing more than pass down directives. He wrestled with balancing his desire to maintain positive peer relationships in the department and the responsibility he felt to improve instruction and submit to administrative authority. Roger also shared a more positive aspect of his role in between the department and the administration. He cited instances in which he was able to sit with teachers in the department who were experiencing conflict with the administration and more clearly articulate to them the expectations of the administration. These types of conversations did much to ease the conflicts these teachers

were experiencing. Roger described this as helping teachers move through the system successfully, something he very much enjoyed being able to facilitate.

When asked about the role of teacher leaders in establishing the culture of the school, Roger was much more enthusiastic. He cited the precedent teacher leaders establish through their behavior in the classrooms and hallways, their adherence to school policies and their enforcement, and other ways of leading by example. Of particular importance to Roger was the potential influence teacher leaders' classroom management practices had on the other teachers in the departments. Leading by example gave department members something concrete to aspire to.

Finally, Roger described teacher leaders as a very important resource for schools. He described how important he believed it was for schools to be able to draw on the abilities and perspectives of teacher leaders, because he felt that teacher leaders have a clearer perspective of what goes on in departments. The connections to the departments are much more intimate, ideas are shared among department members, and the perspectives that result are much more complete than those possessed by the administration.

I consider Roger my friend as well as my colleague. Because of that it saddened me when he decided to step down as department chair. Like me, he had struggled with conceptualizing who he was as a teacher leader. For him it reached a breaking point. He no longer enjoyed school, he was burdened with his perceptions of what it meant to be a math department chair, and he did not believe that his efforts were making a meaningful impact on the instructional quality in his department. He followed his affinity to teaching and moved away from the tensions related to leadership.

Though Roger remains a very good friend and colleague following his tenure as a math department chair, the relationships I have cultivated with the Language Arts and Foreign Language department chairs have been equally valuable to me as I develop my conception of what it means to be a teacher leader in a secondary school. The Language Arts department chair, Laura, and the Foreign Language department chair, Kelsey, are quite often found together. They constantly bounce ideas off of each other and constantly dialogue together. Though science is a far cry from language, Laura and Kelsey have allowed me to be grafted into their community. Being able to visit with them and share struggles has been very formative of my identity as a teacher leader.

I decided to sit down with Laura and Kelsey and document their perceptions of teacher leadership. Much like Roger, these leaders had experienced a variety of tensions surrounding their roles, and discussing these tensions proved helpful to me in articulating teacher leadership. By way of introduction, Laura and Kelsey are very reflective practitioners, very protective of their departments, and very interested in creating opportunities for student success. As a result of their allegiance to the school and their students, these teacher leaders have experienced a variety of tensions.

When I queried Laura and Kelsey about tensions they experienced in their roles as department chairs, both were quickly able to identify some things that had been subjects of their conversation. Laura related the tensions she experienced within her department as she struggled to push forward the school vision in the midst of open resistance to change by members of her department. She was troubled that they were resistant to even participate in professional dialogue, became defensive when their status quo was challenged, and generally challenged any

new idea that was suggested. She felt that no matter what she did she could not get past the opposition to change that was exhibited in her department.

Kelsey likewise expressed frustration with being unable to affect change in her department, but unlike Laura, believed that if given the authority she could hold the teachers in her department accountable. Time was a very real tension for Kelsey, who commented that it was impossible to keep her head above water in the midst of everything she believed was expected of her. Kelsey also expressed some level of frustration at what she referred to as a “fragmented vision” (personal interview December 8, 2009) that the administration was putting forward. She described three cycles of initiatives and felt that the first initiative was not resolved and yet the school was moving on to another. Kelsey took the roles upon herself that lead to her feelings of frustration.

In discussing the affinity perspective, both Laura and Kelsey stated that they were much more closely aligned to teachers than to administrators. Kelsey shared that she was most closely aligned to a foreign language teacher from another school than to any teachers in her department whom she described as decidedly not “warm and fuzzy.” Interestingly, Laura stated that she attached herself to strong teachers rather than simply other teachers in her department. She identified strong teachers as those with a mindset similar to hers, student-centered, with the needs of students being the most important part of being a teacher.

In the realm of school culture and her ability to impact it, Laura related that she continued to hold high expectations for her students and hoped that she would have that kind of influence with her colleagues in her department. She very much desired to be perceived as a student advocate who holds a very high standard of performance. Kelsey was not quite as positive,

stating that administratively (e.g. budgeter, textbooks, etc) she felt like a leader, but that in the realm of instructional support she did not feel like she was making a real difference for the teachers in her department. Interestingly, when asked to describe her role as a teacher leader, Laura described herself as a conduit.

After spending time talking with three department chairs in my own school I decided that I wanted a perspective of someone besides myself who serves as a science department chair. I contacted another science department chair in my district, Carmen Singleton, and found her more than willing to participate. Carmen is the science department chair of the school in our district that demographically most resembles Northside. Socioeconomically, we are working with the same kinds of students. Our faculties are very similar in make up and experience, and ultimately I found our perspectives on teacher leadership to be surprisingly in concert.

Carmen has been teaching for over thirty years. She is a very accomplished Biology teacher and currently teaches gifted and college preparatory Biology courses. I first met Carmen years ago at a district level department chair meeting. I have always been struck by Carmen's professionalism and felt privileged to have the opportunity to talk with her about what it means to be a teacher leader. I met her in her classroom on a teacher workday to conduct the interview.

From the very start of the interview Carmen provided a new perspective on teacher leadership, and I was very glad to hear it. My first question about tensions elicited a response from her that placed her firmly in the role of a liaison between her science department and the administration at her school. She related that one of the tensions she felt was when she had to convey messages from the department to the administration. Unlike any other teacher leader I spoke with, Carmen voiced a very real responsibility to back her administration, regardless of her

personal feelings. When asked how she was able to resolve these tensions, she related that there were times when she disagreed with the administration and told them so, offering an alternative course of action or other means of accomplishing their directive. Regardless of the outcome of these discussions, she stressed the need to act in accordance with the will of the administration and back their directives.

This was a new perspective for me. Many of the other participants had more difficulty submitting to administrative authority. Whether because of subject area expertise or some other variable I cannot say, but Carmen's willingness to submit to those in authority above her was liberating. I found myself reflecting on how this simple act of submission freed Carmen from much of the animosity many of the other teacher leaders experienced as they interacted with their administrators.

Something else that Carmen said stood out for me. While many teacher leaders have expressed concerns of being marginalized, Carmen suggested the opposite. At times new, young, or inexperienced administrators might feel that teacher leaders were trying to impose their will on them. Often these administrators get defensive. Carmen says that in those cases she has backed down and reminded them that she does not want their job. When asked about her role as a mediator, Carmen explained that there were lots of times when she has filtered out a lot of the things the administration says. She believes that the administration can often give more information than is needed, and that simplifying administrative directives often eases the tension that teachers may feel about being able to accomplish or comply with a directive.

Carmen places a very high value on the need for teacher leaders to have good rapport with the teachers in their departments. They should also be good role models and well respected.

Content knowledge, and ability to manage people effectively, and good people skills are all traits she believes important for teacher leaders.

Among teacher leaders of all disciplines and even different schools a unique relationship exists. This relationship is built on mutual trust, shared struggles, and common experiences. Knowing that there is someone else in the building or the district with similar perspectives is critically important to teacher leaders. I have unique relationships with all of these teacher leaders and value their friendship, their professionalism, and their willingness to offer support and encouragement as it is so frequently needed.

My journal has several entries that demonstrate this. On August 27, 2009 I write about my relationship with Laura as a co-laborer and co-traveler. I write of the journey that we are sharing together and the value I place on being able to share the thread of common experience with her. I write of my relationship with another science teacher, Camille, as a partner who helps me brainstorm and think things through. I describe bouncing ideas off of each other and honestly providing each other with feedback.

On September 9, 2009 I write about a *cord of three strands that is not quickly broken*, and go on to say that this journey of teacher leadership is so much easier to travel with someone else. On November 1, 2009 I write of having sought the perspective from Susan on how I should handle a curricular issue, and on November 5, 2009 I have a conversation with another teacher leader about how I should address grading policies between colleagues.

Each of these instances is indicative of the relationship that can exist between teacher leaders. A common thread of service runs through all teacher leadership situations, and as a rule teacher leaders value collegiality, helping others, and creating positive change in their schools. I

find myself especially valuing the time that I can spend in conversation with other teacher leaders in my context. During these conversations we are able to share common struggles and offer each other support and encouragement. This strengthens us as a group, enabling us to serve our departments with much more empathy and concern.

CHAPTER 5

Theoretical Considerations – What I Believe it all Means

In the previous chapter I gave considerable attention to contextualizing my experiences as a Science Department Chair. I explored my relationships with the school level administration, the teachers in my department, my teacher leader colleagues, and a district level administrator. My purpose in conceptualizing my experiences in this way was to develop a framework for articulating my identity within the various contexts that I exist. As I move from the presentation of data in the previous chapter to my analysis of it here, I want first to explore the sources of tensions that are common across contexts. Following this I will present the sources of tensions that are unique to a given context or are limited in their scope. Finally, I will return to my research questions and articulate how this study addresses the focus of my research and how my internal critical dialogues with self and my interactions with other stakeholders has enabled me to resolve my tensions and to arrive at a better understanding of the interaction between leadership and identity. Across all that follows I will attend to my analysis through the lens of identity construction.

As a means of introducing the various tensions under consideration in a manner that is easily understood by the reader, I have organized them by contextual area on the following chart. The first column of the chart lists a tension source that was described in the data in one of the contextual areas. An X has been placed under each contextual area to signify that a particular tension source was evident in a particular contextual area.

Table 3. Tension Sources by Contextual Area

Tension Source	Myself in the Hierarchy	Myself in the District	Myself in My Department	Myself and my Teacher Leader Colleagues
Marginalization	X			
Validation	X		X	X
Content or Curricular Expertise	X	X	X	
Role Model	X	X		X
Conduit or Liaison	X	X	X	X
Evaluator/Supervisor	X	X	X	X
Trust	X	X	X	X
Organization (Budgeting, Scheduling, etc)			X	
Supporter/Nurturer			X	X

Though continued analysis of my data might reveal additional tension sources within the various contextual areas, the nine sources identified in the chart above present a reasonably comprehensive picture of the sources of tension that I have navigated in my role as a Science Department Chair. Of the nine sources listed, only three were common across each contextual area. These include the conduit/liaison function teacher leaders serve, the perceptions that are held among the various stakeholders concerning the evaluative and supervisory authority possessed by teacher leaders, and the trust that teacher leaders experience. The other tension sources were not present across every context. Only marginalization and organization were limited to one contextual area.

Of the nine tension sources, I found the idea of marginalization to be the most confounding. The only contextual area including marginalization as a tension source was the *myself in the hierarchy* area. In reading and rereading my data from this area *through the lens of identity construction*, it has become evident to me that the tensions emanating from this construct were not the result of any particular discourse. In fact, at no point in my data do I find any

reference to any conversation regarding my being marginalized. Instead, my feelings of marginalization were just that – feelings. This realization leads me to conclude that the source of tension emanating from my feelings of marginalization was not a dialogue with another stakeholder, but rather an absence of one. As my data reveals during an Instructional Leadership Team meeting and my subsequent interview with Dr. Carnes and Mrs. Mathis, once I had participated in discourses confirming my identity as a valuable voice in the school, I no longer mentioned marginalization in my data.

If the tensions emanating from the absence of discourse resulted in my feelings of marginalization, it is through discourse that I received validation as a Science Department Chair. Reminiscent of Gee (2000-2001), the validation I experienced as a Science Department Chair emanated through the discourse of the administrative team. They *talked* about the important roles that I and my teacher leader colleagues filled in the school, and that discourse provided the “power” to validate us (p.103). My institutional identity as a teacher leader was validated and sustained in the midst of the discourse. We were teacher leaders because *we were being talked about as teacher leaders* (italics mine).

Validation was also a very important construct in the *myself in my department* and the *myself and my teacher leader colleagues* contextual areas. Upon being approached by a teacher experiencing problems with a parent a very important part of my conversation with her was to validate her efforts. I let the teacher know she was doing a good job. I asked her if she had received support from the administration. I went to considerable effort to offer her my support and to validate her identity as a teacher. In another instance, I provided validation to a beginning teacher who was experiencing conflict with an older and more experienced inclusion teacher.

Though this teacher believed that she was competent, my validation of her identity provided a very meaningful discourse for her.

Perhaps most meaningful from these interchanges from the standpoint of my own identity construction was not that I had provided validation for these teachers as they needed it, but rather that in the midst of my discourses with them I established myself as their department chair. I was their department chair not only because of my institutionally assigned perspective. I was their department chair because I dialogued with them as department chairs do.

Examples of the role of validation as an identity tension also exist among my teacher leader colleagues. The Mathematics Department Chair, Roger, ultimately stepped down as department chair because his perceptions of what it meant to be a department chair did not match what he was able to do in the position. In short, he had not received validation in his role. Kelsey argued that if she were given the authority to hold teachers in her department accountable (i.e. to be validated by the administration as a department chair) she would be able to affect positive change in the department. Laura likewise suggested that if the conversations within her department were to become less oppositional that she would be better able to fulfill her department chair duties.

Of interest here is a conversation I had with Carmen. While validation has been described thus far as a tension between administrators and teacher leaders and teacher leaders and teachers, Carmen presented a discussion of times when she has had to validate a new administrator to prevent them from getting defensive. She relates that at times she has had to back down and remind from these inexperienced administrators and relate to them that she did not want their job. In this case her dialogue validating the authority of the administrator allowed this person to

more completely define their identity as a supervisor. In addition, this also set her apart as a teacher leader who was under the authority of this particular supervisor.

A third construct for identity tension that is evidenced in the data is the idea the teacher leaders are to serve as content or curriculum experts. This construct was evidenced across all of the contextual areas with the exception of *myself and my teacher leader colleagues*. In considering this construct and its impact on identity it is important to note that the data suggests that there is a broad spectrum of meaning attached to the idea of content and/or curricular expertise. From the local school administrative perspective content expertise implied an understanding of the breadth of the content as identified in the standards. At the district level, the idea of curricular expertise included content knowledge, the ability to present the content to students effectively, and a knowledge of the students themselves. At the level of interaction between teachers and their department chairs, content expertise seems to have its broadest application at the level of “what can I do in my classroom today?”

Constructing my identity as a content or curricular expert has involved my navigation of these various contexts. My conversations within the department revolve around helping teachers decide on appropriate pedagogy, identification of suitable activities or laboratory supplies, or helping to refine understandings of content. At the school administration level the conversations assume a broader character and emphasize how to most effectively develop standards-based instructional practices to improve test scores. Finally, from the perspective of the district level administration, curriculum includes the content, the nature of learning, and the nature of students. Navigating these various constructions of curriculum on the one hand implies a certain level of tension, but on the other affords ample opportunity for discourses to refine my identity as a content expert across the various contexts.

A fourth construct of identity that is evidenced in the data is the idea that as a Science Department Chair I am to be a role model in the school. Dr. Carnes described this as teacher leaders being able to inspire both students and the other teachers in the school through innovation, being self-starters, taking the initiative to do what is best for their students, and who know the depth of their content. Dr. Carson described this as being exemplary teachers and role models for peers, colleagues, and students with a keen understanding of the goals and mission of the school and an uncanny ability to define the pathways to those goals. Roger described the role model construct as setting precedent through behavior in classrooms and hallways, adhering to school policies and their enforcement, and leading by example. He placed particular importance on the potential influence a teacher leader's classroom management practices can have on teachers in their departments.

As someone who is much more comfortable in my room with my students with my door closed, the idea of being a role model is a definite tension source. I generally prefer to keep a low profile. As a teacher leader I am expected to move beyond that. As the preceding perspectives indicate a teacher leader is to lead by example. The tension that exists between what I know to be appropriate behavior for myself as Science Department Chair (e.g. modeling good teaching, inviting teachers to observe my classes, maintaining excellent planning habits) and my desires to remain out of the limelight definitely create tensions.

A much easier identity for me to assume as a Science Department Chair is as a conduit or liaison. This identity was articulated across all contextual areas as a major component of being a Science Department Chair. Dr. Carnes related this idea as being available to teachers who may be hesitant to go to the administration with concerns. Dr. Carson related that as liaisons teacher leaders are able to assist administrators with concerns over content and should be comfortable

coming to her with the concerns they or others in their respective departments may have. Roger described the role of conduit as a disseminator of information from the administration, and Carmen described how she was able to filter administrative expectations in such a manner as to make them palatable to the teachers in her department.

Assuming my identity as a conduit has required me to acknowledge the authority structure that exists in my school. As explained by Dr. Carnes, there is no expectation that I sell or spin anything. Instead, there is an expectation that I initiate a discussion with the administration when I have concerns about a decision or course of action. Carmen related much the same philosophy and related that at times she had disagreed with her administration and told them so, often offering an alternative course of action. Regardless of the outcome of these discussions however, Carmen articulated much the same philosophy that Dr. Carnes did. The final decisions rest with the administration and teacher leaders are to respect it.

Although submission to the authority structure of a school may be perceived as overly passive, I would repeat my statement in the previous chapter. Carmen's willingness to submit to those in authority above her is liberating. Submission to authority in this way does not imply weakness or an unwillingness to engage in constructive disagreement with those in authority. Rather it implies that once everyone has voiced an opinion an administrator is tasked with the final say. This is only reasonable as it is the administrator who will answer for the results of his or her decisions.

In articulating the place that being a conduit fills in the construction of my identity, I find that it fits neatly as neither a discursive nor an institutional perspective. I find elements of the construct fit in both. That as a Science Department Chair I exist between the administration and

the teachers in my department is evident. I frequently am called upon to pass down directives, initiate department meetings, or facilitate Critical Friends protocols in my department strictly at the behest of the administration. On the other hand, I have been involved discursively in interactions flowing both from the administration to the teachers and from the teachers to the department. Yes, institutionally as a Science Department Chair I fulfill the role of conduit. But I do so discursively as well.

Of all the constructs I have acknowledged in this analysis, perhaps none has posed a greater source of tension for me than the Science Department Chair's role as an evaluator or supervisor. I began the introduction to chapter three by sharing a story of how I was unsure of how to proceed when I had learned of the possibility of a teacher administering medicine to a student illegally. From there I related how I initiated a conversation with an administrator to seek clarification about the extent of my authority. I was told outright by the Director of Student Learning that as a Science Department Chair I served the role of an administrator without added burden of evaluative or supervisory authority. From none of these conversations did I ever fully understand the boundaries of my authority in the hierarchy of the school.

Other teacher leaders that I interviewed have also experienced these tensions. Roger shared with me a story of being tasked to work with a teacher to correct ongoing pedagogical problems with her and the frustrations he experienced in not having the authority to enforce his suggestions. Laura related the difficulties she experienced in not having the necessary authority to push forward the school agenda, and Kelsey articulated her deep frustration in being unable to affect change in her department because she could not hold teachers accountable. In each of these cases, the tensions resulted not in the exercise of assigned authority, but in attempting to exercise authority that had never in reality been institutionally assigned.

From the standpoint of constructed identity this lack of institutional or discursive assignment of authority produces a hollow ring. At least from the perspective of my lifeworld there is nothing in my experience or the experiences of other department chairs that we have any sort of supervisory or evaluative authority. We work with our departments along a variety of fronts and definitely exist as leaders in the department. But we have no authority over it.

If there is one construct identified across the board as an important part of my constructed identity, it is the idea that I am to be trusted – again across the board. Dr. Carnes stated emphatically that he trusted all of his teacher leaders. Dr. Carson related the importance of establishing trusting relationships with her teacher leaders, and members of the department interact with me from a position of trust and confidence that I have their best interests and the best interests of their students in mind. Identity tensions emanating from this construct revolve around the confidence that others can place in me as a leader. The effectiveness of my leadership and my identity as a leader are very much tied to the level of trust others are able to place in me.

There are two final constructs that I was able to identify within the contextual areas used in this analysis. The first, organization, is predominately centered within the department and concerns activities related to budgeting, scheduling, equipment inventories, and other day to day activities of a Science Department Chair. Though these activities are of major importance in promoting and maintaining a collegial and productive department, they are only minor sources of tension. Tensions revolving around these activities stem mostly from them being done accurately and in a timely manner.

The second and final construct articulated here, supporter and nurturer, could well be the most important construct of my identity in my context as a Science Department Chair. Though

there is no reference to this identity construct in either contextual area dealing with the administration, both constructs focusing on teacher leaders reveal its importance. As a nurturer I am available to the members of my department, and I am often the first person they approach when they are experiencing difficulty with a student, a parent, or even an administrator. Because I am not an administrator I am able to serve as a neutral sounding board, offering advice in how they can best navigate through difficult situations.

The data illustrate this. I relate a story of a teacher who approached me in tears wanting my reassurance that she was doing a good job. I assured her that she was and let her know that she was a valued part of the faculty. Another story relates a conversation I had with a beginning teacher who was experiencing issues with an older colleague, and a third cautions this teacher to be careful not to burn herself out through overwork. In another instance, I arrange for a long term sub, lesson plans and activities for a teacher who will be out for maternity leave, and in other instances I have orchestrated community building outings and activities for the department as a whole.

In working with my teacher leader colleagues I have similarly received and given support. I write of my relationship with Laura as a co-laborer and co-traveler and the journey we are sharing together. I write about *a cord of three strands that is not quickly broken* and explain that the journey of teacher leadership is much easier to travel when someone else along. I write of seeking the perspective of Susan on how I should handle a curricular issue, and speak with Kelsey about her perspectives on addressing grading policies between colleagues.

The variety of discourses that originate from enacting my identity as a supporter and nurturer emphasize the very important role that I serve acting in this capacity as a Science

Department Chair. I am available to the members of my department and my teacher leader colleagues. I provide ongoing support and encouragement, and receive the same in return.

The forgoing information provides a synopsis of the identity tensions that have occurred in my lifeworld and within particular contexts of my Science Department Chair experience. In contextualizing my experiences in this way I was able to analyze these tensions contextually by relationship, and from this develop a meaningful understanding of my constructed identity as a Science Department Chair within my lifeworld. I now return to the research questions that have driven this study, and present a final analysis of my effort as a response to each question in turn.

1. In what way is a science teacher leader's identity performed and expressed in every day practice?

My performed identity as a science teacher leader is expressed among a variety of contexts. For the purposes of my analysis, I contextualized my identity as occurring across four contextual areas. These areas include *myself in the hierarchy* in which I explored my performed identity with the local administration, *myself in the district* in which I explored my performed identity with the district level administration, *myself in my department* in which I explored my performed identity within the context of my department, and *myself and my teacher leader colleagues* in which I explored my performed identity in relationship with other teacher leaders.

Within each of these contexts a particular set of performed identities are expressed. In the *myself in the hierarchy* context, my performed identity expressions include serving as a content specialist and conduit or liaison between the administration and the department. Within the *myself in the district* context my primary identity is as a curricular specialist and liaison between the district level administration and the local school. Within the *myself in my department* context

I perform a variety of identities including supporter and nurturer of the teachers in the department, conduit between the department and the administration, organizer of persons and materials, and a source of validation. Finally, within the myself and my teacher leader colleagues context I am a supporter and nurturer and a source of validation. Across all contexts I am perceived as a role model.

2. *What identity tensions does a science teacher leader experience in relation to every day practice?*

Nine separate identity tensions were presented and analyzed in this study. These include marginalization, validation, content/curriculum expert, role model, conduit/liaison, evaluator/supervisor, trust, organization, and supporter/nurturer. Though many of these tensions occur across the various contextual areas, others were limited to impact in a specific area. Marginalization for example, primarily was an identity tension within the context of my relationship with the school administration. Ultimately, the source of this tension was an absence of discourse as opposed to a discourse that emanated from it. My need to be validated, and the needs of the teachers in my department created identity tensions that were resolved within validating discourses. My identity as a Science Department Chair was validated in the midst of discourses about me that supported my views of myself as a teacher leader.

Identity tensions originating from differences in perception of my identities as an evaluator or supervisor were most disruptive in the construction of my identity in each context. A variety of perceptions of my identity as a supervisor or evaluator seemed to exist across contexts with no established institutional perspective on my responsibility or authority as a Science Department Chair. Discourses varied from context to context and resulted in role confusion.

Other tensions emanated from my activities related to the extent of my authority, and my role as a supervisor within my department.

3. *How do interactions with other stake holders (e.g., administrators, teachers, teacher leaders) contribute to a science teacher leader's construction of identity?*

It is within the context of my relationships with other stakeholders that I have been able to conceptualize my identity as a science teacher leader. It is primarily through discourses within the practice of enacting my role as a Science Department Chair that my identities have emerged. I know that I am a nurturer and supporter of my department members not because of any institutionally articulated identity, but rather because I have enacted that identity as a part of my role. The same holds true for my identity as a conduit or liaison between the teachers in the department and various levels of the administration. Nowhere is my role as liaison articulated, but it is enacted in the midst of discourses on an almost daily basis.

There are other constructed identities that have emerged as a result of this study. My identity as a role model among my peers and colleagues for example, was not an identity I had assumed as a result of an institutional assignment. I learned of the administrative perception of teacher leaders as role models through my interviews with them. This discourse is not something that had been articulated to me previously. Other identities were much more obvious to me. I knew that I had a responsibility as a department organizer for example, as I have traditionally been involved ordering supplies, scheduling classes, facilitating protocols and other activities that are often assumed to be a part of a Science Department Chair's identity.

4. *In what ways does a science teacher leader's critical dialogue with self about these tensions lead to a better understanding of the interaction between leadership and identity?*

There are several defining characteristics of my identity as a Science Department Chair that have emerged from this study. I am confident that without having conducted this research project I would still not fully grasp my identity in these areas. It is only as a result of my critical dialogues in the midst of researching, reading, and ultimately writing that I have been able to conceptualize and understand the entirety of my identity in my context.

I can offer several examples of the critical dialogues that took place. As related at the very beginning of this study, a constant question for me for much of my tenure as a Science Department Chair is "What am I doing here anyway?" More than any other experience within my context, I experienced ambiguity. I wasn't sure who I was or what was expected of me.

As I began the process of data collection through journaling and other means I began to see patterns of identity emerging. Some of my constructions were elementary. I knew a part of my identity involved ordering supplies, maintaining textbook inventories, and scheduling classes because I had evidence that I did those things in my data. I also knew that I existed somewhere between the department and the administration because of the discourses I had traditionally had in that context. In this instance my data only supported my existing view.

Other constructs of my identity were not so obvious to me. The feelings of marginalization I experienced and documented in my journal were the beginning of critical dialogues that ultimately lead to the initiation of conversations with various administrators. From these conversations I learned the perceptions they held of teacher leaders, the roles they expected

us to fulfill, and the trust and confidence they placed in us. By critically dialoging with myself about these conversations, I developed a much more holistic view of teacher leadership.

Ultimately, I believe that as a result of this research it is now possible for me to articulate my identity as a Science Department Chair as a job description that takes into consideration the various influences of the dialogues I have engaged in across a variety of contexts, as well as the institutionally held perspectives that have served to construct my identity. In presenting this job description I attempt to distill my analysis of my work into a succinct description that might prove useful to others who are experiencing conflict or role confusion in their roles as science teacher leaders. Of course, the identities others will realize in their roles as science teacher leaders will emanate from the discourses that occur in their contexts as they attempt to enact the institutionally assigned duties that make them teacher leaders. With that said, here is a job description for my role as a Science Department Chair. May it prove useful to others in similar contexts.

As a Science Department Chair in my context I am tasked to:

- Facilitate effective communication between the local and district level administration and the teachers in the Science department.
- Provide on-going support and encouragement to all science teachers, nurturing them in the midst of their difficulties, and validating their successes.
- Model exemplary pedagogical content knowledge.
- Develop the Science Department portion of the master teaching schedule.
- Oversee the Science Department budget and order laboratory and other materials as needed.

- Positively implement the administrative agenda.
- Serve on school and district level committees as needed
- Work collaboratively with other teacher leaders at the school and district level to develop, implement, or improve curriculum.

CHAPTER 6

Conclusions and Recommendations

My Conclusions

Some time ago several friends were visiting at my house. One of these friends, a pediatrician, was speaking with a teenage girl who was present. When discussing their respective grades in school, the pediatrician remarked that he had finished his twenty-fourth grade before becoming a doctor. As I finish and present this study, I can say with some measure of satisfaction that I too have finished the twenty-fourth grade. This would include thirteen grades kindergarten through my senior year in high school, four years for my bachelor's degree, two for my masters, two for my education specialist, and now three as I finish my doctorate.

But, there is more to say than that. As I write this I conclude my culminating study on teacher leadership, this being the capstone experience of twenty-four grades. To accomplish this work, I immersed myself in articulating the context of my lifeworld for nearly eighteen months. I journaled most days, saved e-mails and meeting notes, and reflected constantly about the substance of my work. I talked to many other persons in my lifeworld who have shared my experiences. I compared their perceptions with my own, and I scoured the literature to learn all that I could about what it means to be a science teacher leader.

I believe the conclusions I share here about teacher leader identities are meaningful. I believe they can inform the relationships that exist between teacher leaders, administrators, and

others involved in the preparation of teachers and administrators. I have articulated how a teacher leader constructs his identity in the context of a secondary school, and have helped to make the ambiguous unambiguous. In so doing I hope I might relieve some of the tension future teacher leaders might experience.

A meaningful way for me to articulate the conclusions from my research is through metaphor. As Berliner (1990) suggests, metaphors are powerful forces that affect the way we think about ourselves and others. I would suggest that they are also powerful means to conceptualize identities. Through metaphor a context for understanding science teacher leadership identities emerges, as does a means to conceptualize the myriad roles filled by teacher leaders in general, and science teacher leaders in particular. My hope is that others might reflect on these metaphors as they attempt to understand teacher leader identity in context, and use them as stepping stones to understand their own experienced identity or the identities of those in their lifeworld.

The metaphor teacher leader as conduit is a very good place to start. As discussed earlier, teacher leaders very often act as border crossers moving between the subcultures of the administration and science teachers in the departments. Science teacher leadership is thus primarily a task of navigating the subcultures of school and district level administration and science teachers. The conduit metaphor effectively captures the border crossing idea while extending beyond it. As conduits, teacher leaders provide for effective two-way communication between groups. Administrators acknowledge that many rank and file teachers are uncomfortable in approaching the administration, and realize that teacher leaders fill a very important role in approaching the administration with teacher concerns. Alternatively, teachers in departments frequently depend on department chairs or other teacher leaders to approach the administration

with concerns, ideas or suggestions. By being a conduit, a teacher leader is able to facilitate communication and improve teacher/administrator relationships.

Teacher leader as conduit is exemplified when teacher leaders facilitate communication between administrators and teachers. This might occur when one subculture or the other wants to gauge the potential responses to a given situation or proposal. “How do you think your people would feel about...?” is an administrative question commonly addressed to teacher leaders. It is often articulated when new ideas or procedures are being considered, when implementation of a program is being considered, or when some other decision affecting teachers is being made. By having a teacher leader as a conduit, administrators are able to get a pulse of the teachers in the school without querying individual teachers.

Carmen’s discussion of her enacted role as a science teacher leader is a good example of this. Carmen described how many administrators share too much information with the department chairs and that she frequently functioned as a filter to provide teachers with the pertinent information they need to act. She noted that this was not done as a means of being secretive or to keep anything from the teachers in the departments, but rather to provide teachers with the information they need to comply with the initiative without overwhelming them with minutia. Her role as a conduit takes into consideration her knowledge of administrative expectations as well as the best way of presenting them to her teachers. This relationship serves all parties equally and promotes the well being of teachers as well as the agenda of the school leadership.

The role of science teacher as conduit works both ways. Teachers in departments also depend on their teacher leaders to function as conduits. Individual teachers frequently seek the

advice of teacher leaders before approaching the administration about concerns, ideas they have, or something new they want to try. Typically these requests are made by teachers hesitant to approach the administration on their own. At other times teachers might be willing to approach the administration but value the teacher leader's perspective. In each instance, the teacher leader acts as a conduit between teachers and administrators. This facilitates communication and enhances the administrator/teacher relationship.

Ultimately, the science teacher leader as conduit metaphor describes a position between the school leadership and the school faculty that is mutually beneficial. The school leaders have a person who is familiar with the scientific content, is able to articulate the perceptions held by science teachers, and is able to use this person to enact programs and initiatives in ways that are well received by the faculty. The science teachers benefit as teacher leaders communicate curricular expectations, provide insight into the views of the administrative leadership, act as spokespersons for the department, and maintain open and effective communication between these subcultures. By existing as conduits between science teachers and school administration, science teacher leaders provide a valuable service to schools.

The teacher leader as conduit metaphor is an outgrowth of discourses that occur within the context of an enacted teacher leader identity. The metaphor does not emphasize an institutionally assigned role, but rather underscores the importance of having someone who is able to navigate between the administrative and teacher subcultures in a school effectively.

Another metaphor suggested by the data is teacher leader as nurturer. A nurturer is a person who supports or protects others, is empathetic, and who expresses genuine care and compassion. This conception of science teacher leader identity was evidenced in this data when I

supported and reassured a teacher who was experiencing conflict with a parent, in my interactions with a beginning teachers in the midst of interpersonal conflict, and as I eased the burden of a new mother trying to balance her responsibilities at school with her new baby. My actions have helped ease the anxieties that arise from negative interactions with parents or others, or and served to solve dilemmas between colleagues. Because the first few years of teaching are so stressful, the support and encouragement of teacher leaders as nurturers benefits many beginning teachers as they adjust to the profession.

Another metaphor descriptive of an identity assumed by a science teacher leader is science teacher leader as department organizer. This metaphor effectively captures many of the organizational and book keeping duties science teacher leaders fulfill. The image of a clerk conjures up someone in an office responsible for general record keeping, filing, keeping meeting minutes, and other secretarial tasks. From the data specific examples of my activities as an organizer include developing departmental budgets, developing the master schedule, maintaining textbook inventories, and working with curriculum implementation.

Finally, it is important to emphasize here that beyond any institutionally assigned perspectives, it is the discourses within the enactment of the role of science teacher leader that will ultimately serve to construct the identity of the science teacher leader. These positions exist in relationship with other stakeholders, and it is in the midst of these interactions that Science Department Chairs and other science teacher leaders ultimately develop their identities. Conversation makes us what we are in our contexts, and by attending to them carefully we can learn much and thereby avoid the role confusion and ambiguity that has marked my experience as a Science Department Chair. Doing so will produce more effective teacher leaders in schools who are able to enact their identities with relatively less tension that I experienced.

My Recommendations

As I consider the breadth my work over the past 18 months, I am particularly intrigued by the radical change that has been brought about in my own perceptions of science teacher leadership. I am no longer concerned by the ambiguity inherent in teacher leadership, but am now much more at ease in my role as a science teacher leader. I know my place in the hierarchy of the school and I have a clear conception of my identity as a science teacher leader that I can articulate to others. Tensions that had previously negatively influenced my experiences have been replaced with a confident assurance of the pivotal role I serve in my school.

Though I am now much more at ease with my place in my lifeworld, questions remain that I would hope to answer with further research. First, within the realm of science teacher leadership, I would like to extend my work into other school contexts. Is my experience as a Science Department chair unique to my district, or is it mirrored in other secondary schools in other districts? Second, how might more effective communication among stakeholders in schools concerning teacher leader identities relieve tensions surrounding construction of identities in context? Finally, beyond the realm of science teacher leadership, it would be very interesting to explore the implications of identity construction on other persons in the school context. How, for example, do the constructed identities of the various student groups in schools (jocks, rednecks, nerds, etc) impact their success in school? How might we as educators positively influence student identity construction to improve student achievement in science?

Though these and other questions remain, as a result of this study I have learned that even in the absence of established policy, the discourses I have within the context of enacting my identity have provided a very clear conception of science teacher leadership. As described by

Gee (2000-2001) my identity as a science teacher leader has been enacted in context. I know who I am as a science teacher leader by what I have done as a science teacher leader and the discourses emanating within my position.

Though for now I am at ease in my role as a science department chair in my school, I am very much aware that my comfort is not the result of any policy change, but only my experiences conducting this study. Should this work end here, it will only be helpful to those in similar contexts with similar school cultures and similar administrative hierarchies. In other schools a much different conception of teacher leadership might exist. For teacher leaders and administrators in those schools to have a meaningful conception of teacher leadership in their schools would require an in depth examination much like this one.

It should not be this way. As a means of avoiding the tensions and ambiguity surrounding teacher leadership reported in this study, I would suggest that all stakeholders in a school share a common conception¹⁰ of the roles teacher leaders play in that school. While it could be argued that a common conception of teacher leadership is needed within all schools in a district or even across districts, of primary importance is agreement among administrators, teachers, and teacher leaders at the local school level. As a means to accomplish this I recommend additional studies in teacher leadership in a variety of other school contexts. This could possibly be accomplished through action research efforts within individual schools, or collectively as university researchers work with schools to explore what it means to teach and lead concurrently.

There are many advantages to refining our understandings of science teacher leadership in this way. First, it is unrealistic to expect today's high school administrators to possess the

¹⁰ As used here, the meaning of the term conception follows the description provided by Koballa, et al (2000), and means a description of the salient features of a group of individuals without explaining their cause, function, or source.

breadth of knowledge needed to manage the entirety of the curriculum. Administrators are educated to be managers of school buildings and faculties, and cannot possess extensive expertise across every content area. A shared conception of science teacher leader identities could position science teacher leaders as the persons in their respective schools who possess the science content expertise needed to move the school forward. Administrators can use that expertise to underpin their own efforts to improve science instruction in every science classroom.

Second, though much has been written about the potential role that science teacher leaders could play in school reform, that role is not generally being played out in schools. The driving force in most schools is still the school principal, and though school culture has been evolving, much still remains to be done to truly distribute school leadership across all levels of the school hierarchy. None of the teacher leaders in this study were given any administrative authority by policy, and any authority they exercised was the result of discourses within their contexts. As such, these teacher leaders did not feel authorized to address pedagogical or curricular concerns effectively. The quality of the instructional program suffered as a result. Carefully articulated job descriptions for Science Department Chairs, Science Coaches, or other science teacher leaders could alleviate this problem.

Third, I believe that colleges of education should continue their efforts to provide meaningful educational opportunities for developing teacher leaders in science and other disciplines. Prospective science teacher leaders should be encouraged to participate in coursework designed to better prepare them for the leadership responsibilities identified in this study, and continued work in the understanding of the relationship between leadership and identity should be encouraged.

Lastly, I would also encourage individual schools and even school districts to begin to develop policies to define their expectations for teacher leaders in science and other disciplines. In at least the district presented in this study, though teachers serve in a variety of capacities ranging from middle school team leader to high school department chair to instructional coach, no school board policy even acknowledges the existence of teacher leaders. Very clear and concise job descriptions exist for most other stakeholders in schools to include teachers, administrators, and even custodians and grounds maintenance employees. Attention should be given to defining who science teacher leaders are, the qualities they should possess, and the roles they are to play. Doing so would reduce ambiguity and positively impact the teacher leadership experience.

This study is but a step along the way to an in depth understanding of how science teacher leaders construct their identities within their contexts. Work should continue in this area as much remains to be learned about the interaction between teacher leadership, identity, and the impact that tension resolution has on constructed identity.

Methodological Implications

Though I have only been deeply immersed in this exploration of my constructed identity for about eighteen months, in reality this content has been a part of my lifeworld as a Science Department Chair for many years. This study has been intensely personal for me, and the findings resulting from this work have direct personal application in my life. In choosing autoethnography as a means of developing an understanding my constructed identity, I was able to make my personal experience data and use that data to solve a very personal and important

dilemma. I have to come to terms with who I am within the various contexts of my professional life.

From a methodological standpoint this implies many things. First, I would argue that engaging the personal as a form of data is an entirely appropriate methodology to use to answer questions such as mine. Because I looked inward at my own experiences and measured my responses to them against others in similar contexts, I was able to present an evocative portrait of the experience of a Science Department Chair. Second, reading my work reveals the experiences and emotions surrounding my *me*. Those interested in understanding Science Teacher Leadership can learn much through this glimpse into my lifeworld, including the personal thoughts and emotions that have defined who I am. Finally, by bringing my personal experiences as a Science Department Chair into the realm of data I believe that I have been able to do something unique. At least in this study, I have bridged the gap between the researcher and the practitioner. Perhaps no other methodology might have allowed me to accomplish this.

Synthesis

Before closing, I believe it appropriate to situate the findings of this present study within the larger context of the existing literature on science teacher leadership, and to comment briefly on the contribution this study might make to the current conversation on science teacher leadership. In doing this I hope to illustrate the uniqueness of this work as well as offer a point of departure for others interested in further research into this topic.

One area I hope this research would influence is in our understandings of existing school hierarchies. As mentioned earlier in chapter two, Kurtz (2009) describes the traditional views of school hierarchies as being built on the premise of the principal as the single, strong, dynamic

leader who keeps the school in check. Though Kurtz tells us that the education reform initiatives of the 1990's may have begun a paradigm shift, the findings of this study suggest that further work is needed to effectively integrate the skills and education of teacher leaders. While I would not presume to challenge the need for a strong principal in the success of a school, I would suggest that efforts to more carefully articulate the roles and duties of science teacher leaders would facilitate using them more effectively.

Though the education reform initiatives in the 1990's do seem to have provided a stimulus for developing a new perspective on teacher leadership, the existing research suggests that teachers are still often viewed as implementers of decisions made elsewhere in the bureaucracy (Darling-Hammond, Bullmaster, & Cobb, 1995). Boundaries still exist between administrators and teacher leaders including hierarchal and occupational boundaries (Goldstein, 2004), relational boundaries (Robertson, 2009), and boundaries of dialogue (Glover, 2007). While this present study did identify and describe some of the boundaries that exist in my context, the research stopped there. I believe the conversation should continue so that we might find ways to fully integrate all stakeholders in schools in ways that best serve the needs of individual schools.

Finally, I hope my study will provide insight for teachers that find themselves in positions of leadership in their schools. In demonstrating that science teacher leader identities are socially constructed within the context of their enactment, this study could ease tensions teacher leaders may experience as they navigate their roles. In reading this study, teacher leaders who are tasked to serve in undefined roles not articulated by their school hierarchies might gain a more complete understanding of their constructed identities in context. This could result in a more productive and meaningful leadership experience. I would hope that would be the case.

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APPENDICES

Appendix A

Revised (110509) Interview Protocol for Teacher Leaders

- 1. Something that is emerging from my research into science teacher leadership is the idea of TENSIONS and the role they may play in the construction of teacher leader identity. Could you describe some instances in your practice where you experienced tensions in your role as a teacher leader? How you were able to resolve those tensions? Ultimately, what did you or what were you able to learn from those experiences?**
- 2. Teacher leaders often perceive themselves as existing somewhere in between the administration and the teachers in their departments. How about you? Where do you believe you exist in the hierarchy and culture of your school?**
- 3. Building on the idea of school hierarchies and school culture, what role do you believe that you play in the development of instructional programs, school policies, or other educational initiatives? Can you think of any times when you played an important part in the development of any of the above?**
- 4. What role do you believe that you and other teacher leaders play in shaping the school culture? Have these beliefs been expressed in your practice? How?**
- 5. Are there times when you feel marginalized as a leader? Do you believe that your voice is valued in the decision making process of the school? Please explain.**
- 6. Are there times when you feel that you have been validated as a school leader? Please describe them. Who validated you? How did it validate who you are as a leader?**
- 7. Could you describe times when you may have experienced role conflict in your capacity as a teacher leader? If you were able to resolve the conflict how did you do so? If you did not resolve it, what prevented resolution?**
- 8. What strengths do you believe teacher leaders possess that make them a valuable part of the school?**
- 9. Would you like to add anything else?**
- 10. Could I contact you to ask additional questions as new ideas emerge from my study?**

Appendix B

Revised (110509) Interview Protocol for Administrators

1. What would you consider to be the major responsibilities of a teacher leader?
2. What strengths do you believe teacher leaders possess that make them a valuable part of the school?
3. How do you believe teacher leaders fit into the overall leadership schema of the school?
4. Contrast the roles you believe teacher leaders and administrators fill.
5. Do you believe that you and your teacher leaders share a common conception of their role as a teacher leader? How are these conceptions similar and/or dissimilar?
6. How do teacher leaders support the goals or mission of the school?
7. Concerning those goals or the school mission, what role do you believe teacher leaders played in developing them? Please be as specific as you can.
8. Could you share any difficulties you have had working with teacher leaders, understanding their roles in the school, or conceptual conflicts you have experienced with teacher leaders?
9. Would you like to add anything else?
10. Could I contact you to ask additional questions as new ideas emerge from my study?