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**EXPLORING THE PROFESSIONAL GROWTH
OF A FIRST-YEAR MIDDLE SCHOOL MATHEMATICS TEACHER
UTILIZING THE MODEL OF HOLONOMY**

A Thesis

Presented to the

Department of Teacher Education

and the

Faculty of the Graduate College

University of Nebraska

In Partial Fulfillment

of the Requirements for the Degree

Master of Arts in Secondary Education

University of Nebraska at Omaha

by

Angela D. O'Connor

June 2000

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Thesis Acceptance

Acceptance for the faculty of the Graduate College,
University of Nebraska, in partial fulfillment of the
Requirements for the degree Master of Arts in Elementary Education
University of Nebraska at Omaha

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EXPLORING THE PROFESSIONAL GROWTH OF A FIRST-YEAR MIDDLE SCHOOL MATHEMATICS TEACHER UTILIZING THE MODEL OF HOLONOMY

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University of Nebraska, 2000

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This research study was written by a first-year mathematics teacher, who taught seventh grade in a suburban middle school. The purpose of this research was to examine my growth as an educator and as learner of mathematics. Reflective journaling was the primary method of data collection throughout this study. The researcher collaborated with two other first-year mathematics teachers throughout the research process. Discussions and interactions with members of the trio, colleagues, students, parents, and administration were recorded as data. Each incident examined in this research was considered to be “critical” to the researcher’s growth throughout the first year teaching experience. Research was organized and examined using the five states of mind of holonomy: consciousness, craftsmanship, efficacy, flexibility, and interdependence. These five states of mind are believed to be creators of effective thought and action for the individual as he/she interacts within his/her community.

At the conclusion of this study the researcher found that growth cannot be measured in a numerical sense, but experiences can be examined for personal and professional development using the model of holonomy. Although the five states of mind influenced the growth of each member of the trio differently, a commonality exists in us to continue our desire for learning as we teach our students.

Acknowledgments

Without my loving parents and sister I would not be the individual I am today.

They are my role models and my inspiration.

Brent Larson and Joanna Philippi have been vital in my professional growth during this first year of teaching. Their support and friendship have given me confidence and strength throughout this experience.

My CADRE mentor has greatly contributed to the success I experienced in my classroom and provided much support throughout this graduate program.

*Through laughter, tears, and their belief in me as their teacher,
my students from this first year of teaching
have shown me the true rewards of a career in education.*

Table of Contents

CHAPTER I. The Problem.....	1
Section A. Introduction.....	1
Section B. Purpose of the Study.....	4
Section C. The Problem	6
Section D. Research Questions	7
Section E. Definition of Terms.....	7
Section F. Methodology.....	11
Section G. Limitations	12
Section H. Summary	13
CHAPTER II. Review of Related Literature	14
CHAPTER III. Data Collection and Analysis.....	26
Section A. Introduction	26
Section B. Consciousness.....	27
Section C. Craftsmanship	40
Section D. Efficacy	47
Section E. Flexibility	57
Section G. Interdependence	62
Section H. Summary	78
CHAPTER IV. Conclusion.....	81
Section A. Introduction.....	81
Section B. Response to Research Question	83
▪ A Free-Verse Response to the Research Questions.....	85
Section C. Evaluation of Holonomy as a Model and Collaborative	
▪ Thoughts on the Five States of Mind.....	93
Section D. Future Growth as a Professional	96
Section E. Recommendations for Further Research	97
References.....	99

CHAPTER I

The Problem

Section A. Introduction

This thesis was written by a first-year middle school mathematics teacher who acted as a vulnerable observer while exploring the beginning of a career in education. During this first year experience I participated in a graduate program, CADRE (Career Advancement and Development for Recruits and Experienced Teachers) that enhanced my knowledge regarding the profession of education and supported me through the events that I encountered during this first year of teaching. As a participant in this program I was able to collaborate with two other first-year mathematics teachers while writing this thesis. The concept of writing a collaborative thesis was pioneered by three University of Nebraska at Omaha graduate students during the 1998-1999 academic year: Jennifer Bernard, J.P. Caruso, and Stacey Stewart. The titles of these master's theses are as follows: First Footsteps: A Teacher's Perceptions and Explorations of an Urban Middle School during the First Year of Teaching by Bernard, First Footsteps: A Teacher's Perceptions and Explorations of an Urban High School during the First Year of Teaching by Caruso, and First Footsteps: A Teacher's Perceptions and Explorations of a Suburban Elementary School during the First Year of Teaching by Stewart (1999). As they concluded their studies, these first-year teachers stated "while we believe that it has been a successful experience for us further research is recommended to explore its promise and value in similar projects" (Stewart, 1999, p. 70).

The three mathematics teachers who conducted similar studies during the 1999-

2000 academic year have all earned a bachelor's degree in education between December of 1998 and May of 1999; each teacher entered the CADRE program in June of 1999. The members of this group taught in three of the five major Omaha metropolitan school districts. I earned a degree in secondary mathematics and physics education. The other two first-year teachers are as follows: Joanna Philippi who graduated with a degree in elementary education with an endorsement in early childhood education and Brent Larson who earned a secondary mathematics education degree. Our diverse educational backgrounds allowed each member of the group to offer a new perspective to the various experiences that were encountered throughout the school year. Another benefit to our collaboration was that we taught different grade levels, which illustrate the spectrum of mathematics curriculum for students. I taught 7th grade mathematics at a suburban middle school, Joanna taught 6th grade mathematics at a suburban elementary school, and Brent taught 9th and 12th grade mathematics at an urban high school.

Throughout our first-year of teaching we shared our experiences with each other through reflective journaling and discussion. We often compared stories, offered advice, and examined situations. Even though our background and careers varied, we all shared the common bond of being first-year teachers whose main focus was on mathematics. This collaborative effort offered many advantages to our individual study of the development of first-year teachers. Our frequent meetings allowed us to discuss what we each were experiencing in the classroom and reminded me that I was not alone in the learning process of becoming a better teacher. Although we encountered many new

and different situations both in and out of the classroom, we eventually experienced similar problems, joys, and concerns.

We all taught mathematics, but our education distinguished us. At the beginning of the year Brent and I projected that we would grow as educators since our background was primarily in mathematics. This belief often led to discussions on the lack of preparation given to us in our education courses. On the other hand, Joanna saw herself growing as a mathematician since she spent approximately half of her instructional time teaching mathematics, yet had few mathematics courses throughout her university education. Together we believed these differences enabled us to become a stronger team since we were able to offer support and knowledge from our various perspectives, while our common bond as first-year teachers created a safe place to “. . . voice concerns, share joys and frustrations, and help one another deal with problems” (Delgado, 1999, p. 28). Research has shown that regular meeting times where teachers “can talk and listen to one another not only helps them cope with the many problems they encounter during their first year, but also gives them the chance to learn and grow professionally” (Rogers and Babinski, 1999, p. 38).

Since we were first-year teachers we were able to view each other with a less critical eye, which would erase factors of intimidation and competition since we felt we would experience similar situations throughout the year. The trio’s conversations allowed me to open my mind to new ideas that I would not have thought of alone. By asking guiding questions to help each other we helped ourselves since “the same event can be characterized differently because the lenses through which individuals interpret

what they see and encounter are uniquely theirs” (Cooney, Shealy, and Arvold 1998, p. 307). We learned from each other as we reflected on how we might handle the situations that each of us faced. The fact that we were all first-year teachers allowed us to express emotions, such as: fear, intimidation, and anger, with each other that we were not willing to share with experienced teachers in our individual building or with the mentors assigned to us. Our common bond allowed us to be honest with each other since we were all at the same step in our careers. We knew that we did not have all the answers, but this common bond offered support since we were not in a position to evaluate or pass judgment on each other.

Section B. Purpose of the Study

My goal was to thoroughly examine my experiences in the teaching profession through my emotions so that I may answer the following questions: am I here for my appreciation of mathematics, the desire to further my education, or for the pursuit of furthering a child’s education? As each member of the trio searched for answers to similar questions we helped each other to examine the mathematician in each one of us, as well as, in our students.

To accomplish this goal, I acted as an vulnerable observer, which allowed me explore my inner self in connection to the environment under investigation and draw deeper meaning to personal experiences as explained by Behar (1996) in The Vulnerable Observer. As a mathematics educator, I felt that I would be continuously growing in two directions – as a mathematician and as an educator. Each member of

the trio knew that we would not always be growing in the same direction, but we learned from the growth and experiences of each other throughout this research process.

During this past year I did not consider myself to simply be a teacher, but also a student who studied and gathered information through the experiences I had with my colleagues and the individuals that walked into my classroom everyday. In Experience and Education, John Dewey (1938) explains that the best teaching tools are our experiences. It is necessary to study these incidents because “just as no man lives or dies to himself, so no experience lives and dies to itself...every experience lives on in further experiences” (p. 16). On my journey of personal and professional development, my studies and research shaped not only my professional stature and growth, but also how and what I taught.

In my research study, I was an active participant. Thus, I became the subject of my own study since I was a first-year educator who collected and reflected on information gathered by being a vulnerable observer. “The ordinary experiences of our teaching days are the essence of our practice. Using a guide to reflect on the experiences - either individually or with colleagues - is an entry to improving our teaching” (Hole and McEntee, 1999, p. 34). I studied how student interactions and the various situations that I encountered in my school influenced my professional growth, both as an educator and a mathematician. Throughout this first year of teaching, I explored how critical incidents affect my approach to teaching mathematics, working with colleagues and as a member of several teams in my school, students, and parents. I focused on the complexities that accompanied my growth as a mathematician and an

educator.

Section C. The Problem

When I walked into my classroom in August of 1999 it suddenly struck me that I was alone. I was now the one responsible for maintaining a positive classroom environment since I was without the assistance and supervision of a cooperating teacher or a university supervisor. As I awaited the arrival of my first students I feared that my undergraduate experiences had not fully prepared me for the year to come. I suddenly felt that I was not able to meet the individual needs of the more than one hundred students that were on my class list for upcoming year. Each member of the trio shared similar feelings and wondered if our student teaching experience and university coursework had been enough to reveal the many roles that we were about to fill. Together we fought personal anxiety and doubt about our ability and our preparedness for what was to come.

It was obvious to me that my learning was really just about to begin. My formal preparation may have been complete, and I may have had a certificate that allowed me to instruct in a secondary classroom, but my professional growth was far from over. Like in my CADRE colleagues, there was a strong desire, a need, to know more about this profession and more about how to effectively present information to those with whom we were entrusted. We did not want to disappoint those who believed that we were able to teach the students in our classroom.

“Our knowledge, or lack there of, can be a stumbling block to our students’ learning”(Lappan, 1999 b, p. 3). We did not want this “stumbling block” to inhibit our students’ learning. As we prepared lessons for the first few weeks of school we saw ourselves becoming the most eager student in the classroom.

Section D. Research Questions

How did critical incidents impact my interactions with the students within my individual educational environment and influence my growth as an educator and a learner of mathematics?

Section E. Definition of Terms

CADRE: This graduate program, Career Advancement and Development for Recruits and Experienced teachers, has been in existence since 1994 and is organized through the Metropolitan Omaha Educational Consortium (MOEC) and the University of Nebraska at Omaha (UNOmaha). Participants complete their first year of teaching and their master’s degree simultaneously. Throughout this program, participants are matched with associates that are considered to be master teachers in the district in which the CADRE teacher is assigned. (CADRE Project Handbook, 1999)

Collaboration: Webster (1991, p. 259) defines collaboration as “to work jointly with others or together especially in an intellectual manner”. For the purpose of this research the term collaboration refers to the process of three teachers discussing situations, sharing ideas, and offering advice to each other throughout the first year of teaching.

Critical Incident: “Critical incident reports are short narratives of events judged to be particularly meaningful by participants in the events” (Branch, Pels, Lawrence, and Arky, 1997, p.223).

Curriculum: Curriculum includes the materials or tools that are provided by the district to assist students and teachers in understanding or presenting any given concept.

Educator: An educator is someone who provides formal knowledge, training, information, or brings someone to an understanding of a specific content area. An educator takes on many roles in his or her profession, such as: a communicator, a confidant, a counselor and a role model to students; a team player in the building and district. This profession requires strength and various talents to be successful.

Holonomy: Holonomy consists of five states of mind: consciousness, craftsmanship, efficacy, flexibility, and interdependence. These states of mind accentuate the importance of individual development as a contributing member to the community. (Costa and Garmston, 1994)

- Consciousness: Individuals who exhibit this state of mind “strive to monitor and reflect on their own thoughts and actions” (Costa and Garmston, 1997, p.149).
- Craftsmanship: This involves “knowing that we can continually perfect our craft, and being willing to work to attain our own high standards, and pursue ongoing learning” (Costa and Garmston, 1997, p.151).
- Efficacy: “Efficacy means knowing we have the capacity to make a difference and being willing and able to do so” (Costa and Garmston, 1997, p.150).

- Flexibility: Those who demonstrate flexibility “have the capacity to change their mind as they receive additional data” (Costa and Garmston, 1997, p.150).
- Interdependence: Independent individuals “contribute themselves to a common good, seek collegiality and draw on the resources of others” (Costa and Garmston, 1997, p.152).

Learner of Mathematics/Mathematician: “Mathematicians pose problems; they predict outcomes, collect data, offer conjectures, and share strategies. Mathematicians ‘do math’; they use tools, for example, calculators, rulers, and unifix cubes.

Mathematicians communicate; they ‘talk math’ and ‘write math’. Mathematicians clarify then revise their ideas, and then they pose new problems” (Reed, 2000, p. 346).

Mentor: Webster (1991, p. 742) defines mentor as “a trusted counselor or guide”. In the CADRE project teachers are matched with a master teacher, as in Zen in the Art of Archery (Herrigel, 1953). This master teacher assists with familiarizing the new teacher with the district and fielding any questions that the new teacher might have.

Participant Observer: To act as a participant observer is to watch your surroundings as they interact in your life. You take part in the existing community as it shapes your past, present, and future experiences. Your life is shaped by daily occurrences and the learning experiences that are created by these occurrences. (Behar, 1996)

Personal and Educational Background: Personal and educational background is influenced by the past experience of the individual involved which impact perceptions and attitudes of that individual.

Reflective Journaling: A method of recording and analyzing daily experiences.

Journal entries are a contemplation of emotions, scenarios, and learning experiences as viewed by a first-year mathematics teacher. Reflective journaling is the primary form of data collection for this thesis.

School Environment: This includes the learning, not only for students, but also for the individual teacher. It is not simply the mere physical setting (building location, design, classroom setting, etc.) but everything encompassed in the school atmosphere. This includes administration, other teachers, support staff, parents, and students. It also includes the attitudes of these individuals and their relationships with one another.

Standards: Standards for mathematical instruction have been developed at the local, state and national level. These documents have been examined by the researcher and are used to guide instruction throughout the school year.

Vulnerable Observer: Ruth Behar (1996) explains in The Vulnerable Observer that by making ourselves “vulnerable” we examine situations from a new open point of view, one that molds our learning through all aspects of life. My approach when writing this thesis is to allow myself to become “vulnerable” to my educational experiences so that I can study my professional development and “continue. . . labor through introspection”(p. 9).

Section F. Methodology

This thesis is a non-hypothecated study conducted during the 1999-2000 school year. The primary method of data collection was daily reflective journaling by myself as the researcher. Journal entries were the result of deliberately contemplating interactions that occur within the school and/or classroom setting involving students, my bloc team and other staff members, administration, parents, community participants, and members of this trio. Throughout this research, I often considered how altering an event, or reaction to an event, might produce a more favorable result in a similar future situation. This method was adapted from the style utilized by the Bernard, Caruso, and Stewart trilogy (1999). They stated that the criterion for their study was listening, learning from their experiences, and letting their past and present experiences dictate the course of their study (Bernard, Caruso, and Stewart, 1999).

All researchers have read the following caution in Crane and Angrosino's book, Field Projects in Anthropology (1974):

...ethical consideration lies in the area which recent United States publications call "Protection of the Individual as a Research Subject." This includes the ethnographer's duty to make and honor promises of maintaining the anonymity of informants and present the material as honestly and completely as possible, bearing in mind that the informants or their children and neighbors may read the ethnography someday. It also includes the idea that the ethnographer owes the host a great debt for their (sic) cooperation and must be careful to repay it in part by, for

example, not reporting on them so that punitive agencies can take action against them. Maintaining anonymity of informants includes not only cases where names must be “changed to protect the innocent,” but also the responsibility for not using materials that could be traced to an informant by local people and used to his or her detriment (p. 6).

As a researcher, I will protect the privacy of those who were a part of my first-year teaching experience. Every attempt has been made to respect the members of the school environment by ensuring the anonymity of the individuals that may have in any way contributed to this learning experience.

Section G. Limitations

This study was conducted during the 1999-2000 school year in the Omaha Metropolitan Area. My perspective as a participant in the University of Nebraska at Omaha’s CADRE project and an active participant in this research is limited to my personal point of view, which is limited to my interactions in one school within my district. At this school I have had contact with only a fraction of the student population. It is the interactions with this part of the student population that has allowed me to participate as a vulnerable observer in the study.

Section H. Summary

There is no question that the first-year of teaching will foster growth, personal and professional, in any teacher. I have devoted several years preparing for this journey, but as an educator my personal strength and desire will drive my pursuit of professional growth. My continuous professional development will provide students with the best possible education, specifically in the area of mathematics. This thesis will conclude with my finding in regards to the problem statement: How did critical incidents impact my interactions with the students within my individual educational environment and influence my growth as an educator and a learner of mathematics?

CHAPTER II

Review of the Related Literature

Literature was chosen that would support and guide the methodology of the study for a first-year educator who teaches mathematics. The Bernard, Caruso, and Stewart First-Footsteps thesis trilogy (1999) were the first pieces examined. Using their methodology and their recommendations for further study as a guide, our trio of mathematics teachers discussed the possibilities of conducting similar research using the collaborative process illustrated in these previous investigations. While their research focused on the perceptions of a first-year teacher in his/her individual school setting, I chose to examine my own personal and professional growth as a first-year mathematics educator. Similar to the First Footsteps thesis trio (1999), my journaling was also the result of acting as a “vulnerable observer” in my individual school community (Behar, 1996).

As I wrote this thesis, I attempted to pull the reader into my work through emotional attachment, not only in my writing but also to my teaching. This style is the main focus in The Vulnerable Observer by Ruth Behar (1996), which expresses the need for emotional attachment in one’s writing. When new teachers grow as educators, they develop an emotional connection to what is done as a professional in and out of the classroom. I want to further explore this emotion and understand how it helps me to develop as a teacher. Behar explains that, “When readers take the voyage through anthropology’s tunnel it is themselves they must be able to see in the observer who is

serving as their guide” (p. 16). My purpose in writing this thesis is to express my first-year mathematics teaching experience in such a way that the readers can connect to not only my words, but also to all of my successes, failures and the plethora of struggles along the way. My personal aim was to further explore critical incidents and how they affected me as a teacher and as a mathematician. By writing vulnerably I learned more about not only myself, but also about my chosen profession. To write vulnerably I must not conform to what has always been taught to me – the myth of “never say I” in my writing (p. 29). Throughout my education I have been taught to write in second and third person, which restricts my mind from analyzing experiences and myself. As I write my thesis I am aware that as Behar states “Writing vulnerably takes as much skill, nuance, and willingness to follow through on all the ramifications of a complicated idea as does writing invulnerably and distantly” (p. 13). Through Behar’s inspirational writing I step up to the challenge of “wearing our hearts on our sleeves” (p. 32).

Throughout this research I encountered many events that have changed me in some way. These events or “critical incidents” are meaningful to me personally. The articles “Basic Clinical Skills: The First Encounters” by Konner (1997) and “Becoming a Doctor: Critical-Incident Reports from Third-Year Medical Students” by Branch, Pels, Lawrence, and Arky (1997) share various critical incidents from students in the medical school setting. Encounters with patients, nurses, doctors, surgeons, and fellow students shape the actions, words, and thoughts of these new doctors. Just as these medical students had critical incidents, the trio of mathematics teachers discussed incidents that had a profound effect on our philosophies about our chosen profession.

In “Where Crowded Humanity Suffers and Sickens”, Abraham (1997) focuses on one family who frequently visits the hospital for medical attention. Details are not only told about the present situation, but also from past incidents that led to the current situation. The author focused on the patient, the family, and the community and how these factors contribute to an individual’s experiences. This comprehensive examination allowed her to not only tell the reader about the family, but also allowed the reader to have a better understanding of the researcher’s subjects.

As educators we are to do our best to discover what will inspire each student to learn. Every day as we greet our students when they enter our classes, we do not deal only with how each student’s school day has been going, but the rest of their emotional baggage as well. Thus, we must teach the student taking into account everything the student carries with him or her; thus, we become familiar with their way of life. In order for the educator to teach the student, I feel that we must know what makes the student who he/she really is and what led to the student’s current demeanor, as Abraham demonstrated. These daily experiences help mold who I am as a professional and how I perceive my role as a teacher. Similar to that of my students, my perspective is the product of my experiences and what I learn from them.

When we record and write about our experiences as vulnerable observers, each member of the trio recognized the role they played which is described in Zen in the Art of Archery where Herrigel (1953) tells of his six-year study of Zen through the art of archery. During his years of study a Zen Master, who he refers to as his teacher, instructs him. In his account, the student and teacher relationship is defined. The

student shares his experiences, frustrations, and questions during his instruction and growth. The student strives to reach a certain level of spirituality and knowledge through his art. He experiences much frustration when he is given what seems to be misdirection and indirect answers from his teacher, rather than the quick and easy solution to his problems.

It is easy to assume that we play the role of the teacher and the children we see on a daily basis are in the role of the student, given those are the defined roles of our profession. We hold knowledge that we want to share with our students. Although in reality, we are also students. As new teachers, each of us dreams of becoming masters in our profession and continues our education to do so. We know that now it is rather unrealistic for us to expect to be masters without having any real experience and that mastery will come as we continue in this profession. We search for the ultimate disciplinary methods. We want each lesson to be perfect in content and presentation. We want the ideal learning environment. As we experience our first year of teaching, we are reminded of the master's words, "And if I tried to give you a clue at the cost of your own experience, I would be the worst of teachers and would deserve to be sacked" (Herrigel, 1953, p. 52). As I performed my study I learn from my experiences and will continue to truly learn if I let such experiences happen naturally. As I struggle, I could be given the easy answers, but I would not truly know how and why something works. If I expect my students to search for the answers and not take the easy way out I must remember to do the same.

As first-year teachers there were times when we were at a loss for words and are

in desperate need of advice and support. As participants in the CADRE project we worked closely with a mentor from our districts who was accepting of our needs and open to answering our questions. Along with my CADRE mentor I was also worked with a mentor from the math department at my school. Rowley (1999) explains in “The Good Mentor” that mentors are models of continuous learning. By serving as models, they illustrate the need to pursue professional development as they guide us during our first steps in that right direction. The relationships with my two mentors emphasized my role as a student throughout this teaching experience as I learned from someone who is considered to be a master in the teaching profession.

“Lifesaving 101: How a Veteran Teacher Can Help a Beginner” explains that veteran teachers that use “compassion with a critical eye” have the knowledge to support and guide new teachers through struggles during the first years of teaching (Delgado, 1999, p. 29). As mentioned in Chapter One each member of the trio found support through the collaborative effort of the other two. We were able to share our fears and frustrations with each other without having to be ashamed of our failures. It is also important that we also have such a relationship with veteran teachers so that we many learn from their experiences and advice.

Rogers and Babinski (1999) suggest the importance of support not from a mentor but from new teachers who experience new and similar situations throughout the beginning of a teaching career in “Breaking Through Isolation with New Teacher Groups.” By collaborating with other new teachers Rogers and Babinski believe “new teachers experience an open and honest exploration of issues” (p. 38). The individual

research of each member of this trio is focused on our collaborative efforts of the first-year teachers that are involved – discussions on relevant research, conversations about our school experiences, offering advice and providing support to each other in times of need.

“Because much of what an individual learns about teaching is through interactions within various communities, it seems reasonable to assume that those contexts are important influencing factors in what is learned” (Cooney, Shealy, and Arvold, 1998, p. 307). Reflective journaling was the primary method of data collection for this thesis. This type of writing goes beyond simply writing in a journal. Dewey stated that “reflection is an active, persistent, and careful consideration of any belief or supposed form of knowledge in light of the grounds supporting it and future conclusions to which it tends” (Yost, Sentner, and Forlenza-Bailey, 2000, p. 39). Emotions before, during, and after a situation are included in journal entries. The reflection asks and attempts to answer questions, such as: How has this changed me? What does it say to me? What does it say about me? What impact does this have on me? How could I have reacted differently? What would I change about the situation if I could re-enact what happened?

Student teachers have the benefit of working with a cooperating teacher and university field supervisor, who serve as observers and frequently models and/or shares suggestions. As new teachers enter this profession, it is vital to learn through self-evaluation. By reflecting on what has been experienced it is possible to accurately share the situation with others and even look back after some time to reexamine the

event and what has transpired since that time, contributing to professional growth. “The ultimate purpose of reflection is to get us into the habit of thinking about our experiences” (Costa and Kallick, 2000, p.60).

Reflecting is perhaps challenging because it requires an individual to look honestly at failures as well as successes. By finding time to thoughtfully consider these events, or interactions with members of the school environment, it often becomes apparent when adjustments need to be made (Hole and McEntee, 1999, p. 34).

As we examined our growth through reflection, our CADRE mentors reminded us to consider the concept of holonomy, which implies that an individual continues to experiment, experience, and seeks improvement while he/she continues to learn from and participate in the community. “Five Human Passions: The Origins of Effective Thinking” discusses the five states of mind of a holonomous individual: efficacy, flexibility, craftsmanship, consciousness, and interdependence. The states of mind are believed “to be the generators of effective thought and action,” (Costa and Garmston, 1994, p. 149). As individuals we work towards reaching set goals through self-motivated behaviors. These behaviors guide us through successes and failures, while we learn from our experiences. Holonomous persons understand that they must improve themselves to enhance the organization in which they participate.

As a first-year teacher I have a desire to move toward excellence in my school as I dedicate our time to learning, teaching, and participation in other aspects of the school environment. This desire in new teachers is what I believe drives the future of education. On December 4th 1999, Dr. Stephen Kleinsmith, Assistant Superintendent of

Human Resources for Millard Public Schools in Nebraska, stated that schools need “teachers who move towards excellence and away from mediocrity” in his address to CADRE teachers. Since we strive to be the very best educators possible it is difficult to imagine a community proudly using the word “adequate” to describe their educational opportunities.

Contentment for an “adequate” education was illustrated in Growing Up American: Schooling and the Survival of Community. Peshkin (1978) examines the power of the community in the town of Mansfield as it molds the educational setting. Throughout his data collection, which involved observing and interviewing several individuals from varying roles including students, teachers, administrators, board members, and parents, the word “adequate” repeatedly arose. One teacher stated, “I guess it’s as good a school as you can expect Mansfield to have” (p. 209). Peshkin points out however, “If Mansfield’s children lack educational opportunities equal to those available in larger cities and suburbs, they are not denied these opportunities by virtue of race or national origin, but by virtue of Mansfield’s size and prevailing ethos, which establishes the limits of excellence” (p. 200).

While I was disturbed by Mansfield’s contentment with an “adequate” education, I recognized that a community has a great impact on the schools. A community can either promote or inhibit growth and change. Our community makes us adhere to its demands as we search for our comfort zone: our place of personal and professional satisfaction. We need to use our community and its members as resources to pursue excellence in the education of our students and not fear the control the

community has the potential of possessing. As a professional I need to encourage the community to serve as a change agent that will have a positive impact on the school and the students.

As we strive for excellence in the education of our students we must not only consider instructional methods, but also competence in our discipline. In “High-Quality Teachers or High Quality Teaching?” Lappan (1999 a) explains that all mathematics teachers must improve their knowledge of mathematics as they enhance their knowledge in the profession of teaching. Furthermore, she says that “. . . to improve our practice, we must engage in exactly such study and reflection” (p. 3). This “study and reflection” refers to time for planning, evaluation, and collaboration with our colleagues. As first-year teachers, we need to take advantage of all such opportunities for growth as professionals.

Mansfield was satisfied with an “adequate” education for its students. The schools feared change since they followed a routine that produced the same “adequate” education for each child. While we grow as educators we must remember to not fear change, and apply new strategies in our mathematics teaching. “There are no quick fixes or magic pill by which mathematics teaching and learning can be instantly improved, and to make matters more challenging, our own experiences can make us resistant to change” (p. 3). The satisfaction of providing an education for our students that is similar to the education we received at their age should not be accepted if we expect to experience growth.

Both teachers that I collaborated with throughout this research process, as well

as myself, have a strong interest in mathematics. We agreed that this appreciation alone is not enough to foster mathematical growth in our students. “Knowing What We Teach and Teaching What We Know” (Lappan, 1999 b) expresses the need for a deep understanding of the mathematics curriculum that we teach. Without adding to our personal knowledge of mathematics how are we to expect our students to add to their understanding of mathematics? “Our effectiveness, in large part, is enhanced or limited by the depth and breadth of our understanding of mathematics itself” (p. 3).

In Math: Facing an American Phobia, Burns (1998) offers solutions that will help to enhance students’ outlook on mathematics so they will not leave math class with a fear or hatred of the subject. In many discussions that I have had with other mathematics educators refer to the negative responses that are heard when we reveal our career as mathematics educators. Such phrases as “I was never any good at math” or “I always hated math” remind us that many do not possess the Mathematical-Logical Intelligence defined by Howard Gardner that explains the actions of someone who finds ease in understanding mathematics. As I reflect on my past, I remember many positive and successful math experiences; I always enjoyed math class and at times find it difficult to understand that others dislike the subject. During student teaching it was frustrating to find that my explanations did not always help students to understand the lesson for the day since I did not feel the overwhelming frustration that some of my students experience.

Teachers have the responsibility of examining district, state, and national standards to ensure that the appropriate concepts are being covered. However, the

emphasis should not simply be on students performing, but also on students understanding. As teachers our goal is to create a comfortable classroom atmosphere that will provide opportunity for growth in our students in the field of mathematics. We not only want to encourage a positive outlook of mathematics in our students; we want them to gain a “positive conception about themselves as learners of mathematics – about their interest, their competence, their attitude, and their motivation” (p. 211). The National Council of Teachers of Mathematics (NCTM) *Principles and Standards for School Mathematics: Discussion Draft* (October 1998) provides an excellent resource for information that will help us take students further in their mathematical thinking. Its emphasis is “mathematics for all” and discusses the needs for success in a classroom composed of diverse learning backgrounds and experiences (p. 17).

As stated, the goals that students will achieve by participating in a classroom where mathematics is the central focus are “learning to value mathematics, becoming confident in their own ability, becoming mathematical problem solvers, learning to communicate mathematically, and learning to reason mathematically” (p. 15). This is how I envisioned my classroom: a model for student success. As a first-year teacher, I wanted to assure student success to the greatest of my abilities and I hoped that the NCTM Standards would help me lay a solid mathematics foundation for my students by serving as a guide through this first year of teaching.

This past year was a valuable learning experience. The situations that members of this trio encountered daily and discussed with each other encouraged the growth of a strong desire to continually improve our teaching practices throughout our careers. By

reflecting on these experiences and by sharing them with each other we learned from each other as we each grew from individual experiences. Although we experienced newfound success, we also experienced frustration that made us stronger as educators. “Teachers learn best by studying, doing, and reflecting . . . and by sharing what they see” (Darling-Hammond, 1998, p. 7). Here lies the foundation of my individual thesis: I examined my experiences, which lead to personal and professional growth.

CHAPTER III

Data Collection and Analysis

Section A. Introduction

Throughout this chapter I will examine the five states of mind (or human passions) that create the concept of holonomy. Consciousness, craftsmanship, efficacy, flexibility, and interdependence have been defined as the five human passions that “drive, influence, motivate and inspire our intellectual capacities” (Costa and Garmston, 1997, p. 149). These human passions have driven the organization of my research and analysis of my growth throughout this first year of teaching. Through such organization, I was able to understand how and why a series of events sparked growth in a specific area; it allowed me as the researcher to find connections between incidents that happened not only throughout this past year of teaching, but also from other life experiences.

Each state of mind has generated thought and reflection throughout my research. As I focused on each part of holonomy individually, I could start to visualize the whole picture—the purpose of holonomy. Many of these incidents could be interpreted in more than one way; thus, having the potential to fit into more than one section. The decision of an incident’s final placement was determined by how that incident affected me as a person and a professional. Focusing on holonomy has provided a starting point for my continuing professional growth. Holonomy is never achieved, but serves as a state of balance.

This chapter consists of data collected throughout this study. The data has been taken from journal entries, email messages, conversations with students and colleagues, cards and letters from my students, as well as, notes and conversations from parents. All data has been analyzed through my reflections of the critical incidents that have impacted my growth as a teacher this past year in order to answer the posed research question stated in Chapter One: How did critical incidents impact my interactions with the students within my individual educational environment and influence my growth as an educator and a learner of mathematics? The answer to this research question will be discussed in Chapter Four.

Section B. Consciousness

Through my past experiences with family, friends, and education I learned the advantage of being aware of my actions and the effects they may have on my surroundings. As I see it, being aware of what is happening around you gives you more strength and control over what will happen to you. This first year of teaching has been a challenge in the classroom with consciousness or “with-it-ness”, which is described as “a teacher’s ability to be aware of and respond to a variety of cues happening in the classroom while keeping students and themselves on task” (Costa and Garmston, 1994, p. 139). Looking back at this past year I can remember various situations where not being conscious of my surroundings or actions have indeed inhibited the overall result that I was working towards compared to other situations when I have been conscious of my words or actions, which resulted in a more positive outcome.

When I was asked to interview at the middle school, I hesitated because I was concerned about working with twelve and thirteen year olds when at that time I was working with high school juniors and seniors. I did not know if I would be able to relate to students at that age since most of my experience during my undergraduate work was with high school students. I spoke with my cooperating teachers and they told me that it does take a special person to work with that age level, but the experience was highly rewarding. I now understand what they were talking about. This year I have learned the great effect that I have had on many of my students, positive and negative. Students are looking for someone to connect to, someone they can trust, and someone to look up to. The relationships that I have built with my students this year are not ones only academically oriented but also as a confidante and a role model.

In September, a situation was brought to my attention that had I reacted differently to at that time I feel that I would not have the same type of relationship I now have with this student. Before my eighth period class two students, Karen and Amy, came up to me and said that they needed to talk. By looking at Amy's tearstained face I knew that I needed to take immediate action. During their seventh period class, they had small group work and another student, Tony, asked Amy, "Do you have your period?" At first this comment did not strike me as unusual for a male student to ask a girl, but then I remembered the age I was working with. This may be considered a rude or sarcastic comment in conversation between high school students, but has the possibility of being embarrassing to twelve year olds who are going through many developmental changes.

I told Amy to go to her eighth period class and I would be there in a minute to pull her out of class and take her to the school counselor. Since another staff member and I team-teach eighth period, I asked him to take over so I could help Amy. I explained to Amy's teacher what happened and pulled Amy out of class. Amy and I walked down to the guidance office, and the counselor was in another meeting so we were told to wait. We went out in the hallway and just talked. Amy explained the situation to me and told me how she felt, humiliated and confused about Tony's intent. She was not sure why he asked this or in what direction he was headed with such a comment. After she got it all out we just talked about anything – anything to help her think about something else until the counselor could talk to her. Suddenly I realized that Amy was calming down, she stopped crying and a small smile was trying to peak out. Then the counselor found us and took care of Amy from there. A report was filed and Tony's schedule was changed so he no longer had classes with Amy.

The next morning Amy walked into my room before school and hugged me. She said that she wanted to thank me for helping her and talking to her about what happened. At first I felt uncomfortable with a student hugging me since I had been warned about physical contact with students during student teaching, but the hug made me realize what my actions the previous day had meant to her. Amy and I have developed a very close relationship this year; she tells me almost everything, sometimes more than I want to know—what she did over the weekend, who she likes, etc. She began to call me “mommy” and often spent time after school helping me out and redecorating the room. The last day of school Amy gave me a card and filled the inside

of it with her bright pink pen. It said “Thank you for everything you have done to make my life better. I will NEVER forget you. You taught me a lot this year and I will always remember everything, even you.” She signed the card “I will always love you mommy!” I wonder what type of relationship we would have had if I would have simply taken her to the guidance office and had her wait alone. If I had acted any other way would things still be the same?

As a first year teacher I continued to wonder if I was getting through to all my students. Did they understand what I was talking about? Were they really paying attention or just pretending? There are many times when I would find myself, as well as the students, changing the topic of class. Off-task behavior was evident in every one of us and often it would be seen more in myself than in my students. More and more time would be spent at the beginning of class talking to the students; they would swarm around my desk when they walked in the door and ask me about anything and almost everything. I would lose focus during lessons; the students could easily get me off track and I was not good about stopping them from doing so. I found myself wanting to learn more and more about them; I wanted to let them know that I cared about them and wanted them to be successful in more than just my class. When I was this age I remember very few teachers that made me feel like they really cared; those are the teachers that I still remember. I wanted to be remembered just like them.

Much of my time would be spent in helping with other school activities: student council, judging show choir auditions, chaperoning the school dance, and working backstage for the musical. I did not want to simply be a teacher that only showed

interest in his or her specific subject. By doing these activities it was evident to my team and myself how close I was becoming to my students. I was the teacher the students would come and see at 7:15 in the morning and they would visit after the bell rang at 3:18 pm.

During winter break, I started to think about how I could create the “ideal” learning environment for my students. I knew that I was starting to lose focus on the content that I was supposed to be teaching in class since I was becoming more involved in other aspects of the school environment and getting to know the students outside of the classroom setting. The students, I felt, were starting to see me more as a friend than as a teacher; I was growing too close to them and felt as if I was losing their respect. I just kept thinking about a team member’s sarcastic comment when she walked into my room the day before the students’ winter break started and saw the presents sitting on my desk, “I see who the popular teacher is this year.” This comment just seemed to ring in my ears. I did not want to be the popular teacher; I wanted to be the effective teacher, one that really got through and helped create success amongst my students. I knew that something had to change, but inside I really did not want things to be different. I still wanted to have fun in the classroom, and my students repeatedly told me that they enjoyed being in my class. This comfortable atmosphere is how I envisioned my classroom and I did not want to lose this feeling.

What did I consider to be an “ideal” learning environment? So much happened first semester that changed my philosophy of education: from building close relationships with these students to throwing a book down out of frustration in Pre-

Algebra since the “chatterboxes”, as I called them, were not focused on a lesson. I took a long look back at my philosophy that I was asked to write for a graduate course, titled “Individualization of Instruction”, in September. At that point in time, I believed the following:

Education allows us to strive for success in every aspect of our lives. It not only enhances our knowledge base, but also allows us to build experiences, which illustrates our past, encompasses our present, and determines our future. The curriculum must involve all aspects of our lives: the math and sciences, the community, and our socialization in the world. The realm of unlimited learning entitles us to seek a multitude of opportunities if we have the desire to pursue them.

Teachers are merely guides in the learning process and role models in the learning community. It is our duty to intrigue students with our creativity, knowledge, and enthusiasm for learning. Yet, it is the choice of the individual student what experiences they gain throughout the journey. We are tour guides as students travel throughout the vast world of knowledge. Our work is dedicated to motivating the students to excel in life and to strive to attain their dreams. We must be more than a teacher; we are a counselor, a confidante, but most important of all, a role model and mentor.

Creativity is the key to a successful classroom environment. Teachers must be creative to motivate the students and the students must

be allowed to express their learning using their creative talents. The students must be allowed freedom in their choices of self-expression. We all have different strengths and talents and must be allowed to work from these strong and successful qualities. This is where we will view success, this is where we will strive for further success, and this is when we will be motivated to achieve our dreams.

As an educator, it is my duty to encourage my students to succeed. I must help guide my students along the paths they choose to follow. I must help them find their strength so that they can succeed in the future.

As I reviewed my philosophy I started to reflect about what I learned from the first semester of teaching and what I wanted to change about the second semester. I still believed that the students needed the ability to make a choice in what they learn and how they learn it. I knew that my first task would be to help them develop these choices and to open new doors for them to explore.

When the spring semester started I found myself taking the time to develop my teaching style around the talents of the students. There were such diverse talents to be found in these 130 students. Some were artistic, some were musical, and some knew more about computers than I ever cared to know. Overall, I discovered that for the most part they were extremely self-motivated. Of course, this did not work for all students. There were still plenty who needed the direction only provided by a strict teacher.

What I started to do was ask the students what they would like to do, what interested them? When I assigned a project I let them have creative freedom in its final product. I ended up grading websites, computer presentations, scrapbooks, songs, and even a mobile. I discovered that by doing this I could have the best of both worlds. They stayed on-task, learned mathematics, and stayed interested while I could still learn about them, their strengths, and interests. At this point I found myself having fewer headaches at night and enjoying the day more at school. I didn't have to completely change what I wanted the classroom setting to be, just modify it a little.

The second to last day of school I found an envelope on my desk. It was a letter from a student, Nicki, that I really struggled with throughout the year. I always felt I could never reach her, no matter what I tried. She made rude comments to me and refused to let anyone help her during class. In this letter she wrote, "Math was my hardest subject but you have changed that. Now it is my second hardest subject, really you have opened many doors of mathematics that I now know and understand . . . PS. I was glad to have you as my math teacher!!!!!" I remember at the beginning of the year all I wanted was for a student to tell me that math was no longer his/her least favorite subject; that is all I was aiming for. I told them this goal and this letter made it a reality for me. Through all the struggles this year to all the fun moments that I will not forget, this is one letter that will keep me going whenever I start to doubt my abilities in years to come.

Even though situations that occurred inside and outside the classroom made me realize the type of impact that I can have on these students and in the school

environment, I would often doubt my influence. Whether it be from building leadership skills to just giving support, I learned the power of a teacher many times, over and over again.

Early in the year the student council took a field trip to a nearby farm for leadership training. During the activities, some sponsors participated, directed the kids, and illustrated power over the students. Another sponsor and I stood back and cheered the students on as they tackled each feat before them. Later on in the year, a few members of the student council came to me with a concern about the role of sponsors. In an email to the other sponsors, I responded as follows:

Here is a concern that has been brought to my attention from some members of the student council. They think that we are doing too much for them and would like more responsibility. They are not getting out of student council what they wanted to because we always have the ideas and we always do most of the work. They want to take this off our hands and simply have our guidance. Bryan came to me yesterday and was a little disappointed after the meeting update that he no longer was doing the t-shirts and that everything was already being done. He really wanted this responsibility; maybe he wasn't perfectly on track but he was trying. I am just letting all of you know this because this is something that we should maybe think about . . . is it our student council or is it theirs?

In this case, the students were not getting the experience that they wanted, success and failure all tied into one. As a sponsor I learned the necessity of taking a step back and letting them take the lead. Throughout my participation in many campus organizations during college, I have learned about the many levels of guidance from officers and advisors and the weaknesses and benefits from these different levels. When the advisor or an officer would do all the work, they were the only ones who gained anything from participating in the organization. When tasks were delegated, more members learned from the experience, as well as, more strength and unity being built within the organization through teamwork. Even though I was afraid some members of student council might fail, I knew that I had to give them the opportunity to learn from their mistakes. How could I expect them to know the true reward of success if I did not let them fail along the way?

In the spring, a teacher informed me during eighth period that she caught Jason helping Lisa cheat on a Pre-Algebra test. Lisa asked if she could finish her test in study hall. I trusted her so I let her take the test to her study hall. Well, the teacher saw them passing Jason's Algebra homework back and forth, which had two similar questions to those on Lisa's test. After school the other teacher and I approached them, and I called home to talk to the parents of both students. Both families were supportive and we decided that Lisa would just retake the test before school the next day.

My learning experience did not come from dealing with what they did, it came from the conversation I had with Lisa and a letter that I received from Jason the next day. They both were worried that I lost faith in them and would no longer trust them;

they did not want our relationship to change. I was almost in shock. I thought they would be upset that they were caught and given consequences at school and home. No! The consequences did not matter to them. They accepted the fact that they were wrong and just did not want to lose my respect. In Jason's letter he wrote, "I'm willing to accept your consequences for my mistakes, but I'm more concerned about your view of me and my character." I never would have thought that my opinion of a student would matter so much to him/her.

Until this letter I did not actually realize the respect that these two students had for me. I talked to both students the next day after first period and told them that I was disappointed in them, but realize everyone makes bad decisions once in awhile and I hoped they learned something from all this. I wrote a pass for Jason but asked Lisa to stay for a few more minutes. When I first learned of the situation, I was disappointed in Lisa for copying and was curious why she would even do such a thing. I wanted to find out why, so I asked her.

Since she was "dating" Jason she wanted to make him feel like he was smarter than she. It was a struggle to keep the look of shock from appearing on my face. Here was a girl that our team always said would be homecoming queen in high school. She was outgoing, intelligent, involved in the musical and student council, as well as, other activities out of school. When she said this, all the memories of college crept into my mind. I remembered all those experiences where I felt inferior to male students in my math and physics classes. I can still remember the fear that I experienced when I was asked to answer a question during class. It was a struggle for me to push myself

through all the required classes for my math and physics endorsements—being one of the only females or the only female in a class was never easy for me. I looked at Lisa and did not want her to even think that she was not as intelligent as a male counterpart; I wanted her to have the strength that I didn't during school.

Lisa must have wondered what was racing through my mind; there was a long pause before I responded to her reason. I looked at her and told her what I wish someone would have told me: there is no reason to feel inferior to anyone else; you have so many talents that need to be advertised to everyone around you. Furthermore, I told her that I knew she had the ability to do whatever she wanted as she got older; I knew that she would be a success at anything she tried to do. She was one of the strong ones and I never wanted her to lose that strength.

After she went to class I sat at my desk and started thinking about what kind of impact I could have on my female students. Could I encourage them to pursue male dominated classes and go on to succeed in such professions? What could I do to show them that I got through it and I would be there to support them if they ever felt the same fears that I did? I wanted to know what I could do now to build self-confidence in these young female mathematicians. The first step that I decided to take was to encourage them to never give up and help them through the struggles they may have in my classroom so they can experience success.

During the school musical, I came to a conclusion regarding my thoughts about discipline and classroom management with which I always struggled. During dress rehearsal, a teacher started to yell at the kids at the top of her lungs. The threatening

sound in her voice scared the hell out of me to where I even jumped back in my seat. I could feel my eyes grow and the look of disbelief work across my face. I could only imagine what was going through the mind of these twelve and thirteen year olds. In my journal I wrote the following response:

. . . I never want them to be scared of me! Maybe this is what my problem with discipline is. They are kids. They make mistakes and need to learn from them, not punished for them. They have so much left of their life; it hasn't even begun. I want the little influence that I have to be positive and caring, not full of anger. I am their teacher but also a friend. This is how I choose to consider my profession. That is who I am--a friend, a role model, and from there I become a better teacher!

After I wrote this I started to take a good look at the management of my classroom and decided it was not as bad as I initially thought. I had a very social group of students and I did not fight it like maybe others thought I should and as I thought I should. They were happy and so was I. As long as they were still learning I was going to use their talkative behavior to my advantage to have fun while we learned and be the teacher I wanted to be.

Consciousness is something that can drive you crazy and make you sane at the same time. This year when I evaluated what effect I was having in the lives of my students I learned more about myself as a teacher and the type of influence I wanted to have over my students. In December I received a packet of old physics lab reports from

a year ago. They were from a professor who wrote the following comment on one of the reports:

Angela, honestly, if you ever want to teach Physics in H.S., you need to learn to develop a strong doubt about your own 'bright ideas.' Otherwise, and please take this from someone who wishes you well, your teaching will be full of errors and will do more harm than good.

When I looked through the reports there were not many scribbles from his famous red pen. Yes, I found some errors I won't deny that, but I wondered why he would send these to me a year later with a comment like that attached?

This comment not only crushed me but also has definitely placed a strong barrier on any desire of mine to teach Physics in the future. I wondered if maybe my teaching was "full of errors" and I was doing "more harm than good". Suddenly, I felt the power a teacher has over a student. He made me feel inferior and incapable. This is not the effect that I want to have on any student who crosses my path; I want to have a positive effect and after this first year I realize that through consciousness or "with-it-ness" I am capable of one thing – instilling success and pride in my students.

Section C. Craftsmanship

During the first week of school I decided to give my students a short pre-test over the basic operations using whole numbers. I could not believe how many students could not multiply or divide. In my journal I asked myself "How am I going to catch

those lacking skills up to those who are ready to move on without boring the more advanced students?” This thought overwhelmed me. I naively thought that the students would enter my classroom at the same level of understanding of mathematics. At this time, I was not prepared to handle all of the different needs that reality threw at me. I did not know what I was getting myself into until it was too late and I was already there. My first impression put fear in my eyes when I looked at my students and made me ask, “What do I do now?”

“Craftsmanship is about striving for mastery, grace, and economy of energy to produce exceptional results. It means knowing that we can continually perfect our craft, and being willing to work to attain our own high standards, and pursue ongoing learning” (Costa and Garmston, 1997, p.151). To excel as a teacher one needs to always work on being a craftsperson. They “seek perfection and pride themselves in their artistry . . . generate and hold clear visions and goals . . . test and revise, constantly honing strategies to reach goals.” (p. 151) This first year of teaching has only scratched the surface of the many lessons that I will learn throughout my career in education.

I set goals at the beginning of the year for my students and myself. First, I wanted to teach not from the book but from the personal experiences of my students. If I wanted my students to realize that math surrounds them, then I needed to use the community as my resource and not a boring textbook. The math textbooks were not all that great and the other math teachers did not even pass them out the prior year. I flipped through the books and made a list of the ideas I liked. Then I examined the list of topics from the other seventh grade math teachers and started looking for ideas from

the Internet, other textbooks, and anything else I could get my hands on at that time. I looked for anything that was different from how I was taught math in junior high and high school. I hated bringing a textbook to class everyday and then working the “odds” or “evens” each night.

I wanted my students to see why they should learn math so they could answer the question “when will we ever use this?” on their own. There were too many times when I heard someone respond negatively about mathematics. Math was either too hard, had no relevance, not fun, and too many other reasons to remember. This goal was the driving force for the effort I put forth each night when planning my lessons; this is where I learned that a teacher never works just an eight hour day. All I asked for in return for my work was for a student to say, “Math isn’t as bad as I thought.”

Once in awhile when I would go to my mailbox I would have a “booster”gram. Throughout the year I received many of these notes from students, which told me that I was achieving my first goal. Beth wrote, “I enjoy being in your class. You make learning a lot more easier and enjoyable. I like the way you take time to help people and wanting them to get good grades because you care.” Carla said the following: “Last year I struggled big time in my math class, but this year I’m doing pretty good. I just wanted to tell you this because I really appreciate it.” Towards the end of the year I received a note from Keith and he wrote, “Thanks so very much for making math really fun before this year I hated math.” As I read each “booster”gram I received I was inspired to continue working on this goal and as I reread them now I look forward to what new teaching strategies and ideas I will find for next year.

As the year progressed, it became easier for me to spot the needs of individual students. Even though these needs frightened me when I saw the results of the pre-test taken the first week of school, I told myself that I wanted to strive to help each child succeed. I feel this is a common goal for all teachers, why else would someone be in the profession, but in the beginning this goal seemed much harder than others. During second quarter I saw evidence that I was meeting this goal. In my journal I wrote the following:

Marty and Jake moved from Math 7 to Pre-Algebra today. They were given books last Friday with a list of work to do in order to catch up. When they came to class on Monday, Marty finished most of chapter one and only had the chapter test to do. Jake barely worked at all; he started in chapter two and only did two assignments. It seemed strange that a parent who pushed so much for her son to be in this class did not help him get caught up. Will Jake make it? When he came in today after school he told me that he did not want to be there anymore! Is he giving up because now things are challenging for him?

The day after Marty and Jake moved to Pre-Algebra I found myself looking for ways to ease the transition. I was looking for improvement in their performance as well as improvement in my performance as their teacher. What could I do to make it easier? What opportunities could I offer them to help them both find success in the struggles that lay ahead of them? Throughout the remainder of the year both students struggled

in Pre-Algebra. Marty even came to the point where he wanted to fail so he would be placed back in a lower math class next year; he barely turned in homework and did not study for his tests. No matter how frustrated I became by the actions of these students, I did not give up.

My strength and determination with not only these students, but with all of them, helped me to slowly progress in making rational decisions when assessing my students' abilities. Towards the end of the year I wrote in my journal "I want to be the one that gets things done successfully. A perfectionist? No. A hard worker? Yes." In the long run, I believe all this effort will have a positive effect in my growth and that of my students. As a teacher I knew that I had a job that needed to be done; one in which I had to put forth all my effort to help each child learn.

Classroom management is something that I was not concerned with after student teaching. The math and physics students that I worked with were in my eyes "perfect". So why should this year be different? I was confident that I had what it would take to maintain a good classroom setting. When I think about that now, I find myself laughing at my predictions. When I was talking with the principal one day she told me that first-year teachers usually struggle in one of two areas, either classroom management or organization. My area was definitely classroom management.

Although I taught Basic Math without much use of the textbook, I often followed the textbook daily in Pre-Algebra. This class was very hard for me to handle because there were 26 students, who knew each other very well—a little too well. They always took longer to get focused at the beginning of class and seemed to whisper, pass

notes, and work on other homework everyday during the lesson. I decided to try something different in Pre-Algebra and the following journal entry explains what happened.

All semester Pre-Algebra asked for an activity, something not from the book so I took some time looking for an activity that we could do for a week or so that would have nothing to do with the book. I planned lessons for the coordinate grid using a grid that the students would make on the floor. It took two days to make the grid; then we started working. We started the class with labeling the quadrants and plotting the points. Everything started out great. The students were sitting along the perimeter of the room on the floor. But then I became overwhelmed; they kept talking over me, ignoring me, and acting out of control. I felt like panic was surrounding them and I didn't know what to do. I told them to sit back in their desks and I would give them what they started to demand—a book assignment. I walked to the chalkboard at the front of the room and tossed the book down on the floor and gave them a huge assignment with no further explanation. Then I walked out of the room. So much started running through my mind; I didn't know what to do. I took a deep breath, walked back into my room, and dismissed them when the bell rang . . . I overreacted and became what I never wanted to be: strict and cruel. The next day, I put fear into the eyes of these brilliant children through a pop quiz and saying that it would hurt their grade if

they didn't complete the book assignment from the night before. Why did I let my anger and hurt take over when my strength should have prevailed?

When the students started acting up and asking for a book assignment, I remember how hurt I was. Here I was, working and trying to develop an activity away from the book to teach the coordinate grid, but they did not want to do it when they asked for an activity in the first place. What did they want? Granted, this activity was a little different than how class was usually run since we did a lot more discussion, or tried to do that. My work was wasted, or at least I thought it was at that time.

This incident really made me examine what I wanted to do as a teacher, who I wanted to be, and how I was going to get there. I did not want to be someone who acted like a drill sergeant; I wanted to be relaxed and easy-going, yet still in control. When the feeling that I was out of control came over me, I started to get so confused. Where did I go wrong? Does this just come from experience? I needed to make a plan that would help me keep control without having to be someone that I am not. When class started I had to be ready and not allow one minute to pass by after that bell rang. They needed direction and so did I. At this point, I realized they could not handle any free time or opportunities where they could talk. From this point on, I started to work on structure in the classroom and following a daily pattern: warm-up exercises, reviewing the assignment, lesson or activity, and very little time to start on homework. I knew that I had a lot to learn about my development as an educator and I now know that I will

continue to learn every day I am in the classroom. I need to remember my craftsmanship will always grow and my strength will be tested every day I set foot in the classroom.

As I organized my data for this section of the thesis I started thinking about the art of teaching. Is there such a thing as reaching the state of perfection as a teacher? Will there ever be a day when I will not learn something new? This year as I have watched my colleagues and reflected on their thoughts and actions, I have come to a conclusion: a true educator always seeks professional development in all aspects of his/her career. Someone once told me that when a teacher stops growing, so do his/her students. This first year is only the beginning of my growth as a teacher. Every day I will learn something new and re-learn many things I already thought I understood. These professional daily lessons will serve as a guide along the path of my future and will determine my success in the end.

Section D. Efficacy

Miss O'Connor,

Just a little note to let you know what a good job you are doing.

Maxwell has never enjoyed math. This is the first year that he has said, "math is my favorite class."

Every once in awhile, a very special teacher will spark something in a child – and the light goes on. You have done this for Maxwell and I

can't thank you enough. Keep up the good work! (A note from a parent, December 1999)

According to Costa and Garmston (1997), efficacy is knowing that I can make a difference through my work, and being willing to take the responsibility to do so. This first year of teaching has been a roller coaster ride with efficacy: from days of powerlessness to days of feeling in control. Through the situations that I am about to describe I have learned that the matter of power is not something that is naturally given to you when you are given a classroom, but is something earned and achieved through the students' confidence in you and confidence in yourself.

As I walked into my classroom before the students arrived I felt as if I was going to be the one in control. These were merely seventh graders and I was a college graduate. It was easy to assume that things would automatically fall into place because, as many first-year teachers that I have talked to naturally assume, "we had all the answers." Not more than three weeks later in my journal I wrote the following: "I feel like a failure and want to cry." This stir of emotions was created by my struggle with classroom management, which continues to be a struggle. The one thing that I was not prepared for was a class of chatty seventh graders who wanted nothing more but to socialize rather than listen to the morning announcements or do a team building activity in homeroom. I realized quickly that things were not going to be as easy as I thought they would be; these were seventh graders, not the high school students that I was used to from student teaching. Seventh graders were still kids; they were just entering

adolescence. There was a lot more that I would have to teach them than I originally thought. I was prepared to teach the mathematics curriculum assigned to me, I was ready to be a team player and serve the school, but the thoughts of discipline somehow escaped my mind as being a real concern.

In an email to my mentor I explained that I did not understand why I could not control sixteen students for a period of twenty-one minutes; I felt as if they had no respect for me. Being a person that prides herself on earning respect and showing respect towards others, this was very hard for me; I was not used to failing in this arena. Lisa and Jason, who were “dating”, would be sitting in the corner talking. Andy and Brian argued about everything imaginable. Kara always asked to visit another homeroom. Robin, Sara, and Christine would rummage through my cabinets or my desk to look for markers to color on their notebooks. Richard seemed to have a “smart-aleck” comment for every day. The others simply did their own thing – mostly homework. I felt like I tried everything to be a good discovery advisor: made snacks, cheered during intramurals, provided games, and invited other homerooms in to do various activities together. Yet, one day Richard said, “You don’t even care about us. You never do anything to show it.” After this was said the bell rang ending the period. When the last student walked outside my classroom I put my head down on my desk and spent the beginning of my plan period crying. I kept asking myself “How could they not know that I cared?” At this time I told myself that I could not make a difference as a teacher, it just was not possible. I was not cut out for this profession.

Thirteen little words from a twelve year-old destroyed my confidence for the time being.

Throughout the year events in homeroom slowly changed. I took time to get to know each student a little bit better, whether it was welcoming them in the morning or talking to them during math or pre-algebra. I found out their interests and tried to focus on what they wanted and not so much what I wanted. I put more control in their hands to create a team, and not an environment where there was an obvious separation between a teacher and her students. As I look back at this situation from eight months ago, I laugh at myself and think that obstacle was easy to tackle. At that time Richard's harsh words hurt me to the point that I lost confidence, but I realized that many of these kids do not think before they speak. I needed time to get to know more about this age level: how they act, what they wanted, etc. Also, I had to let the kids get to know me and assure them that I was there for them and not myself – only then could I earn their respect.

This efficacy roller coaster ride only began with discipline – it had many ups and downs on a daily basis. I often walked into a day confidently thinking “the control is going to fall back in my hands” and leave wondering “is this teaching thing really for me?” I always felt as if I could have done better; I was hardly satisfied with my overall performance on any given day. I wanted to be so much more.

I wanted to be different from the other math teachers; I wanted to implement more artistic creativity and writing into the curriculum. I wanted the students to learn from the community and not the classroom. I felt that this could be my “difference”;

this is how I could impact the learning of my students – by letting them view mathematics in a new light. I wanted to be that one teacher that could “spark something mathematically” in the 130 minds I interact with each day. Throughout my preparation at the university, I always dreamed about being that one teacher that made such a huge difference in the lives of students; a teacher that I now realize would possess high efficacy. In the article “Power of Believing” by Weber and Omotani (1994) a teacher with a high sense of efficacy is described as one who is able to:

... take personal responsibility for students' learning. When students fail, these teachers examine their own performance and look for ways they might have been more helpful. The more responsible a teacher feels for making sure students learn, the more likely the teacher will be not to give up in the face of students' difficulty – and, perhaps more important, not to convey to the child that he or she is inadequate or incapable (p. 36).

This is the professional that I wanted to be: someone that would never make a child feel incapable of success. I believe that a teacher, who believes a student is incapable of success, has undoubtedly failed as an educator.

I consider myself very lucky since the middle school allowed me to be creative in my classroom as long as I met the required outcomes by the end of the academic year. I spent the little free time I had looking through books and searching for ideas. My classroom was bright; red, royal blue, emerald green, deep purple, and yellow filled

the walls. One wall, “The Math Road to Success”, was dedicated to the personal success of individual students; any work they did in class and were proud of could be placed on the wall of success, whether it was a C for some or an A for others. I tried to do what I could to make all my students feel they could be successful in my classroom, not just the A students. Sometimes a C might represent success for students and that was okay by me as long as they put forth the effort.

I felt confident in my ability to present the curriculum in a creative manner, until the first quest (a little more than a quiz, but not quite a test) in Basic Math. We were studying decimals and after a month of this topic, you could say that I was “decimal”ed out! I thought the students were ready to take this test. They weren’t. Three-fourths of my students received a D or F. I felt like I had entered the “Twilight Zone” when I looked at these scores; I thought they knew it. The homework scores looked fine; a few mistakes here and there, but overall not that bad. I did not know what happened. Did I make the test too hard? Does homework not truly show retention of daily lessons? Was I not getting through to them? What? I needed answers and I did not know where to get them.

I sat down and looked over the decimal quest they took, and answered my first question. I could have made the quest a little easier. I was still thinking in the high school frame of mind when I wrote this test. There was a big difference between those I student taught and those I now teach – a four-year difference. Some of the answers had repeating decimals, which these students were not used to, some of the word problems were just a bit confusing, and it really was too long to take in a forty-three minute class

period. I reviewed and re-tested. The second time around the scores were much better; they were what I expected to see the first time.

I realized that I had good intentions and ideas to share with my students, but there are many things that I will need to fine tune and still learn with them as I teach them. “Efficacious people . . . continue to learn how to learn” (Costa and Garmston, 1997, p.150). This year in CADRE the importance of being a forever learner has been stressed in the developmental process of becoming a master teacher. If I was to remember only one thing about this year it is that I will never stop learning. I learn something every single day in my classroom and from my colleagues, whether it is how to write a good test or how to explain something to a student who really “doesn’t get it.” My mistakes are nothing to be ashamed of – as long as I continue to learn from them. If I remember this thought I will not feel like a failure because I will continue to learn from my mistakes.

Before I knew it the dreaded parent-teacher conferences arrived. Of all aspects of teaching, this was the one that I feared most. During student teaching this fear became a reality. As my cooperating teacher introduced me to a parent of a geometry student, the parent responded, “Oh, I have heard about you!” Those words continue to ring in my head every time I meet a parent for the first time or check my voice mail while crossing my fingers and hoping there would be no messages from parents. My struggle with classroom management only added to my concern about conferences. I just wondered what the parents heard about me from their children. How did they

envision this twenty-three year old teacher, fresh out of college, overwhelmed by teaching and graduate courses?

The Friday before conferences I had all my students fill out a form listing their strengths in math and their growth areas. I added the first quarter grade and a list of the topics that were covered. I thought this would make the dreaded conferences short and painless. The parents only had five minutes with each teacher; I figured discussing this form with the parents would fill each five-minute slot.

To my surprise, conferences actually made me feel more in control than I ever felt before. Not only did each conference fly by, I never expected the compliments and encouraging words that many parents gave. The parents helped me realize that yes, I was making a difference – I was getting through somehow, someday! Parents complimented the fact that I do not use a textbook; I did not even pass one out to my Basic Math students. Others mentioned that their son or daughter said that I made math fun and easy for them to understand. The chaos that I saw in my classroom instead of discipline was not even mentioned. I looked forward to the second day of conferences and left for fall break looking forward to working with the parents that I met at conferences trying to help these children succeed.

Throughout the remainder of the school year I continued to struggle with classroom management. It was the discipline aspect of teaching that made me feel insufficient as a teacher. I knew what I wanted to do and how I wanted the classroom to run, but could not get to that desired point. The lack of my skills to maintain order in my classroom created a wall that blocked my view of the teacher that I wanted to be. I

could not be the easy-going person that I felt the classroom deserved. I wanted to create a warm environment for the students to learn in, but when I relaxed so did they. How could I draw the line without being someone who was not relaxed— someone who was strict and constantly expected silence and order, a drill sergeant? I wanted the students to be comfortable around me, someone that was easily approachable, and that they would want to go to for help. Every attempt I made to be this person backfired. The students took advantage of the environment that I tried to create. I was losing control once again. They socialized; I wanted group discussions. They copied each others work; I was aiming towards a small group effort. They wanted to use calculators: I wanted them to use their minds.

There were days when I felt so lost that I just wanted to scream, but something inside of me would not give up. I started to see it as a challenge that I would defeat. At first, I did not realize what was happening to me. Why was I so driven to overcome this obstacle? Then I realized that I was becoming stronger and more confident. It finally hit me in March when I wrote in my journal:

Something has made me start to focus on my life, what I want, and what I want to do. Lately, I have been walking into my room more optimistic . . . somewhat stronger. Finally I started taking life one day at a time and going with the punches. I can now accept that things may not go as planned from class to class, but I still have control of every situation thrown at me in the classroom and the ability to make the best of that situation. Since I have started to let the stress “roll away” I am truly

happy with where I am at in my life. I love what I do! I love the kids, even on the bad days! They always bring out a smile on the inside. The pieces are finally falling together. Somewhere through this year something got to me. My personal and professional experiences have helped me to grow into who I always wanted to be – someone who believes in herself. Maybe it is the kids like Amy who call me “mommy” or James who has the “Miss O’C Rules” website. Maybe it was my bloc team with the advice and encouragement they gave. Maybe it was the challenge of getting through each day. This might be something that I never quite figure out, but this change has helped me grow so that I can help my students grow even more.

This confidence has made me realize that I do make a difference in the lives of these seventh graders and that it is my decision what kind of impact I make: good or bad.

Another first-year teacher told me that she feels as if she has turned many students off on math this year. Her students asked her why she never smiles. I have confided in her many times this year about the struggles that I have and lately she mentioned something that really made me think, she said “Angela, you make them smile. You have them excited about math. Doesn’t that say something?” When I sit and think about her statement, I realize that she just told me where I am making a difference, where efficacy affects my growth as a teacher. At this age I believe that

many students are making a decision of whether or not they like mathematics. This is where I can make my difference – I can make more of my students enjoy mathematics and learn from their enthusiasm.

Section E. Flexibility

November 9, 1999: “What am I supposed to do? In order to change them, I have to change who I am!”

This statement is the response to one of the many days where I walked out of my classroom with a headache that was too large for words due to my ongoing battle with classroom discipline. It is a prime example of where I was unable to demonstrate flexibility as an inexperienced teacher. I have always been the type of individual that has to be organized and in control of every aspect of my education or profession. Organization is what I call my sanity. When I feel disorganized or control has changed hands, I slowly lose grasp of my sanity and lose focus until organization is once again achieved. Until this first year, I never would have thought that my life as a teacher would become a series of disorganized events, which would make sense when they were put together. This is why I now understand the need for flexibility.

“Flexibility involves the ability to step beyond yourself and look at a situation from a different perspective.” (Costa and Garmston, 1994, p. 135) I felt confident at doing this – until it was the perspective of my students that I needed to see. It has always been easy for me to offer words of wisdom to family and friends or be the

mediator in a heated situation. When I spent time with friends or family, I felt that I was also very easy going since a change in plans never really bothered me that much. Nonetheless, I struggled when confronted with a class full of twelve and thirteen year olds and when I attended team meetings. I felt as if I could not be the person that I have always been and that I needed to become someone else in order to survive this year.

At the beginning of the school year in a meeting with the other seventh grade math teachers, we discussed staying together with the math curriculum. By doing this we felt that we could benefit from writing our lesson plans together and sharing our ideas for various activities. It would also give me more support, support these teachers did not have, as a new teacher in the building. They went far out of their way to help me adjust to my new environment.

When I would work with my team I did not feel this relaxed or confident about planning events or curriculum; the support just did not seem to be there. I often felt as if nothing was ever planned for our daily meetings and that everything happened at the spur of the moment. During second quarter my team wanted to work on a thematic unit and we discussed the topic of population. My section of the thematic unit would be on statistics. As a class we would study graphs and charts, how to analyze them, then collect information and produce a graph or chart to share the collected information. In the team meeting we decided on a starting date and felt as if the remainder of the planning would be on the individual teacher for their assigned section. We decided to update each other as our individual planning progressed. When I brought this up to the other math teachers they decided to continue with the order from last year and would do

statistics later on in the year, but encouraged me to pursue this unit and share my ideas upon its completion. They offered some ideas from the previous year and I felt as if I was ready to go. I appreciated that these other teachers were so helpful since I was the one straying from the original plans.

I thought everything for the unit was set and ready to roll until a team meeting two weeks later. My frustration was voiced in an email to my mentor:

Well, things were going good. I was all set and planned for my unit on stats for our team thematic unit and then this . . .

I had to stray from the math team in order to do this unit because they are working on number theory and are not doing stats until third quarter. Well, two teachers from my team did not get the books for the thematic unit so they asked if we could do the unit later on! They want me to continue with stats and then review it again in January! This really frustrates me because I would have to take more time for a topic than is really needed. I want to propose a new topic for our team so that I do not have to repeat an entire unit. Is this reasonable? Do you think that my team would listen to me, a first-year teacher? I just hate wasting time that I could be using to introduce a new topic.

“The flexible teacher is a hypothesis maker who looks upon each experience as a learning opportunity.” (Costa and Garmston, 1994, p. 136) Even though my initial reaction was one of anger and frustration where the desire to be flexible was slowly

being erased from my mind, I looked upon this situation as a learning experience. I knew that there were going to be times when I could give in to someone else's suggestions and ideas, but I also realized that I need to stand up for my own opinions. Flexibility should not only have to come from me; my team should be flexible also. Instead of being the timid first-year teacher I decided to stand up for myself and suggest that we do something that would not waste valuable learning time in my classroom. At the next meeting I proposed not doing our planned thematic unit but waiting until spring and planning a new unit. We brainstormed some ideas and were all satisfied with this decision. This situation increased my confidence when interacting with my team so I would not be intimidated by more experienced teachers. It taught me that flexibility is something that should always be considered when working on a team, but there are some situations where I should be assertive.

As the year progressed and team planning started an uphill climb, I still struggled with classroom management. I could not understand why things would not go as planned in my thin red plan book which consisted of carefully written objectives, activities, and assignments. Throughout the frustration I experienced on a daily basis, I learned to take one day at a time and go with the flow. "Flexible people can live with doubt because they have great capacity to look upon life as a series of problems to be solved. They enjoy problem solving because it's a challenge" (Costa and Garmston, 1994, p. 136). This statement is the perfect explanation of how I started each day – "as a series of problems to be solved." I realized that when I would relax, know what I wanted to cover that day, and plan two or three possible activities it was easier to adjust

to the mood of my students. As I took a deep breath before I started each class period, confidence slowly started to encompass my teaching and it was evident to my colleagues and mentors.

In Pre-Algebra we were discussing different methods of solving equations. One approach they struggled with was multiplying by the reciprocal of a number. It got to a point where several students would rather work with fractions than use this easier method. I searched for a problem that would just be “impossible”, as they would see it, for them to solve if they chose to use fractions. I wanted something that simply could not be solved using methods known to them so I made sure there was an x^2 in it; this would not only confuse them, but also make them not want to work with fractions since it would have an unfamiliar variable in it. All I planned for this lesson was this one problem and to take a deep breath before they fired off their usual 100 questions.

It worked! This was an unbelievable class, even my mentor was asking questions. As my journal from January 10 states,

I felt like they were totally immersed in the mathematics. We touched on multiplying by the reciprocal, the distributive property, simplifying terms, and various ways that different people view problems. I was so energized by the mathematics that was kicking in all our minds. Question after question, light bulbs going off here and there . . . I just can't describe it!"

This day proved to me that I did not have to change who I was to be an effective teacher; I just needed to adjust to the curiosity of my students. It was okay to be a little loud and unruly in class. We could have fun. It is still possible to learn in a room that appears to be in total chaos from the outside. I just needed to relax and take a second look at what might encourage a seventh grader to pay attention in math class; I had to think like one of my students to develop lessons and activities that could maintain their interest.

As I reflect back upon this past school year, I think my biggest lesson has been to take each day as it comes and roll with the punches – that is the way to keep my sanity. Even though in the past I have always viewed myself as being flexible with various situations I was not prepared to be flexible with my classroom and teammates. By easing up a little more each day I felt a little less stress as the year ended. Even though I had to learn to give up part of my need for control and organization in order to be more flexible, it worked. I was more comfortable in my classroom and was able to be relaxed like I wanted to be. I did not have to change, just adjust—be flexible. With the kids there is so much that has to be considered. The classroom is a place that holds so many diverse needs. One perspective, my perspective, does not suit them all.

Section F. Interdependence

While I was finishing my chores on my last day in the building for the summer, a colleague stopped me to say his final goodbye since he would be teaching at a different school next year. The thought of him no longer being a part of the middle

school staff has left me at a loss for words about the upcoming school year. He has not only been a wonderful colleague and friend, but my support system for this past year. There were numerous times when he seemed to be the only person that I could trust with how I really felt about situations with the team, students, and other added stresses throughout the year. Before he left he said, "I never would have gotten through the year without your support and friendship. You were the only one in the building that I could trust." His kind words not only showed the significance of our professional relationship this past year, but they made me think about the impact the school environment has on a first-year teacher. I could remember many incidents this semester where something happened that frustrated one of us and made us doubt the contributions we could make to this profession. Too many times this year we felt all alone; I always thought that in a school setting there would be many people to turn to for advice. Unfortunately, that did not come as easily as it should have for my colleague and myself.

"Interdependence means knowing that we will benefit from participating in, contributing to, and receiving from professional relationships; and being willing to create and change relationships to benefit our work" (Costa and Garmston, 1997, p. 152). Throughout my education, especially at the university level, I have always been a part of a team. Through my Greek affiliation at the university I learned more about myself, who I wanted to be, and the impact the community could have on my life. I threw myself into campus involvement and gained an immeasurable amount of inner strength from these experiences. I served on the executive council for various campus organizations and was the president for two of them, which helped mold me into the

leader that I wanted to be. Throughout these experiences I was highly rewarded for my work and dedication; there are certificates hanging all around my room. I took all these experiences, good and bad, and learned from them.

My leadership experiences helped me to overcome my shyness around new people and illustrated how much others can teach me. I learned to trust others; I used to be afraid of always being hurt so I hid in the shadow of another leader. Participation on these different teams has sparked a new and unforeseen growth in my personal development. During these experiences, I have not only strengthened a weak self-esteem but gained valuable resources that will only construct a path for continuous professional growth.

Interdependence is also compared to a “two-way street; one that gives help and receives help, one that influences and is influenced”. (Costa and Garmston, 1994, p. 141) The demeanor of this “two-way” street is one that has the power to affect the attitude of all drivers on this street. This year I have learned the importance of developing a positive and productive relationship with administration, colleagues, parents, and students; the lessons that I have learned have all been beneficial to my growth, while not always pleasant to my emotional well-being.

As an educator I feel that it is my obligation to each of my students and their parents to serve as a coordinator for each individual student’s success. The following statement is engraved in my mind from the number of times I have called home to say it to parents: “I would like for us to work together to help your student to succeed.”

There were two phone calls made during second quarter that had very different responses to this statement.

The first was about a student from Pre-Algebra, Caleb. After a few weeks into second quarter, I noticed that his scores seemed to be going down with no hope of quickly changing direction. He stopped asking for help and all of a sudden became very quiet in class. First quarter, Caleb was a discipline problem since he would always talk, fidget in his desk, and distract those around him. Thus, in a way I was relieved with this new “calmness” about him, but it did scare me. When I spoke with his mom I told her of my concern and of course said my famous line, which I stated earlier. I made sure that she understood this was simply a call of concern and not one of frustration. During our conversation I learned that Pre-Algebra was his hardest class and this was the first time he struggled with mathematics. Also, she informed me that Caleb lacks self-confidence and tends to “shutdown” when confronted with failure. While both of these statements surprised me, they also gave me insight that I need to be taking more initiative with this student and his learning. This was a case where I felt that I needed to make more of an effort to approach him and ask if he had any questions. I know that this was a weakness of mine; from the beginning of the year I have felt that our world is one of too many kids, too little time. His mom was going to talk to him that night and keep in touch with me about his progress. At the end of this phone call I felt confident Caleb would soon be on an uphill climb with our support.

Not to my surprise, Caleb asked to speak with me privately the next day. I figured he would since I knew his mom would be talking to him, but I was shocked by

what he said. He wanted to thank me for being concerned about him and how he was doing in class; he said that it “meant a lot” to him. It meant a lot to him? Why? Even though I appreciated this because I wanted students to know that I cared about them, it still made me think. Was it that he doubted if teachers really cared? Maybe I was sending the wrong signal to him since most of my time was spent trying to control his behavior instead of recognizing his current struggle and his potential to do better. From this point on, Caleb was no longer a problem in class and he came in for help whenever he could, one time even staying until five at night to work. His growth in Pre-Algebra over the next year was due to the “two-way street” connection between school and home.

The second phone call had a disturbing outcome – one that I never actually thought happened to a teacher. Shawn was a Basic Math student, who from the beginning of the year failed at everything he did. I wish I could say he tried, but he just did not seem to care about his schoolwork. When I called his mom at work one morning I gave her that famous line of mine; this was her response, “He has never done very well in school.” I felt like she expected his failure and simply did not care. Did she not believe that he was capable of change? What was I supposed to do if I did not have her support? I thought parents like this were only parts of “made for T.V.” movies. This lack of parental support was a concern for every teacher on our team; we were at a loss of words for this student. Another teacher gave up on him by the end of the year, but I just could not do it. Many times I asked myself “why not?” and could not answer my own question.

Now, I know the answer to my question. In my yearbook Shawn wrote “thank you for being so nice to me.” I could not give up because I cared and I knew that he needed someone who did. Shawn received someone who cared and in return I grew as a teacher; he left me with the lesson that a teacher cannot give up because that teacher may be the last hope for some individuals.

Throughout this year I felt as if I was the passenger on a fast and breath-taking roller coaster ride; one where you never knew when the hills and valleys were coming close. Why did I feel this way? The students? The curriculum? This fearful ride came mostly from interactions with colleagues at the middle school.

I was not at the middle school a month until I felt a lack of support towards my graduate career. In the bookstore one day after school, another teacher, out of the blue, told me that the education association did not support CADRE and did not want a CADRE teacher in this building. They thought it put unnecessary stress on a first-year teacher. I took this as a personal attack because I could not have imagined the beginning of my professional career without CADRE. It also made me wonder who the “they” were and what did they really know anyway? I knew that last year my school had a bad experience with a CADRE teacher quitting on the first day of school. Did these bad feelings carry over to me? Did they already make a judgment on my work ethic and dedication before they even knew who I was? Even though this confused and hurt me, I wanted to prove them wrong. This ignorant comment started a fire inside of me; a fire of determination to make “them” realize their mistakes.

This was not the only case where I felt unwanted in my “new home”. I felt like the new kid at school; the one who did not have any friends and had no clue where to start looking. I was totally confused; was I doing something wrong here? During student teaching I not only had a wonderfully supportive cooperating teacher and math department to work with who offered many opportunities for growth and listened to my ideas, but two other math student teachers to speak with. I did not see why it should be any different here, but where was the support?

During that same first month teachers on my bloc convinced me that they had split personalities. I think about those cliques in high school; the ones that you hated but would have loved to belong to. I remember those few “popular” kids that would ask for help in class, but exclude you from other activities. This described my team; I wanted to profit from the team and use their experiences as a resource to help my professional growth; this is how I changed so much throughout my college experience. However, I could not help but to detest a few of the members for the way they acted at times. There was a huge separation among our team. This journal entry describes how I felt.

. . . Professional relations seem so wishy-washy right now. I guess they are the ‘roller coaster’ ups and downs of life. After school one team member came in to my room and asked me to add some writing to our bloc banner design. She told me that I was so awesome! I know that she appreciates the extra things I do for the bloc, but I have such a hard time reading her. How does she truly feel about me? Two other teammates

are great. I respect and admire their help, ideas, and commitment to education! When a colleague told me today that a team member noticed another new teacher and I pulling away, it made me think that maybe there is potential to pull a team, a good team, together. Someone noticed a change. Now what will happen to create, trigger, a change in the positive direction?

Throughout the first few months I did not know what to think, who to trust, and what to do about this stir of emotions. Another teacher on my bloc and I stood together and tried to get by one day at a time by venting to each other and sharing those first year teaching experiences that drove us to ask the question “Are we really cut out for this?”

After the meetings, we usually went into another classroom to talk until our next class instead of spending more unwanted time with our team. One day when he was gone I decided to stick it out and see what would happen if I stayed in there for a while longer. Then the topic came up: someone finally asked me why did the other teacher and I leave immediately after meetings? I was a little scared of confrontation at this time, but if I was going to say anything it had to be now. Very calmly and quietly I explained that we felt very unwelcome from the start. No one went out of his/her way to speak to us. We did not feel as if our opinions often mattered. It seemed that sarcasm was always shot in our direction. So many times our ideas were shot down, ignored, or eyes would simply be rolled. Sometimes team members passed me in the hall and did not even acknowledge my presence. Then surprisingly, I heard an apology.

This teacher explained that she actually did really like us and that she felt comfortable using her sarcasm around us; she did not think we would take it seriously at all.

At first I did not believe her, I do not think that I really wanted to. I had doubt in the possibility of serving on a good team this year; I figured that my university experience was simply a blur of the reality. Everything that happened amongst our team during those first few months often made me feel inferior and unwanted; it also made me not want to return next year. Before this explanation I did not think there was any hope so I gave up. I believe that it was at this moment of the conversation our relationship started to change. Throughout the rest of the year, we became close friends. She offered advice, listened to my opinions, invited me to teachers' night out, and supported me throughout the remainder of the year.

Even though things worked out with one colleague they never did for another. He became the complete opposite of my expectations for a teacher. I dreaded him walking into my room. He would come in and talk to the students while I was teaching; he became my biggest discipline problem in eighth period. One member proved me wrong, but I was not about to have hope for this situation. I lost all respect for this individual. Amazingly, I learned a lesson here; I knew what I did not want to be, and this drove me to be a stronger teacher. Looking back, I remember making mental notes about what not to do and how not to act. When I found out that this individual was going to be leaving, a sigh of relief came out. I was rejoicing because I would no longer have to deal with any aspect of what I could not stand. It would be all gone!

There are going to be times when I will have to suck it in, put a smile on my face, and pretend everything is just fine. There are going to be times in the future where I will sit on a team that just does not click. When I think about what the future might bring I start thinking about how I can change it. How can my past experiences impact my future? I learned what I wanted, what works for me and for others, how to compromise and come together in agreement. Now what I need to remember is how I felt that first semester and to do what I can to prevent it from happening again.

It always seemed that once things started to improve in one aspect of life, something else always crept up and surprised me. So many feelings entered and left my head every day: success, confidence, joy, pain, isolation, fear, hatred, and betrayal. From day to day I did not know what to expect, but I never would have expected to feel betrayal from my colleagues.

I do not exactly know the date when the parents of a Pre-Algebra student called my supervisor and requested a parent meeting without my attendance. They were concerned about their daughter and how she was uncomfortable in my classroom since I struggled with maintaining a well-disciplined environment. One day as I was walking out of the building I noticed there was a meeting in the principal's office and in there was Catherine, her parents, and colleagues from my team. For some reason I had this disturbing feeling that the meeting had to deal with me. Earlier in the week I became really upset in Pre-Algebra, threw the book on the floor, and the next day gave them a pop quiz over the material that I was trying to cover. I knew this incident scared a few students because they have never seen me so upset and my frustration carried over into

the next day. So I made sure I apologized for my actions and offered an explanation to my students. How they saw me and what they thought of me really mattered. I did not want this one incident, where I lost my cool, to change their perception of me for the rest of the year.

Once more I glanced at the meeting, took a deep breath, and left. On my way home I convinced myself that if it was about me they would have asked me to attend so we could work everything out together – I was wrong! The next day my supervisor told me that he needed to talk to me when I had time. During lunch I walked into his office and he shut the door. It was then I learned the meeting was about me. I cannot remember exactly what he said because all I could think of is why was I not informed of this meeting prior to its occurrence? I just did not get it! Why did the parents not contact me first? Why would my colleagues keep this from me? When was it scheduled and how long did they keep it from me? How was I supposed to trust them now?

I walked out of the office in a state of shock. It was like I was in a daze; this could not have happened. They would have told me, wouldn't they? The rest of the day just seemed to disappear and at 3:18 pm when the bell rang tears just streamed down my face. I did not have the desire to face my team or my Pre-Algebra class again and that night told myself I was not going to go back. I did not want to walk back into an environment where I would constantly have to watch my back. I knew I was wrong and will be the first to admit my mistakes. I did not know who I could trust anymore so I did not want to try to trust anyone at all.

At home that night one of my thesis comrades called and to her surprise got more than she bargained for during that phone call. I was just hysterical and really needed someone not involved with my school to talk to about this whole thing. As she listened I started to calm down, and her supportive words made me think about how I could possibly benefit from this mess. There was a lesson to be learned here somewhere and I needed to find it.

After a lot of thought over the weekend, I found the strength to return and face my team Monday morning. During my plan period one of my team members who sat in on the meeting stopped by to see how I was doing, but the meeting was not mentioned. As she was about ready to leave, I stopped her and asked why I was not told about the meeting with Catherine. She gave me this look of amazement and replied, “you did not know about it?” We talked about how I felt; this team member was one of the few who seemed supportive of me from the very beginning. I told her that I was considering not coming back today and I felt betrayed by the team. She apologized and then admitted that she wondered why I was not there when they met.

The morning classes cheered me up and reminded me why I loved teaching, but I dreaded seventh period Pre-Algebra. I felt like I was walking on a tight rope; one wrong move and it would be over. One o’clock came and once again they started to act up. I decided to put some of the responsibility back on the students for their actions. Some of the Pre-Algebra students in my discovery once told me that I needed to just crack down on the few that act up. This journal entry explains what I did.

Twenty Pre-Algebra students were held after school for not following instructions during class. When they all arrived I said this: "You tell me that I need to crack down on my discipline and wonder why I have so much trouble. Well look around and tell me what I am supposed to do when this many of you are out of control!" I left it at that.

During the next week, I found the lesson that I was supposed to learn. There are those who are willing to help; they may be a supervisor, a friend, a teammate, parents, or students. Their approach may not be as tactful as it should be, but most of the time intentions will be good. I need to realize that people are mere humans and tend to react before they think about what really should be done or how a situation should properly be handled. I need to listen, accept feedback and see how it fits into what I already do, and rationalize before I overreact. Everyone is responsible for his/her actions; sometimes we just need to think before we act.

Now the Math department is another story. I considered myself very lucky to be able to work with the other two seventh grade math teachers. They were such lifesavers throughout the year. Unfortunately, this attitude did not remain when the entire department tried to work together. We were not a team; instead it reminded me of enemies going to war--seventh grade versus eighth grade. You could cut the tension that filled the room during department meeting. I felt like there was a lot going on that I did not even know about or care to even know. In my journal I wrote,

A colleague mentioned that she hoped the gift I placed in her mailbox was a peace offering. What is going on? The curiosity is killing me! I know that the seventh grade department is under scrutiny, but I cannot help to think that maybe I am doing something wrong. There is no reason why I should feel this way; I just do—a lack of self-confidence at times does this to me. I will feel much better once my mentor day arrives so I can work on curriculum and set out what needs to be done to meet the outcomes for this year. I hate seeing other people stressed, especially when they are a wonderful teacher and mentor. Why can't things just be okay? What is our next department meeting going to be like? We never seem to agree on things at meetings and always leave something for next time. I have heard from other teachers that something is going on, but I do not know what it is. I feel like there is a lot of back stabbing going on between grades. Are things going to continue to get worse? What is going to happen and who is going to have to change?

This tension not only frustrated many of the teachers in our department, but caused me to doubt what I was doing. I often felt like I was contributing to the problem since I was a first year teacher. Was I doing something wrong? Was I not succeeding in my classroom? I now know that what was going on had absolutely no direct connection to my classroom, but at that time I felt it did. Another math teacher walked into my classroom to observe and took notes on my teaching. She even came in and corrected a

mistake I made while there were students in my classroom. I was intimidated by her presence in the room and could not help but feel that she thought I was stunting the growth of my students.

At the end of the first semester, the math team attended an all day meeting with other district math teachers and administration. This meeting was to help us decide what should be taught in each grade and how we could start working together to meet our goal. The outcome of this meeting left me with a confused feeling: I felt like one grade needed to teach all concepts while the other grade reviews them. Was that fair? Was it possible to teach all the concepts so the students could master each one? Would it all fit into one year? I was not sure what to think about the whole situation, but at least one thing was different after the meeting. Everyone seemed to get along a little better. Members of the team were able to be civil and respectfully listen to everyone's opinions. Maybe this even caused us to pull together as a team.

Towards the end of the year I started to think about what I learned from others and from my experiences with teams and my students. I looked at what I considered to be the qualities of a "master teacher" for our school environment and wondered what I would need to do to gain those qualities and continue to grow. My last observation of the year had a slight surprise. I was used to one other person being in my room, but not three. When I was told who would be observing me I was a little worried. Would I do okay? Would my teaching be what they wanted? Since I did not yet have a contract with my district I was especially nervous: was the observation the determining factor for that contract?

When they walked into the room and sat down, the tension in my shoulders and neck started to build, but I told myself I can do this. I had a great hands-on activity planned. This was a good group of students. I could do it! Immediately after the observation we met and discussed what they saw, what they thought, and areas that I felt I could work on. I thoroughly enjoyed this meeting; I was getting a lot of good advice and I was inspired to continue teaching. When I walked out of the office I heard a comment that still floats in my mind from time to time. They were surprised at how much I liked feedback and that I asked for it. Why wouldn't I? It is only there to help me to grow in my profession and if I expect my students to accept my feedback I need to do the same.

The next day another teacher had an observation and conference. She was upset and I hated seeing her like that; the kids loved her and I had so much respect for her contributions not only in the classroom, but everything she does. I started to think about what a school really wants out of a teacher. What are the expectations they hold for us? I vented my frustrations in my journal and wrote:

It seems like it is all about what the school wants you to do. What can you do for them? Whether it is teaching to their standards, meeting their objectives, or what you can lead for them. Seeing a colleague so upset that she may not be a good teacher since she doesn't teach a certain way and knowing that another is leaving and could care less what happens now at the middle school scares me – will I ever get like that? When I was told today that there was a contract awaiting me, but with what is going on with so many

individuals leaving from my team, it was a concern that I might not accept it made me wonder: what exactly is going on? Does the district care as much for its teachers as they expect their teachers to care about the students? What is it that they really want from me: a follower to the district way or a leader using my talents to help my kids?

I did accept my contract and made a promise to myself as I signed my name. The promise was to always be myself and follow my beliefs while striving to learn all that I could from my past experiences, administration, teammates, parents, students, friends, and whatever else may cross my path. Throughout this year I have learned that interdependence is something that not only affects one's personal attitude but also his/her professional attitude. Without the support of others it is hard to move ahead on your own.

Section G. Summary

As I reflect on my first year of teaching, I can best compare it to a mathematical problem. I remember all the story problems that were assigned to me throughout my academic career. At first I dreaded them, I was always overwhelmed by all the information given to me. After I read the problem, I started working on a plan of attack. How could I defeat this challenge before my eyes? Sometimes it took awhile to determine a method that I thought might work and sometimes I felt lost so I asked for help. Once a method was selected I would start to use what I knew to apply my chosen

strategy. When an answer was finally found, it was a must to always check over my work. If it did not make sense or was obviously wrong I would select another strategy and start over. Throughout my education I learned that there was never one easy way to solve a problem, nor was there one correct route to the answer. All that mattered is that I continued to work until I got there.

When I walked into my classroom to get ready for the first day of school, there were piles of books and supplies scattered everywhere. It felt like chaos surrounded me and I did not even know where to begin. Once I took a deep breath, I decided that I needed to organize what I had to work with and throw away what was of no use to me. This plan of attack was not an easy endeavor. Often the need for a deep breath to calm my nerves was necessary to get me through the struggles with planning lessons, classroom discipline, relations with my colleagues, and many other stresses that seemed to cross my path on a daily basis. Sometimes I could handle these issues on my own, but mostly I needed help from my two mentors, team members, thesis partners, or other colleagues. When a plan was decided upon I would use what I have learned through my undergraduate and graduate work, as well as, previous personal experiences to tackle the situation. I would always be very careful to thoroughly think about my solution before I continued. There were times when I presented a lesson where students were the ones double checking my work and correcting my mistakes. Whenever this happened it was a learning experience for both my students and myself; we would work together to devise another plan. In situations that did not involve lessons, colleagues would provide feedback to help lead me down a more successful path.

Before I knew the curriculum I would be teaching I saw myself growing as a mathematician as I directed that same growth in my students. While I taught my students mathematics, I felt as if my education was suffering in this area. I was bored; this content was simply not challenging. There was no need for me to even review a topic before it was discussed in class. What I did learn is how to have an open mind to the world of mathematics—I had one hundred and thirty students with one hundred and thirty different perspectives. My students taught me how to see problems in new ways; they explained mathematics using their own creative strategies. I was intrigued by the way they thought and cannot thank them enough for what they taught me this past year.

My growth as a teacher was tremendous this year. Everyday I did not know what to expect; everything was always so new. Many times I cried when I failed and thought I was not cut out for teaching. I would get so frustrated but I always found something to motivate me to get over all those hurdles. As I continue my career in education, I am challenging myself to further examine what I do in and outside of the classroom and reflect on my actions. By doing this I will enhance my students growth as mathematicians while they enhance my growth as a teacher.

CHAPTER IV

Conclusion

Section A. Introduction

Throughout my first year of teaching I experienced many “critical incidents” that I believe have greatly influenced my effectiveness as an educator. Participants in the CADRE program share the commonality of being a first-year teacher taking on an incredible workload. Teachers in this graduate program specialize in various fields of education. The cohort of new teachers has proven to be an invaluable resource. Although my mentors played an important role in my survival during this past year, the collaboration with two other first-year mathematics teachers was a more valuable source of encouragement and support. As Bernard (1999) described, the members the First-Footsteps trilogy became a necessary support system. I relied on the other two members of the mathematics trio for encouragement during difficult times, to share ideas, and offer suggestions. Present among my trio was a level of comfort and familiarity that allowed each of us to honestly share questions and concerns.

The purpose of my study was to collaborate with other first-year mathematics teachers to examine personal and professional growth during the first year of teaching mathematics. Together we reviewed various pieces of literature recommended by members of our committee. Our discussions regarding this literature and experiences created a comfortable learning environment for each member. A strong trust was built among members of the trio during our conversations with each other; these professional

relationships allowed us to become more open about our emotions since intimidation and fear seemed to diminish as our relationships strengthened. During the data collection stage, our trio continuously met to discuss the happenings in and outside each of our classrooms. We used this time to express joys and concerns, failures and successes, and share ideas that another teacher might find useful. As we shared these experiences we learned more about ourselves and contributed to the growth of each other.

This last chapter allowed further examination of where I was when I started, how I currently view myself, and where I see myself in the future by answering the research question: how did critical incidents impact my interactions with the students within my individual educational environment and influence my growth as an educator and a learner of mathematics?

During the course of the year, I used reflective journaling as the primary source of data collection. By reflecting I analyzed my emotions, actions, what I learned, and how I have changed. Journal entries were based on interactions and personal reactions to curriculum, classroom discipline, students, colleagues, administration, parents, as well as, significant events in the school. My background was also an important factor in the direction of each reflection and molded the growth that was achieved. As I compared my journal entries to each other I found that there was not a simple set format for each entry. Each entry is as different as day and night, but each one does exhibit a commonality: they all illustrate how critical incidents have affected my personal and professional growth.

Section B. Response to Research Question

“If we knew what it was we were doing, it would not be called research, would it?”

--Albert Einstein (Maleki, 2000)

As I have finally reached Chapter Four, I realized that the effort in this thesis resulted in a unique research product. Both mathematics teachers that I collaborated with throughout the school year had a great impact on my teaching experiences since they helped me to take into account various perspectives. As we have conducted similar studies, we realize that typical research audiences may question the validity of our individual studies to act as vital research in the traditional sense. However, we would urge those with questions to remember that research as a science is ultimately a process approach to gaining new information. We must be careful not to exclude non-traditional approaches as viable ways to increase the educational knowledge base simply because they are less structured or formulaic than those most commonly seen. Although this type of research is non-traditional in the mathematical sense, every effort has been made to maintain the integrity of this product as a scientific endeavor.

As a prologue to the free-verse explanation and reflection of data presented in Chapter Three, it is necessary to also provide a contextual framework for this "sociological reflection" branch of research science. What I refer to as "data" in Chapter Three is essentially a combination of feelings and experiences stemming from a series of critical incidents. Acting as a vulnerable observer has allowed me to see myself as part of the school and to analyze myself within this milieu. The difficulty I

experienced in the data collection centered on my ability to use these critical incidents to answer the research questions posed in Chapter One. This was partly because "critical incidents" were not bound by time or location, and partly because the operational definition of "critical incident" at times varied within me. There were many times when a situation seemed critical but ultimately paled in comparison to some small potentially unrecognizable event that literally changed who I am.

Attempting to quantify and articulate my critical incidents through sociological reflection and by acting as a vulnerable observer has been frustrating. There were times when I would write in my journal daily and times when I did not write anything for a few weeks in a row. Brent, Jodie, and I met and talked regularly to compare ideas and experiences; together, we read books and journals. Yet in all this, the science of our individual approach seemed incomplete because we literally lack the ability to answer a confined problem comparing growth as an educator to growth as a mathematician. The type of growth to which we were referring, we assumed would reveal itself in time, and it did, but not in the way any of us expected.

To answer the research question, I find it most appropriate to describe why the question was inappropriate in the first place. As a mathematician, I tend to approach communication and even experiences in a very quantifiable and logical way similar to other members of the trio. Measuring growth initially seemed attainable, ostensibly through a structured analysis of documentation collected during the year of teaching. However, during the process of our individual research, we became much more sensitive to the emotions and feelings related to teaching (things innately very

unmathematical), and thus we were taken in directions other than those that might have allowed us to construct a quantifiable answer to our research problem.

In a way, this answer represents a measurable transition from clinical or mathematical explanations of the world to a more inspired and expanded view. In fact I now know that the research questions were uninteresting, and I know why. In my original efforts to define a problem statement that was attainable, I failed because I was not experienced enough using the vulnerable observer technique to know what the data might ultimately yield. This is not an excuse for the sake of finishing a thesis but rather an answer to the research questions in the form of an explanation of a new level of understanding that I have gained throughout this process.

A Free-Verse Response to the Research Questions

There is no easy way to explain what has happened to me throughout this past year. I started to work on my graduate degree and started teaching both at the same time. As part of the experience I learned more about myself than I really wanted to know, my strengths and weaknesses, but I have also grown in a way that opens my mind to the greater things in life. Much time this year was spent living in frustration of not knowing what to do, having too much to do, and still wanting to do so much more. There is a lot this year that still does not make sense to me and to be honest, I do not know if it ever will. When I allowed myself to be vulnerable, an unlocked door opened up that created an emotional chaos inside of me. I went from one day being hysterical and wanting to quit teaching because I just knew I was not cut out for it to another day

of knowing that this is how I wanted to spend my life because of how my students made me feel.

At the beginning of this study our trio set out to answer a question that I now realize cannot be answered. How did critical incidents impact our interactions with the students within our individual educational environments and influence our growth as an educator and a learner of mathematics? If I had known then what I know now I would have seen the humor in such a question. How do you know in what direction you are going to grow? Can you possibly control the environment around you, even if you tried, so that your growth will be a smooth uphill climb reaching your planned destination?

My journal is evidence that this is not possible. When I thought one thing might happen, something else always did. I could not plan or predict my future; I could not even plan the next few minutes of my day. So many things bombarded me at once that I felt as if I had nowhere to turn until it all just stopped. The only out that I had throughout the year were the thoughts and words I could put into my journal and the discussions that I would have with my two cohorts. These thoughts that would just jump into my head one minute and bounce somewhere else the next minute added to my frustration because I wanted control. I needed complete control of my life and it seemed impossible to get it.

Now that I look back, this complete loss of control and added unpredictability of my life has triggered growth. I learned so much about why I chose education, which I thought I knew when I was working toward my bachelor's degree. At first all I really

wanted to do with my life is help people—to impact other people’s lives in some way, shape, or form. That was it and in a way I must admit that I thought it would be an easy task. This year taught me that I could have an impact on other people’s lives just by being a part of their life, not necessarily by being an educator. Many different people impacted my life this year so why should it be different for anyone else. These learning experiences took various forms: good and bad, but all of them really made me think about what I want out of life.

What is it that I really do want out of my life? I want to grow and never stop growing. I want to see new things and learn all about them. I want to meet new people much unlike myself and see what their experiences can teach me. Learning has no limitations so why should I limit myself.

If I take these thoughts and direct them back to the research question I realize that I do not want to answer this question even if I could. Why would I want to direct and contain all my growth into a specific area? I would miss out on so many things. I now believe that a person’s learning cannot be contained into a little box, even into a journal. Throughout life you are constantly growing, the hard part is if you actually realize that it is occurring.

We wanted to start the examination of our growth through critical incidents. Throughout the data collection process it was hard to define situations as a critical incident or not. I always search for immediate answers, maybe that is why I like mathematics; there are rules and procedures to follow that can quickly get me to the answer that I want. Learning through vulnerability does not. There was no way to

immediately know how anything would affect me. There would be days when I would be so upset from something that happened that day in my classroom or when I would walk in my door at night with the satisfaction of “yes, I did it!” All these little events had an impact on how I viewed my successes and failures as an educator. Often, it would seem like my emotions would just continue to build. It was never one little thing but a series of events that would finally let these emotions be released and allow me to learn from my experiences. There would just be times where I had that “ah-ha” feeling burst inside I me; this is were I started to learn about my growth as a person and a professional.

The potential that I found in myself this year amazes me and I think it will for a long time. No college professor or course can put into words the rewards of being an educator—the rewards for the students you interact with and for yourself. The students that I had the privilege to work with this year changed me more that I can ever explain. They helped me find confidence in myself that I have not felt in a long time. I am at a loss of words now trying to even attempt to explain what they mean to me. I have always been a person who has lived life not being satisfied with what I do; I always thought that I could have done better. I have always been self-conscious and disappointed in myself. I continued to push myself until I could not take the pressure anymore. Many times I have spent evenings sitting in my room crying because I have felt like a failure and a disappointment to my family and friends. My students never made me feel this way; as I became closer to them, my mornings would light up just knowing that they would be there and I could spend time helping them—teaching them.

They brought out the person in me that has been hidden away for so long: a person that I was afraid to introduce to the world because I feared rejection. In my classroom, our classroom, I was comfortable and had nothing to fear because these students accepted my failures along with my successes. Even while I struggled and made many, many mistakes they still accepted me for who I was and for the fact that I am only human. It is hard for me to believe that twelve and thirteen year olds motivated me to be strong enough to be the person I truly am when they are just now starting to go through changes and finding themselves.

When I started teaching I did not realize all that I could share with my students. I was originally focused on teaching mathematics and trying to teach it well. Much of my time at the beginning of the year was spent looking at ways to present material, activities to try, and reading advice from experienced teachers in journals, magazines, and newsletters. I read through and thought about district, state, and the draft of the new national standards. Sometimes I felt like it was information overload, but I continued to look for ways to be more effective in the classroom. After awhile I started to think about what was shaping my learning and where it came from.

When I ask myself how can I help my students, I consider what had a great impact on my growth: I can teach them by what I have already learned and experienced. Sometimes it concerned mathematics but most of the time it did not. If I think back and look at what my students really needed from me it was more than a better understanding of mathematics; it was someone to connect with, to latch on to, and a role model. When I talked to parents on the phone or at conferences, conversation would be directed

towards a child's progress in class, but at times it would sway to how this child viewed me as a person. One parent mentioned that her son looked up to me because all that I was trying to juggle: teaching, graduate school, thesis. She said that this made him want to keep working when he started to get tired—I was a role model. Another parent told me that her daughter was interested in math and science and believed that she could get through the classes because I did—she looked at me for inspiration. I connected with another student because she has speech problem that I once had; we both struggled pronouncing double r's, double s's, double l's, the ch's, and the sh's. I knew that she was embarrassed at times when she spoke so I told her that she can get through it and things will eventually get better—they did for me. These are the things that my students will probably remember me for and I believe this because it is how I earned their respect in the first place; I taught them through my experience. They learned from my actions and my words.

Knowing that I must still teach mathematics, I need to find some way to connect it to experience so that the mathematics we discuss in class is meaningful to them. If I can somehow make my students become more “vulnerable” to their environment I can teach them to view mathematics in a whole new light. By being a vulnerable observer you let your mind see new things and search for the meaning behind those things; you continue to ask why and do not accept the first answer that comes to mind. If I can motivate my students to examine the mathematics around them, the mathematics in our community, and challenge their curiosity, then would they not also be growing as a vulnerable observer? Would eventually this vulnerability transfer to other situations in

life? Right now this may still be an obscure thought, but it does leave me with something to think while I continue teaching.

After this study I see my teaching taking a different direction. From what I observed this past year, there are many teachers that get “stuck in a rut.” They fall into a pattern and want nothing to disrupt its harmony. I want everything to disrupt any harmony that may be coming my way; I want experiences, good and bad, to mold my development as an educator. How can I expect my students to grow if I let myself stop?

During the last week of school, I was forced to examine everything that has impacted my life as long as I can remember. It was not a week of school full of reviews and tests because most of the time I was not there and even when I was in the building I could not focus on what I needed to do. Life threw a fastball at me that changed how I look at things. One day my father was at home full of energy and laughing. The next he was in open-heart surgery. This was unexpected to my mom, my sister, and I. He always took care of us and we always expected that he would be there, but then all of a sudden there was a chance that we could lose him. The seven hours that he was in surgery was the longest seven hours of my life, but nothing hit me until I saw him in intensive care that night. It scared the living hell out of me! I can still see him lying in that bed looking like someone that I have never seen before, someone that I did not even know—so helpless and so out of control. I became so scared standing there watching him that I ran out of the room and cried.

For the remainder of the week I started to think about what he has taught me and what he would want me to do. This man was my role model and he has always

motivated me to do my best. He was the one who always bragged to his friends and our family about my success, which inspired me to always do more. I knew that now he would want me to be strong and believe in him, as well as, myself. This incident is something that I should have placed in Chapter Three because it has triggered a considerable amount of growth, but it cannot be placed in only one section. I have even hesitated writing about it all at because of tears it brings to my eyes when I think about what could have happened to him.

During the last week of school the purpose of holonomy became a reality to me; without it I would not have easily gotten through that series of events. Holonomy became a part of my personal life since it helped me through this frightening situation. Each state of mind: consciousness, craftsmanship, efficacy, flexibility, and interdependence pushed me through that week. The support and prayers of our family, friends, and my team members at the school greatly helped that week. My students made cards for my dad and I to tell us that they were thinking of us and missed me. Our “community” was there for us when we need it to be. (Interdependence) As my family changes our lifestyle to improve our health we need to set clear goals, focus on them, and adjust many aspects of our lives to achieve these goals. (Craftsmanship and Flexibility) Throughout these two and a half weeks since I saw him in intensive care I have become very aware of what is important to me that I may sometimes take for granted. I constantly reflect on the impact he has had on my life, which in turn makes me consider the impact that I may have on some of my students’ lives. Since everything is so new it is hard to explain how I feel; sometimes I feel like it has all been

a very bad dream and I will wake up soon. I continue to learn from what has happened and that learning never stops. Little things every day make me think what about this, what if this happened? (Efficacy and Consciousness)

All these aspects gave me the strength that my dad wanted me to have. Together they were able to help me focus on why things happened, what I can do about them, and who I can depend on for help when I need it. I see holonomy as a support system that is internal since it does create an inner strength that is necessary to move ahead. As a teacher, holonomy offers professional strength. It builds confidence that I can get through each day, good or bad. It shows me ways to “creatively maladjust” to my environment as Kohl (1994) explains in “I Won’t Learn from You” and Other Thoughts on Creative Maladjustment. I can take what I have been given and twist it to benefit my students and my personal growth. My experiences from this past year have taught me to take each day as it comes and be ready for the surprises and challenges that await me. Most important of all, through my vulnerability this past year holonomy has taken me from someone who was unsure of her abilities to someone who now sees what she has to offer.

Section C. Evaluation of Holonomy as a model and Collaborative Thoughts on the Five States of Mind

At the beginning this graduate experience I did not believe that holonomy was relevant to my professional growth; it was directed more towards the portfolio exit option of the CADRE Project. It was not until a seminar in February that I made a

connection with the five states of mind. The usefulness of holonomy as a model was not apparent until I had experiences that I could look back and reflect on. It was not until April, when I was deciding how to organize Chapter Three of my thesis, in which we decided to use this model to analyze our data. As I examined the data in my journal I found incidents that fit into each state of mind and could see how I had grown throughout the year in each of these five areas: consciousness, craftsmanship, efficacy, flexibility, and interdependence. One problem that I found during the organizational process was that there were many situations that could easily fit into more than one area. The placements of such incidents were based upon how the situation most directly impacted me as the researcher. Although I found some difficulty associated with the use of holonomy, I now believe that this model will continue to be a useful tool to evaluate further personal and professional growth in the continuation of my career.

Since each member of the trio has been exposed to the concept of holonomy and our conversations have had a direct impact on my research, I felt that it would also be beneficial to collectively examine each state of mind. The following are brief explanations of what we have learned as a group regarding holonomy.

Consciousness

After our first year of teaching we each believe that the most important thing we discovered was that in order to be successful as teachers we need to pay attention to students' attitudes and abilities, as well as, the needs of the school. As teachers, we must also be aware of how we interact with our individual schools; we need to focus on

maintaining an open mind and not entering with preconceived notions about our situation. We feel that consciousness is the stepping-stone to development in the other states of mind. If we are not aware of our surroundings then we cannot add to its growth and our personal development.

Craftsmanship

Even though I feel that my craftsmanship has developed throughout the year, I agree with Brent that significant growth in this area will occur during our second year of teaching since we will then be able to review and revise lessons and activities that have previously been used. As first-year teachers we were able to make minor adjustments to our teaching, but there were still many strategies that we envisioned. These strategies were not implemented because of our lack of teaching experience and other personal and educational demands made upon us within this past year.

Efficacy

As first-year teachers we repeatedly told ourselves that we knew we could make a difference in the lives of our students, but struggled with maintaining this confident attitude. When we felt failure in the classroom our sense of efficacy suffered, but our desire to have a positive impact on our students did not. This desire, along with the confidence that our students had in us as their teacher, pushed us to continue our pursuit of professional development.

Flexibility

We learned that flexibility allowed us to take advantage of those “teachable moments” not only for our students, but also for ourselves. It was necessary to be flexible in various situations with a multitude of individuals and in planning our classroom curriculum.

Interdependence

This year we looked to others for advice and support as we encountered new and unfamiliar situations in the classroom, but we also were able to make contributions to colleagues who had more experience. It became apparent that some veterans looked forward to working with first-year teachers since they are enthusiastic and have fresh ideas from their university courses. We also felt that we benefited greatly from working with other first-year teachers who were having similar experiences.

Section D. Future Growth as a Professional

When I entered my room in August of 1999 I had no idea of the long and challenging road that lay ahead of me. In any profession, if growth ceases effectiveness diminishes. For instance, take a look at professional athletes. Because they are professionals, can they stop practicing? They cannot stop because it is that practice that helped them to reach the level that they achieved and helps them to not only maintain, but also continue to grow. Professional educators face the same situation. They must continue to practice their craft and monitor their growth.

The only way that I can continue to examine my growth is to reflect on what happens to me. When I was student teaching, a cooperating teacher helped me find my

mistakes, offered suggestions, and helped out in many binds. This year even though I had the support of mentors, they still could not be available at the snap of my fingers to help in a time of need like my cooperating teachers. I had to learn to depend on myself to learn from my many successes and failures.

Originally, members of the trio felt that our similar studies would have significant implications for other first-year teachers, regardless of grade-level or subject area. As we have analyzed our reflections, it has become apparent to us that all teachers could greatly benefit from the practice of reflectively writing about the significant events that influence their professional development. We further noted that this was not exclusive to only the profession of teaching. Drawing upon this information leads us to believe that this process can help to foster the personal and professional growth of individuals in a variety of careers and in all walks of life.

Section E. Recommendations for Further Research

As I approached the final stage in my thesis writing several discussions led to ideas about similar research involving the process of reflective writing and the concept of holonomy. The following recommendations are based upon discussions with members of the trio, conversations with mentors, and other professional that I interacted with during this first year of teaching.

1. I would recommend that first-year teachers in a variety of subject areas conduct similar studies, such as: science, social studies, language or fine arts. Many times I

felt that my quantitative mathematical background and mentality was at times a stumbling block in my attempt to write vulnerably in a qualitative study. It would be interesting to know what potential stumbling blocks would be to other educators writing vulnerably.

2. The first year of teaching provided a multitude of opportunities for professional growth. This research has helped me to evaluate the future path of my career. I believe that a longer study may show further growth. I recommend that a similar study be conducted that involves a beginning teacher continuously reflecting and gathering data about professional growth during the entire probationary period.
3. Many times during this first-year of teaching my school mentor, as well as, other teachers in the building have complimented me on the strategies that I use in my classroom. Such interactions spark an interest about the impact that mentoring or working with a first-year teacher might have on a veteran teacher.
4. Members of the trio believe that through reflection and examination of our professional development throughout our first years as teachers greatly contributed to our growth and our awareness of our abilities and beliefs. We believe that a similar study conducted by people who are beginning a career in a field other than education may also experience the same benefits.

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