

SHOULD I STAY OR SHOULD I GO? STRESS, COPING, AND RETENTION
AMONG NOVICE TEACHERS

by

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ABSTRACT

MOLLY HAYMORE FISHER. Should I stay or should I go? Stress, coping, and retention among novice teachers. (Under the direction of DR. DAVID C. ROYSTER)

There are many factors that lead to stress and burnout of teachers that ultimately result in up to half of teachers leaving the profession before their sixth year of experience. This study is a mixed-method approach to the problem that began with surveying n=385 secondary teachers of all content areas. The Maslach Burnout Inventory (MBI) was used to measure the teachers' burnout levels, the Classroom Appraisal of Resources and Demands (CARD) was used to measure stress, and the Preventive Resources Inventory (PRI) was used to determine the teachers' preventive coping skills. An independent t-test was conducted that found the stress and burnout levels between new and experienced teachers are not statistically different. Additionally, multiple regression tests were conducted with various combinations of independent and dependent variables. It was found that stress and burnout were significant predictors of job satisfaction. It was also revealed that years of experience, job satisfaction, and burnout are significant predictors of stress, while job satisfaction, preventive coping skills, and stress were significant predictors of burnout. This project aims to further research mathematics teachers as they are teachers in one of the most critical needs area of education. After the collection and analysis of the surveys, four mathematics teachers were chosen for follow-up interviews where they were questioned about their stressful occasions, coping mechanisms, and their ideas on mathematics teacher retention. The teachers were chosen randomly from groups that were stratified based on their preventive coping skills and stress levels.

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LIST OF ABBREVIATIONS

AP	Advanced Placement
CARD	Classroom Appraisal of Resources and Demands
D	Demands
DP	Depersonalization
EE	Emotional Exhaustion
MBI	Maslach Burnout Inventory
NCLB	No Child Left Behind
PA	Personal Accomplishment
PRI	Preventative Resources Inventory
R	Resources
SA	Self Acceptance
Satis	Job Satisfaction

CHAPTER 1: INTRODUCTION

For centuries, teaching has been characterized as a profession that is “emotionally taxing and potentially frustrating” (Lambert, O’Donnell, Kusherman, & McCarthy, 2006). Any person who has attended school, had children in school, worked in a school, or who has just listened to the evening news knows that teachers work in stressful conditions and teachers leave the profession in relatively high numbers. The rate at which teachers leave the profession is significantly higher than the departure rate in other professions (Minarik, Thornton, & Perreault, 2003). The departure rate of novice teachers is even higher. Studies have shown the number of teachers who leave the profession within the first five years can range from one third to one half (Hanushek, 2007, Ingersoll & Smith, 2003). Research shows after a teacher has been in the profession for more than five years, their probability of leaving the profession decreases dramatically (Cox, et al., 2007). The first five years of a teacher’s career is the time when they are most vulnerable because they transition from being a student to being a teacher and define who they are as educators. At some point during this time, they will make the decision as to whether to remain in the profession or leave for other career paths. There are numerous proposed solutions for this “national epidemic” of teacher retention and many theories pertaining to the stress and burnout of all teachers. This chapter, along with Chapter 2, aims to bring together those theories and use them to support the research conducted in this study.

This research project aims to make generalizations about the stress factors facing new teachers, and many of those will be discussed later. The following ideas will also be discussed in subsequent chapters:

- how teachers cope with these factors of stress
- whether the stress causes teachers to become dissatisfied with the profession
- what factors contribute to burnout and stress in the teacher profession
- what strategies can help alleviate the teacher retention problem

Kate Walsh, President of the National Council on Teacher Quality (NCTQ, 2008), states that the time period of the third through the fifth year of a teacher's career is "an opportunity lost for the health of the teaching profession" because of the high rates of teacher attrition within that valuable time of a teacher's career. She claims that those years are the time when a teacher is becoming consistently *effective*. The State Teacher Policy Yearbook (National Council on Teacher Quality, 2008) offers analysis on what they feel is the "most critical piece of the teacher quality puzzle" which is "the retention of *effective* new teachers." [emphasis added] The No Child Left Behind Act consistently refers to quality educators as "highly qualified," and its definition of "highly qualified" does not coincide with what is considered "effective." This chapter begins by clarifying and creating some operational definitions for the factors involved with being a teacher, beginning with what it means to teach.

Teaching

Thorndike (1906) began by describing teaching as strategies used to assist students in learning goals deemed necessary by society. Similarly, Gage (1978) described teachers more as facilitators of information. Successful teaching requires input from the

students and makes teaching a two-way, or bi-directional, relationship. Cohen, Raudenbush, and Ball (2003) described this relationship by stating, “Instruction consists of interactions among teachers and students around content” (p. 122). By combining parts of all three definitions, Hiebert and Grouws (2007) define teaching as “classroom interactions among teachers and students around content directed toward facilitating students’ achievement of learning goals” (p. 372). This definition is goal-oriented, bi-directional, and content based and is used as a working definition in *The Second Handbook of Research on Mathematics Teaching and Learning* (Heibert and Grouws, 2007).

Highly Qualified Teachers

In 2001, the United States federal government initiated the “No Child Left Behind Act” (P.L. No. 107-110, H.R. 1, 2001), which quickly impacted American education. One of the goals of this policy was that by the end of the 2005-2006 school year all public school teachers of core subjects (mathematics, English, history, science, and foreign language) must be “highly qualified.” According to the No Child Left Behind Act’s (NCLB) standards, a teacher is considered highly qualified if he has a bachelor’s degree, is fully certified or licensed, and has proven he knows each subject he teaches (Ferrini-Mundy & Floden, 2007).

Many states are consistently lacking in the NCLB requirement that all teachers must have a valid teaching license in their field in order to teach in their subject area (Ingersoll, 2003). Most states require teachers to pass a standardized test to become licensed to teach, but those tests do not “really certify that teachers have the breadth and depth of subject knowledge to teach all student to high standards” (Mitchell & Barthe,

1999). However, in some states and schools, a teacher need not have a state teaching certificate to be granted a teaching position (Ingersoll, 2003). This occurs in some independent schools and in public schools where the teachers are in high demand and there are not enough certified teachers to fill the vacancies. In such a case, teachers are hired with an “emergency certificate” and are required to complete the certification standards after being hired. In 1994, at least seven states allowed over twenty percent of their new public school teachers to be hired under an emergency certificate (Darling-Hammond, 1999). According to the National Center for Education Statistics (2004) during the 1999-2000 school year, over thirty percent of secondary mathematics teachers were teaching either without a teaching license or a major in the field of mathematics, or without both. A similar situation exists in other fields with twenty-eight percent of teachers of English and twenty-seven percent of teachers of social studies teaching “out of field.”

The standard used to prove teachers know the subject they teach varies from state to state. Twenty nine states require a standardized test in the content area in which the prospective teacher is seeking licensure (Mitchell & Barthe, 1999). These tests, combined with other pedagogical tests required in some states, total over 600 standardized tests being administered for teacher licensure. Most of these tests are being administered by national companies such as Educational Testing Service (ETS) and National Evaluation Systems (NES); however, some of the tests are created by individual states (National Academy of Sciences, 2001). Individual states regulate more than 500 professions by requiring licensure tests varying from construction-related positions such as architects and electricians to other professions such as real estate appraisers (National Academy of

Sciences, 2001). This consistency with licensure in other professions is not found in the teaching profession in every state, even though NCLB standards require it for all teachers in core subjects.

Effective Teachers

Vogt (1984) described effective teachers as those who can educate all students with varying abilities while following instructional objectives and determining the learning mode of those students. Becoming an effective teacher has a higher standard, and there appears to be no definitive standards to help the teacher along the way. Currently, there is no final goal for a teacher to complete to officially deem him/her to be an effective teacher.

Vygotsky (1978) introduced the concept of the *zone of proximal development*. This is hypothesized as a region between a person's *actual* level of understanding and his/her *potential* level of understanding. This zone often is referenced when analyzing student learning levels. This idea can also be used to compare a teacher's level of efficacy and success in the classroom. This will be described in greater detail later. Teachers routinely analyze their own teaching by comparing their teaching to that of other teachers, previous experience, or potential student abilities in their classroom. A teacher's zone of proximal development is defined to be the hypothetical region between the level in which the teacher is currently teaching and their level of potential as a teacher. An effective teacher can find a way to improve their zone by improving their teaching skills to closer approximate their highest potential of teaching ability, resulting in student achievement gains. However, according to Hiebert and Grouws (2007), it is difficult to find connections between teaching and student learning. This difficulty may be attributed

to a dearth of useful theories connecting teaching and learning. This then may contribute to an inability to find an appropriate mixture of teaching methods, to find the most useful systems of teaching, and to juggle additional factors in and out of the classroom. In mathematics education, the theories involving content learning have been tested more than theories involving content teaching (Hiebert & Grouws, 2007). This opens up many opportunities for research in the theories of teaching.

In a time of high-stakes testing, many teachers are resorting to teaching *skill efficiency* which allows for accurate and quick recollection of concepts (Hiebert & Grouws, 2007), but those skills generally quickly dissipate once the testing is complete. An effective teacher can facilitate skill efficiency and efficacy while teaching *conceptual understanding* which builds connections between ideas (Hiebert & Grouws, 2007). It is accepted that this helps students retain material much longer than they would with procedural understanding (Reys, Lindquist, Lambdin, & Smith, 2007). With appropriate motivation and the proper support, more teachers, if not all teachers, could become effective teachers whether or not they are classified highly qualified. Many of them leave, however, before they have this opportunity (National Center for Teacher Quality, 2008).

Stress and Burnout

Factors leading to stress and burnout are many times related to the characteristics of being effective or highly qualified and the pressures related to achieving those goals (Grant, 2007), as well as increased accountability measures for teachers (Sorenson, 1999). However, those are not the only factors that contribute to the stress of the teaching profession. According to the most recent Teacher Follow-up Survey, thirty-two percent of teachers who changed schools cited “poor working conditions” as an important reason

for their decision, and over thirty-seven percent of teachers who left the profession stated they were leaving to “pursue a job outside of teaching” (Cox, et al., 2007). Geving (2007) found that poor student behavior is a main contributor to teacher stress, especially in secondary level teachers. Other cited reasons for teacher stress is lack of administrative support (Lambert, O’Donnell, Kusherman, & McCarthy, 2006; Blase, Blase, & Du, 2008) and the excessive amount of tasks that are required of new teachers who have not acquired successful task-management skills (Brown, 2005). The combination of many factors will result in nearly fifty percent of teachers leaving the profession before they reach their sixth year of teaching (Ingersoll & Smith, 2004).

The fact is that teaching is a highly stressful career, and teachers are leaving the profession at an alarming rate (Hanushek, 2007, Ingersoll & Smith, 2003). Without effective teachers, class sizes increase, school administrators become frustrated, parental concerns grow, and stress levels increase. The following chapter will present literature that supports and refutes many of the reasons for high stress and low retention.

CHAPTER 2: THEORETICAL FRAMEWORKS AND REVIEW OF THE LITERATURE

This chapter begins by exploring the theoretical frameworks that have guided the research questions and then reviews the literature on this “national crisis” in education of teacher retention (National Commission on Teaching and America’s Future, 2003, p. 8). Following the discussion of the theoretical frameworks, the review of literature will begin with an introduction on the teacher retention problem followed by an analysis of the Teacher Follow-up Survey. Possible solutions to the teacher retention problem along with a review of the literature on stress and burnout, are discussed. This chapter will conclude with the statement of the research questions.

Theoretical Frameworks

Maslow’s Hierarchy of Physiological Needs

In 1943, A. H. Maslow stated, “Human needs arrange themselves into hierarchies of prepotency...the appearance of one need usually rests on the prior satisfaction of another, more pre-potent need.” This idea of a hierarchy may never end because “man is a perpetually wanting animal.” He describes the items that drive the movement into the levels of needs but stated that listing the drives would get us nowhere for “theoretical and practical reasons.” This hierarchy can be related to the change teachers face when they begin their careers in a classroom. Listing specific items that force teachers into the various zones would seem pointless when the transition may be a much broader issue.

Maslow's ideas evolved into the creation of his theory of the physiological needs that a person encounters when faced with a new stage in one's life. This theory can be applied directly to a teacher's career. According to Weller (1982), the issue that contributes the most to stress and discontent in the teaching profession is "people-problems." This indicates why a behavior-oriented approach like Maslow's is appropriate for school administrators to follow and works as a "vehicle" for meeting the needs of all teachers (Weller, 1982). This hierarchy can be used to describe many parts of a person's life, as in the study to evaluate student retention in higher education (Brookman, 1989). Figure 2.1 below gives a visual representation of the hierarchy that is described in relation to teachers.

Figure 2.1. Visual Representation of Maslow's Hierarchy of Physiological Needs as they relate to the Teaching Profession



Physiological – “Survival Stage”

This is the stage a person enters when beginning a new phase in his life and consists of the most basic needs. For a teacher in this stage, the most important drives are workshops, equipment, displays (supplies), and food (Riley & Mort, 1981). In order to reduce the stress that teachers may incur at this level, Quinn and Andrews (2004) suggest a school-specific handbook for first year teachers that can assist them with many of the survival essentials. Since this stage is the bottom rung of the hierarchy, Maslow (1943) claims the “major motivation” in life begins at this physiological level.

A person who is lacking food, safety, love, and esteem would most probably hunger for food more strongly than for anything else...For a chronically and extremely hungry man, Utopia can be defined very simply as a place where there is plenty of food. (p. 373)

Maslow states that physiological emergencies occurring less often signals a move into the next phase of the hierarchy.

Safety

Teachers deserve a safe place to work that is free of hazards, clean, appropriately heated or cooled, has sufficient light, and offers privacy to a certain degree (Weller, 1982). Teachers should also be able to work in a place that Maslow (1943) describes as “predictable” and “orderly” (p. 377). Although the teaching profession is rarely predictable, it should be orderly. Many schools are lacking in this aspect of the hierarchy, which, in turn, affects how students learn (American Federation of Teachers, 2007). Feelings such as “injustice, unfairness, or inconsistency” can make the teacher feel anxious and unsafe (Maslow, 1943, p. 377). Those feelings can increase the stress levels of teachers and produce dissatisfactory feelings about their school, colleagues, and,

ultimately, the profession. More tangible aspects can be included at this level, such as job security, salary, and insurance benefits (Maslow, 1943). Once all of these feelings have dissipated, teachers no longer see the immediate need for safety, and they then long for a stronger bond with the profession.

Love and Belonging

Most people relate the word “love” with a family member or significant other for whom they would have strong feelings. In the sense of a teacher, however, “love” simply means belonging to a team or group (Bailey & Pownell, 1998). Weller (1982) suggests principals allow teachers, students, and administrators to participate in joint reviews of particular school codes and events to allow for all points of view to be shared, thus promoting the belonging to a group. This can give a teacher a sense of belonging with their teaching and the profession and can help new teachers feel less isolated in their careers. Maslow (1943) warns not to overlook the fact that in order to transcend this stage, teachers must be conferring as well as receiving the feelings of belonging and the notion of teamwork. Without this stage and with the inability to discuss their feelings with another person, teachers can become emotionally exhausted with teaching.

Esteem

Teachers with high self-esteem generate a strong feeling of pride in their school and their profession (Weller, 1982). Self-esteem is defined as that which is “soundly based upon real capacity, achievement and respect from others” (Maslow, 1943). This means one’s self-esteem must be generated by opinions of others and not just estimations of one’s own ability. Teachers who have reached this level have a solid reputation in the profession and have earned respect from others. Many teachers who have reached this

level are rewarded with exchange programs and master teacher awards (Riley & Mort, 1981). Many people may think there is no higher stage than the esteem stage, but even if every need is satisfied, we always long for something greater (Maslow, 1943).

Self-Actualization

This stage of the hierarchy is the most ambiguous, yet the most intriguing. Even Maslow admits that not much is known about this stage, so it remains an area to be researched. Maslow (1943) defines self-actualization as “the desire to become more and more what one is, to become everything that one is capable of becoming” (p. 382). Many teachers who reach the stage of self-actualization extend their career by writing articles, developing curriculum, writing grant proposals and receiving grant funds, presenting ideas at conferences, and conducting research (Riley & Mort, 1981). Maslow (1943) describes this stage articulately by stating, “A musician must make music, an artist must paint, a poet must write, if he is to be ultimately happy. What a man *can* be, he *must* be” (p. 382). At this point, a teacher knows she has reached the pinnacle of her career in the stage of self-actualization.

Liminality

The term “liminality” derives from the Latin root *limen* meaning “boundary or threshold” (Meyer and Land, 2005). In 1960, Arnold Van Gennep wrote about the “Rites of Passage” a person experiences when changing cultures or a way of life. He describes this particular transition in three different stages: preliminal rites, liminal rites, and postliminal rites. The liminal stage is the stage that has been the most researched and Van Gennep (1960) describes it as “the transitional stage” where a person is transitioning from one social state to another. He also refers to it as a “territorial passage.” Thus, Van

Genep refers to liminality as the period when one is between states, such as during a wedding ceremony when a person is not single but not married, or when certain cultures welcome a new member but they are not yet completely transitioned. The transition was later described as being “betwixt and between” social stages, and this terminology has been used widely in studies on liminality (Bettis and Mills, 2006).

In the terms of education, Conroy (2004) explains liminality as “a threshold...the entry and exit point between zones of experience or understanding,” and this concept matches the threshold a new teacher experiences when she is “betwixt and between” being a student and a teacher. This period can involve a humbling of the participant because she is being “stripped” of her old identity (Meyer and Land, 2005). This threshold overlaps the physiological and safety stages of Maslow’s hierarchy. These are the stages in which a teacher is most vulnerable to stress and feelings of dissatisfaction with the profession. Cook-Sather (2006) describes the liminal stage as when “she or he is neither what she or he was nor what she or he will become” and the hope is those teachers in this stage become effective teachers working their way to self-actualization.

By infusing Maslow’s hierarchy with the concept of liminality, it appears novice teachers begin their transition of becoming effective teachers at a point near the second and third levels of Maslow’s hierarchy. Where this exact point is may be unclear, and this point is different for every teacher. By embedding the discussions of the liminal stages, the transitional stages of being a student to becoming a teacher can be better focused and understood.

Review of Literature

The following discussion contains a brief overview of the “Teacher Follow-up Survey,” one of the largest teacher surveys administered in the United States. It is administered regularly by the National Center for Education Statistics and follows the “National Schools and Staffing Survey.” Afterwards, there is a review on the literature of possible solutions to teacher retention. The three most common solutions discussed are professional development, additional mentors that are more effective, and positive peer collaboration. That follows with a discussion of stress and burnout among teachers. The review will end with the research questions garnered from the readings that will be addressed in the research project.

It has been reported that the attrition rate of teachers is a continual problem. This is more prevalent in the areas of mathematics and science and in urban settings (Ferrini-Mundy & Floden, 2007). Studies have been conducted that undertake to find the reasons that teachers are leaving the profession. The results of these studies are mixed and, at times, contradictory. For example, Ferrini-Mundy and Floden (2007) and Cwikla (2004) suggest there is not enough preparation in mathematics content for college students who want to teach mathematics after graduation. However, Paul (2005) reports that the current undergraduate mathematics courses required for a degree in mathematics can be a “filter” that eliminates potential mathematics teachers. This is a commonly discussed issue in teacher preparation, and it is often noted that currently a third of students in grades 7-12 do not have a teacher with a major or minor in mathematics (Reys & Reys, 2004).

Teacher Follow-up Survey

The “Teacher Follow-up Survey” is administered every four years. It serves as a follow-up to the “National Schools and Staffing Survey” from the National Center for Education Statistics. It was completed most recently during the 2004-2005 school year. Over three million teachers were surveyed for this version of the Teacher Follow-up Survey. Each teacher surveyed was placed in one of three categories. They were either classified as a “stayer,” “mover,” or “leaver.” “Stayers” are teachers who remained at their current teaching assignment. “Movers” are teachers who remained in teaching but left their current teaching assignment for another school or district. Finally, “leavers” are those teachers who left the education profession. Of those surveyed, over nineteen percent are teachers within their first three years of experience. Of that nineteen percent, over twenty three percent were classified as movers or leavers. Additionally, it reveals that over ten thousand (36%) of the first-year teachers were movers or leavers that year (Cox, et al., 2007).

The “Teacher Follow-up Survey” reinforces some of the reasons teachers leave the profession and refutes others. Teacher salaries are a widely discussed feature of American education. Although 16% of the teachers stated this was one of the reasons they left, it was not the most noted reason. Hanushek, Kain, and Rivkin (2001) were able to show that a substantial increase in salary would reduce only marginally the attrition rate of teachers. Other reasons suggested for teacher departures are violence, urban populations, and weak administration. The “Teacher Follow-up Survey” indicates that a weak administration is one reason teachers were movers with 37% of teachers changing schools because of weak administration, but violence and urban populations are

dismissed in the results (Cox, et al., 2007). Pointing out the contradictory nature of the results, Smith and Smith (2006) find that teachers leave urban schools for stress-related reasons including violence, lack of feelings of safety, and poor community involvement.

Other reasons were noted as significant factors for teachers who were leavers or movers. Over 38% of movers left for a better teaching position, and almost 33% stated they were moving due to “poor working conditions.” As for the leavers, retirement is the most commented reason for teachers to leave the profession with 38% of leavers citing retirement as one of the reasons. More significant is the fact that 37% of leavers left to pursue a career outside of the teaching profession, and 18% cited they were leaving because they were “dissatisfied with teaching as a career.”

Kersaint, Lewis, Potter, and Meisels (2007) conducted an in-depth mixed methods study on teachers in Florida that was modeled from the “Teacher Follow-up Survey.” They used qualitative results and found six factors that emerged from the data: administrative support, financial benefits, paperwork/assessment, family responsibilities, joy of teaching, and time with family. Then, measures for those six factors were analyzed and stratified across numerous demographic characteristics with ANOVA tests, and then MANOVA tests were used to correlate them between leavers and stayers. The test found numerous statistical correlations, but those important to this study include the result that secondary level teachers found administrative support to be more important than elementary and middle school teachers and years of experience was also found to be a significant predictor of the importance of administrative support. New teachers (0-4 years) and more experienced teachers (20 or more years) were found to believe administrative support is the most important. Additionally, they found that new teachers

(0-4) were the only stratified group based on experience level that felt financial benefits were important. Finally, most groups found that paperwork and assessment were significant factors of whether they remain in the profession or leave the profession with males, new teachers (0-4 years), and secondary level teachers reporting this more significant than their counterparts.

Possible Solutions

In numerous research studies there are myriad solutions put forward for the teacher retention problem in the United States. Three themes consistently arise in these education studies: stronger professional development (Richin et al., 2003; Stevenson et al., 1999; Cwikla, 2002; Makkonen, 2005; Hoff, 2000), more effective mentoring for new teachers (Adams & Adams, 2003; Harrison et al., 2006; Cwikla, J., 2004; Brown, S. W., 2005; Richin et al., 2003; Makkonen, 2005; Ingersoll & Smith, 2004; National Commission on Teaching and America's Future, 2003; Hoff, 2000; Scherff, 2008), and productive peer collaboration (Brown, 2005; Cwikla, 2004; Cwikla, 2002; Scherff, 2008).

Professional Development

Many researchers have studied ways to improve teacher working conditions and reduce departure rates. One of the issues that tends to arise often is better professional development for teachers. Studies have shown that teachers desire more effective collaboration in the form of professional development (Richin et al., 2003; Stevenson et al., 1999; Cwikla, 2002; Makkonen, 2005; Hoff, 2000). Professional development opportunities can be about simple tasks to help a teacher in a survival stage, or they can be more substantial to help a teacher into higher levels of the hierarchy (Riley & Mort, 1981). Simple tasks could include things experienced teachers take for granted such as

how to use the copy machine, how a lunch period works, or who to contact for various problems. The more substantial workshops can include sessions on building content knowledge, best practices, or teaching methods.

Ferrini-Mundy and Floden (2007) discuss professional development in Chapter 29 of the *Second Handbook of Research on Mathematics Teaching and Learning*. One issue brought to light is the lack of state or national standards or controls on the quality and content of professional development. Professional development is used to establish which teachers are granted license renewal or tenure. There are no federal standards for teacher induction programs or beginning teacher support. Britton, Paine, Pimm, and Raizen (2003) report that more than thirty states have policies in this area with requirements such as mentoring programs or beginning teacher induction seminars.

It is suggested by Ferrini-Mundy and Floden (2007) that federally-funded programs have the greatest impact on teacher professional development. In the post-Sputnik era of the 1950's through the 1970's, the National Defense Education Act (NDEA) funded programs in mathematics and science, and later the National Science Foundation began providing professional development for teachers (Ferrini-Mundy and Floden, 2007). Additionally, in the late 1990's and early 2000's, the Eisenhower Professional Development Program was the federal government's largest investment that focused only on teaching skills and knowledge for mathematics and science teachers (Desimone et al., 2003). A concern about the proposition that federally-funded programs are the most effective means is that these programs are not always widely available throughout the country. Another issue discussed is the issue of the capacity for these programs to handle large numbers of teachers. These programs may involve the

participating teachers to expend additional money they can not afford to spend on travel expenses, registration fees, driving long distances, and taking time away from work, the latter causing them to lose accrued leave days and to deal with preparing plans for substitute teachers.

More Effective Mentors

Two hundred teachers from the Public Education Network were interviewed about their early teaching experiences, and they overwhelmingly agreed that being paired with an experienced instructor was the “most effective form of assistance and support in their first years” (Makkonen, 2005, p. 59). Clutterbuck (1992) defined a mentor as “a more experienced individual, willing to share his/her knowledge with someone less experienced in a relationship of mutual trust” (as cited in Harrison, J., Dymoke, S., & Pell, T., 2006). In Adams and Adams (2003) it is noted that many school systems are not using a mentoring program and that the mentor is playing more the role of an evaluator. This evaluator role interferes with the ability to form the mutual trust between a new teacher and the mentor. In order to be effective mentors these more experienced teachers must have “good interpersonal skills, knowledge of how the school and district operate, and credibility with administrators” (Makkonen, 2005, p. 60). Mentors should be able to listen and empathize with the novice teacher when they meet on a regular basis (Harrison, J., Dymoke, S., & Pell, T., 2006). By having an effective mentor, a novice teacher can quickly pass through the initial survival and safety stages and gain a sense of belonging at her school. Hoff (2000) believes that an experienced teacher who is mentoring a novice teacher should have a reduced teaching load and a reduction of duties outside the classroom in order to be an effective mentor. Some researcher may opine that the new

teacher should have a reduced teaching load to allow more time for transitioning into their new career.

Another issue contributing to a failed mentoring program is the lack of experienced teachers to serve as mentors. Ingersoll and Smith (2004) reported on the finding from the most current Schools and Staffing Survey which showed some alarming statistics about mentoring programs during the 1999-2000 school year. Among all first year teachers, eighteen percent were assigned mentors outside of their discipline while only forty-eight percent were assigned mentors within their discipline. Therefore only two-thirds of first year teachers were assigned mentors that year. All new teachers should be assigned an experienced mentor from the same content area (Smith & Ingersoll, 2004). This collaboration with a more experienced teacher can assist the novice teacher in improving their Zone of Proximal Development and becoming a more successful educator.

Positive Peer Collaboration

In many ways, peer collaboration is a form of professional development and many people refer to it as such (Cwikla, 2002). Collaboration is much less formal than a professional development course or workshop. Collaboration may occur in the parking lot, during lunch in the cafeteria, in the library, or the teacher's lounge and can greatly increase a teacher's sense of belonging in their school. Not all collaboration is positive collaboration, however. Many times the negative feelings shared among all teachers only increase the stress of a new teacher. Possibly due to negative comments from department colleagues, many teachers see department meetings as a waste of time (Cwikla, 2004) despite the opportunity for positive collaboration that could take place.

One method to increase collaboration among new teachers and experienced teachers is not to isolate new teachers (Brown, 2005). This isolation may be in the form of physical, social, or both. A strong mentor and better departmental collaboration can reduce a teacher's feelings of social isolation. It is important that new teachers have opportunities to ask questions and share ideas and concerns with other teachers at any time. Physical isolation may occur in different ways. Due to the overcrowding of many schools, modular classrooms have been placed on the schools' grounds often away from the nucleus of the school and other teachers. Beginning teachers feel isolated in their classrooms even when they are placed in a classroom in close proximity of other teachers (Brown, 2005). The lack of seniority of these new teachers often will place them in these modular classrooms where there is even less opportunity to collaborate with their colleagues between classes or at any time the new teacher needs a collaborator.

Stress

Sorenson (1999) states, "Stress is a condition of twenty-first-century education that continues to increase as more accountability standards and new policy initiatives are introduced." Teaching is a stressful occupation, and without the proper guidance and coping skills, those feelings of stress can result in teachers not having a sense of belonging in their profession, and ultimately, they leave teaching. Up to half of them leave before they reach their sixth year of experience (Ingersoll & Smith, 2004). Fives, Hamman, and Olivarez (2006) believe that proper coping skills for dealing with stress are initially adopted while a teacher is in her student teaching stage. They also report that stress levels decrease within the student teaching semester as efficacy increases.

Many factors can contribute to high levels of teacher stress, but Geving (2007) suggests student behavior is an increasing factor of the stress, especially among secondary level teachers. In her study of secondary level teachers, she found ten specific student behaviors to be significant contributors to teacher stress. The correlation coefficients of the study ranged from .17 to .40 and the behavior factors leading to teacher stress from the most stressful to the least stressful (but still significant) are: hostility towards the teacher, not paying attention during class, noisiness, lack of effort in class, coming to class unprepared, hyperactivity, breaking school rules, harming school property, hostility toward other students, and lack of interest in learning.

Other potential stressors may include the lack of parental and administrative support (Lambert, O'Donnell, Kusherman, & McCarthy, 2006; Blase, Blase, & Du, 2008), and the lack of task management for new teachers when dealing with the newfound paperwork and extracurricular duties outside the classroom that are required of all teachers (Brown, 2005). These tasks can include parent conferences, bus monitoring, hallway duty, staff meetings, bathroom duty, cafeteria supervision, and a plethora of other tasks assigned to teachers.

Jepson and Forrest (2006) conducted a multiple regression test to determine which factors contribute to teacher stress. They tested and found the following independent variables to be significant predictors of stress: type of school setting, Type A personality, teacher-specific achievement striving, and occupational commitment to the teaching profession. The strongest predictor of stress was occupational commitment, and it revealed that as commitment increases, stress decreases. The next most significant factor was achievement striving. Its positive beta value indicated the teachers who strive

to reach higher achievement are more stressed. Additionally, teachers with a Type A personality are also found to be more stressed. Those are more aggressive teachers and those who would consider themselves to be “perfectionists.” Another interesting result found in this test revealed that elementary school teachers have higher stress than secondary teachers. The other factors in the test that were not found to be significant were gender, years of experience, and job status (full or part time).

Combating stress is a daunting task. Hurren (2006) found that something as simple as a sense of humor from school administrators and principals can reduce teacher stress and increase job satisfaction. Botwinik (2007) also suggested having a sense of humor may help teachers through difficult and stressful periods. This does not mean a school should not be serious and professional because it is a place for serious education, but a keen sense of humor can go a long way when someone is in a stressful position.

Burnout

Burnout is defined as “the state of physical and emotional depletion resulting from conditions of work” (Freudenberger, 1974). Maslach, Jackson, and Leiter (1996), some of the most well-known researchers of burnout, constructed burnout as a combination of three components: Emotional exhaustion, personal accomplishment, and depersonalization. “Emotional exhaustion” is the emotional lassitude a person experiences when they are fatigued and frustrated. “Personal accomplishment” is the person’s self-evaluation of their own work. The final component, “depersonalization,” is when a person has a tendency to isolate themselves from others.

Ghorpade, Lackritz, and Singh (2007) found that the components of burnout are statistically related to different personality traits. Emotional exhaustion was negatively

related to extroversion and emotional stability, depersonalization was negatively related to agreeableness and emotional stability, and personal accomplishment was positively related to extroversion, conscientiousness, agreeableness, and emotional stability.

Kokkinos (2007) also found similar results when comparing burnout to personality traits; however, that study also revealed that student misbehavior and the time constraints on teachers were significant predictors of the burnout components.

Grayson and Alvarez (2008) conducted a study to determine which school climate factors relate to teacher burnout. They used the Maslach Burnout Inventory in their study and stratified their teachers based on demographic data such as gender, age, degree level, teaching experience, household income, and marital status. The only demographic factor that revealed significant differences in burnout was gender; however, that was only in one factor of burnout. Females were shown to have significantly higher emotional exhaustion than males. This study also used the Teacher Satisfaction Scale (TSS) and the Teacher Climate Measure (TCM) to measure school climate features. Comparisons using the TCM and household income were found to be significant indicating that as income levels increase, the teachers' ratings of positive school climates increased as well. This does not reveal that salary is correlated to teacher stress; it shows that salary can be correlated with a teacher's perception of their school climate.

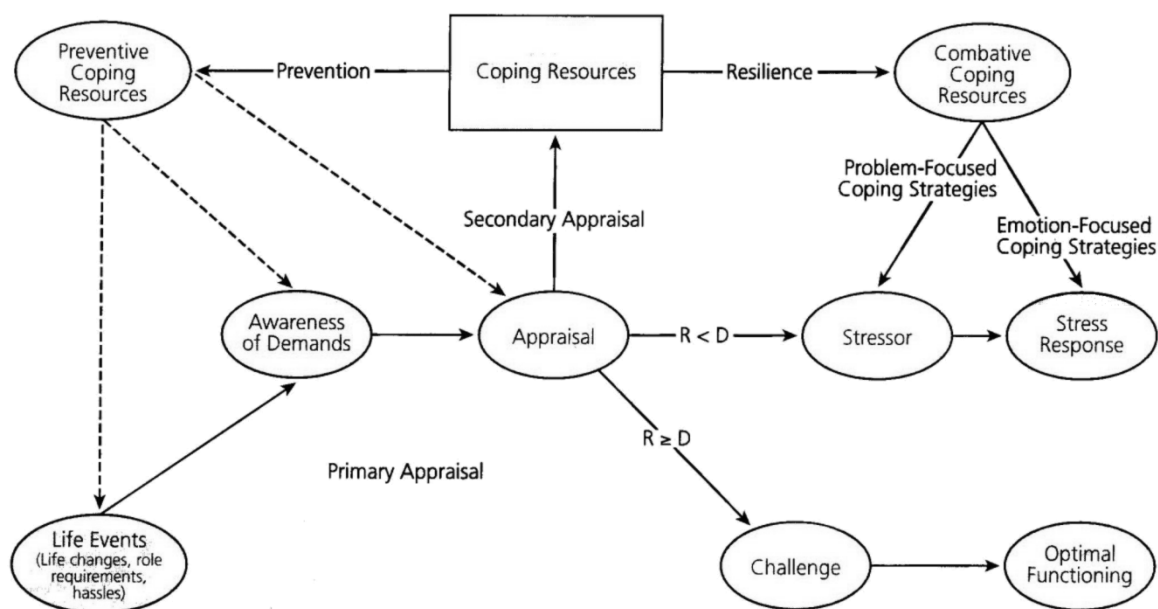
Preventive Coping Skills

Teachers cope with school stress in many different ways. Sorenson (1999) suggests simple tactics that can help a teacher control stress such as a balanced diet, exercise, adequate sleep, as well as being able to recognize work overload and stress-resistant workplaces. Certain coping mechanisms can also have a negative effect on a

person's mental health. Relieving stress using anger induced methods such as placing blame on others and yelling can increase mental health problems such as insomnia, anxiety, and depression (Suldo, Shaunessy, & Hardesty, 2008).

When a potential stress threat occurs, a stress response is triggered (Hobfoll, 1988). Adequate preventive coping resources can reduce the number of events a teacher interprets as stress threats, which eliminates the stress response trigger (McCarthy, Lambert, & Brack, 1997). McCarthy (2002) and his colleagues created a model of stress prevention and coping and used this model to visually represent the use of preventive coping skills in a stressful situation, known as demands. This model is found in Figure 2.2. The model begins with preventive coping resources and the dashed lines from that variable indicate the individual can control the degree of demands from life events, individual perceptions they have about demands encountered, and their own appraisal of the ability to handle demands. Once the demand has become apparent, the individual must appraise the seriousness of the demand. Optimal results would be those in which the individual feels the resources available outnumber the demands ($R \geq D$), but the reverse can also occur ($R < D$), which triggers the aforementioned stress response. If this occurs, combative coping mechanisms must be reinforced to reduce the intensity of the stressors.

Figure 2.2. Model of prevention of stress and coping. (McCarthy, Lambert, Beard, and Dematatis, 2002)



Betoret (2006) conducted a study on Spanish teachers in Spain. His study combined teacher self-efficacy, coping resources, stress, and burnout. A MANOVA conducted found that teachers with a reported higher amount of coping support at their schools and higher self-efficacy were found to be less stressed and more motivated and satisfied in the profession. Additionally, those teachers were also found to be less burned out.

It has been found that up to one half of teachers leave the profession within their first five years of teaching (Ingersoll & Smith, 2004). This failure to retain teachers is becoming a national epidemic and strategies invoked by school systems are not effective enough to reduce the stress of these novice teachers, thus resulting in departure from the profession. Current efforts of mentoring, professional development training, and stronger collaboration among teachers may be showing small improvements but have yet to be

effective in a larger scale. In order to reduce stress levels and increase teacher retention, more research must be conducted to learn how teachers cope with the stress and study those teachers with successful coping skills.

Research Questions

There are many factors that cause teacher dissatisfaction and result in feelings of burnout and stress. Those feelings ultimately result in quality teachers leaving a profession that needs them. These problems lead to a number of questions:

Question 1: Do teachers in the first five years of teaching experience higher stress and burnout than their more experienced colleagues?

Question 2: Are teachers with higher stress and burnout more dissatisfied with the profession?

Question 3: From the viewpoint of the teachers, what are school administrators doing to help reduce stressors and increase retention?

Question 4: What variables contribute to a teacher's burnout and stress levels?

Question 5: What efforts are being made to retain mathematics teachers?

Question 6: Do mathematics teachers believe they have the same needs as teachers in other disciplines?

The subsequent chapter will discuss the methodology used in this research project. The two chapters following will analyze the quantitative and qualitative results with a discussion in the final chapter of the results and how they attempt to answer the research questions noted above.

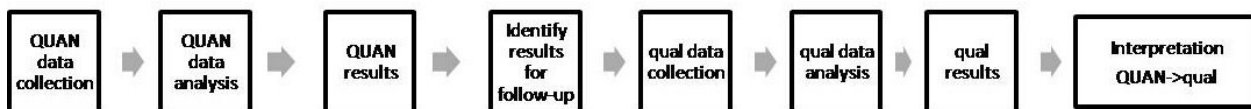
CHAPTER 3: METHODOLOGY

The design of this study is quasi-experimental and uses a mixed methods approach to the problem. This chapter focuses on the quantitative and qualitative methods used to conduct the research.

Design of Study

This study follows the “explanatory design” created by Creswell and Plano Clark (2007). The explanatory design is a two-part design in which the qualitative data is gathered to build upon the quantitative results. This design is also used when the researcher uses specific characteristics gathered from the quantitative results to stratify the participants into subgroups to better understand the individual groups. This stratification process is discussed in further detail in this chapter. Figure 3.1 represents a flow chart description of the explanatory design process created by Creswell and Plano Clark that is used in this study.

Figure 3.1. Explanatory Design: Follow-up Explanations Model (QUAN emphasized)



The flow chart model reveals the quantitative data collection, analysis, and results are all completed initially. Then, the results from the quantitative study are analyzed to determine which participants will be used in the qualitative study. The qualitative data is

then collected, analyzed, and results are reported. The final portion of the explanatory study is the interpretation of both parts of the study together. The use of uppercase letters in “QUAN” indicates the emphasis on the quantitative results of the study. The first three steps of the chart are discussed in Chapter 4, the follow-up participants in the fourth step as well as the fifth, sixth, and seventh steps are found in Chapter 5, and the final step is found in Chapter 6 of this study.

Part I: Quantitative Research

Participants

The Advanced Placement (AP) program is one component of the programs that the College Board administers — programs such as the SAT (formerly known as the Scholastic Aptitude Test) as well as the Preliminary SAT (PSAT). High school students enrolling in AP courses may take a standardized test created by College Board committees at the end of their studies, and, with a sufficient score, they may earn college credit. The allure of earning college credit during high school has become increasingly popular and the percentage of students earning college credit has increased in the last five years (College Board, 2009). In order for teachers to become teachers of AP courses, that course must first pass an audit process from the College Board which includes the teacher submitting a syllabus and other documents to demonstrate the course follows College Board regulations and guidelines. It is recommended, and required in some states, that AP teachers attend an institute endorsed by the College Board in order to prepare them to teach the course and to complete the audit process.

During the summer of 2008, 412 secondary level teachers attended AP professional development workshops on the campus of a large, urban university in the

Southeastern United States. These teachers were targeted for participation in part I of the research design. The participants were current or potential AP teachers of various AP topics. All workshops were either five days or two days in length. The five day workshops were designed for teachers new to teaching AP courses and included more in-depth instructions for teaching the courses. The two day workshops were refresher courses for experienced AP teachers. The consultants leading the workshops made appointments for the researcher to administer the surveys of part I of the project during or immediately after class time on any day of the workshop.

Instruments

Classroom Appraisal of Resources and Demands (CARD) – Stress

This survey instrument was created by Lambert, McCarthy, and Abbot-Shim (2001) but was designed for elementary school teachers. With permission from the authors, the original CARD was altered to make it suitable for secondary-level teachers. The newly updated survey is found in Appendix A. The CARD survey measures on two scales: Classroom Demands and Classroom Resources. This allows the researcher to compute a stress score for individual teachers by finding the difference between these two scales. In addition to the standard questions on the CARD, questions have been added to allow the researcher to determine if the teacher has ever had thoughts of leaving the profession and how often those thoughts occur or have occurred. There is also an additional question for each teacher to rate their satisfaction with the teaching profession. Previous uses of the CARD (elementary version) have yielded favorable reliability measures of over .90 for each of the two scales, resources and demands (Lambert, O'Donnell, Kusherman, and McCarthy, 2006).

Maslach Burnout Inventory (MBI) – Burnout

The MBI was created in 1996 by Maslach, Jackson, and Leiter. The MBI is the most well-known measure of teacher burnout and has been used in more than ninety percent of empirical studies on that subject (Hastings, Horne, & Mitchell, 2004; Schaufeli & Enzmann, 1998). The three main components of burnout measured by the MBI include: emotional exhaustion, depersonalization, and personal accomplishment. Each of these three scores is measured using questions answered with a 7-point frequency scale and the answers range from 0 (“never”) to 6 (“everyday”). “Depersonalization” occurs when a teacher isolates himself from others. This variable is measured with five items on the survey that ask for the frequency with which they experience negative feelings towards other teachers and administrators. “Personal accomplishment” is the self-evaluation of the efficacy of the teacher’s own work. Eight items on the survey test his feelings of personal accomplishment. “Emotional exhaustion” measures fatigue, frustration, and stress. Nine questions on the survey are used to create a score for this component. Since they are measured by frequency, the personal accomplishment scores were reverse-coded to match the consistency of the results (McCarthy, Kissen, Yadley, Wood, & Lambert, 2006). The average of each of the twenty-two questions yields a burnout score for individual participants. One of the previous studies using the MBI to measure teacher burnout yielded a reliability coefficient of .881 while the three individual components obtained coefficients of .859 (emotional exhaustion), .630 (depersonalization), and .623 (personal accomplishment) (McCarthy, Kissen, Yadley, Wood, & Lambert, 2006).

Preventive Resources Inventory (PRI) – Coping Skills

The PRI, created by McCarthy and Lambert (2001), is a survey instrument that measures how well a teacher can prevent stressful situations. It consists of questions requiring a Likert Scale response where participants are asked to describe how well they agree with statements related to the prevention of stress. The PRI instrument measures the following aspects: perceived control, maintaining perspective, social resourcefulness, self-acceptance, and scanning. “Perceived control” is similar to self-confidence and is defined as “measuring perceptions of the ability to influence life events in order to keep daily hassles from becoming stressful” (Lambert, McCarthy, Gilbert, Seabee, & Steinley-Bumgarner, 2006).

“Maintaining perspective” is the belief that one can keep emotions at a manageable level during stressful situations. Participants who have higher scores in this category are more successful in using life experiences in a constructive and beneficial way. “Social resourcefulness” is the act of keeping others close who can act as a buffer during stressful situations. It measures the participant’s perception of how well they can maintain supportive relationships. “Scanning” is the ability for a teacher to anticipate stressful situations before they arise. Questions in that category include “I am good at identifying things that will cause stress in the future” (McCarthy, Kissen, Yadley, Wood & Lambert, 2006).

“Self-acceptance” is the degree to which a teacher can accept any of his/her own shortcomings, especially when dealing with life situations. After measuring those various scales, the number of questions on the PRI made the survey quite lengthy. Due to the length of the PRI, the instrument used in this study is shortened to measure only self-

acceptance. In previous studies “self-acceptance” has been shown to be an indicator for all other variables. Therefore, a condensed questionnaire was used in this study consisting of only the fifteen questions measuring self-acceptance (Lambert, McCarthy, Gilbert, Sebree, & Steinley-Bumgarner, 2006). Previous uses of the PRI have shown favorable reliability in the self-acceptance scale with coefficients of .708 and .848 (McCarthy, Kissen, Yadley, Wood & Lambert, 2006; McCarthy, Lambert, Beard, & Dematatis, 2002).

Variables

Upon completion of the surveys containing the CARD, MBI, and PRI, each participant will receive a score for the following variables: Stress, Burnout, and Self-Acceptance. Additionally, the survey includes questions about feelings of retention. Those questions used a Likert Scale to determine if the teachers have ever wanted to leave their jobs and the frequency with which this feeling occurred. Also added was a question rating the teacher’s satisfaction with the teaching profession. This question will be used to indicate job satisfaction in the statistical tests.

Data Analysis

SPSS 17.0 will be used to analyze the data. Teachers will be stratified in two groups based on experience and an independent t-test will be used to compare the stress and burnout of new and experienced teachers when considering the question: “Do teachers in the first five years of teaching experience higher stress and burnout than their more experienced colleagues?” Teachers with five or fewer years of experience will be placed in the first group while teachers with greater than five years of experience will be

placed in another group. The two groups will be compared to determine if statistically significant difference occur.

A multiple regression test will be used to determine the results of the following question: “What variables contribute to a teacher’s stress and burnout?” The question will be analyzed by two separate multiple regression tests, with stress and burnout as each of the dependent variables. They will both test to determine if the other variable is a predictor of the dependent variable as well as including the number of students taught, years of experience, age, gender, self-acceptance, and job satisfaction to the independent variables.

Another multiple regression will be conducted to determine the answer to the following question: “Are teachers with higher stress and burnout more dissatisfied with the profession?” This question will analyze whether the independent variables of stress and burnout are significant predictors of job satisfaction. The results of this quantitative analysis will be provided in Chapter 4.

Part II: Qualitative Research

Participants

The most recent Teacher Follow-up Survey (2007) indicates that Special Education teachers are the most likely to leave the profession. Beyond that population of teachers, secondary level teachers of core subjects such as mathematics, English, and social sciences are the next highest number of departures. Ingersoll (2003) reported on the prior version of the Teacher Follow-up Survey in which secondary mathematics teachers held the highest percentage of departures. Other studies have reported that teachers of mathematics and science are considered two of the greatest need areas

(Rotherham & Mead, 2003). Due to the focus on mathematics teachers, only the teachers of mathematics were included in the second part of the study in order to gain a better idea of their situation.

Using SPSS 17.0 syntax code, all mathematics teachers will be placed into one of the following four stratified groups based on their stress levels and preventive coping skills (measured with self-acceptance):

- Group 1: Stress level below group average, coping below group average
- Group 2: Stress level below group average, coping above group average
- Group 3: Stress level above group average, coping below group average
- Group 4: Stress level above group average, coping above group average

Using a stratified random sample, one participant from each group will be chosen to participate in an interview for Part 2 of the project.

Analysis

Each teacher will be interviewed using a semi-structured interview protocol, located in Appendix B. In order to determine the major commonalities and differences between the four participants, a thematic analysis will be used to analyze the data (Coffey & Atkinson, 1996). Outlying themes were determined through theory and the interview protocol was designed based on these themes. The themes chosen for the interview protocol were the following: Stress and Coping, Retention, Mathematics, and other miscellaneous questions. The stress and coping questions were designed for the teachers to describe their most stressful days in the profession and to detail how they cope with the stress and relieve the tension after a stressful day. The retention questions were created to determine if the teachers have ever considered leaving the profession. If they answer

“yes,” they will be asked questions about why they wanted to leave and what made them change their mind. In the case they answer “no,” they were questioned about what makes them stay in the profession. Since the teachers interviewed will be mathematics teachers, they will be asked some questions specific to their field. For example, they will be asked if they feel their needs are different than the needs in other areas. They will also be asked about the reported mathematics teacher shortage and they will be given the opportunity to share ideas and thoughts about this shortage. Additionally, this section inquires about the teachers’ college preparatory courses and how it affected their preparation for teaching mathematics. Finally, the additional questions that will be asked of the participants will pertain to other ideas such as professional development, collaboration within the teachers at their school, “perks” and “downfalls” of teaching, high-stakes testing, and questions about salary. The participants’ responses will be entered into a meta data analysis table created in a spreadsheet to compare and contrast the results from each theme.

The data collected from this portion of the project will be used to study the following questions: “From the viewpoint of the teachers, what are school administrators doing to help reduce stressors and increase retention?”; “What efforts are being made to retain mathematics teachers?”; and “Do mathematics teachers believe they have the same needs as teachers in other disciplines?” The analysis of this data will be presented in Chapter 5 with further discussions in Chapter 6.

CHAPTER 4: QUANTITATIVE DATA ANALYSIS

This chapter will describe the results of the quantitative data collected during the study. Responses from the surveys collected from the participants were analyzed using correlations, t-tests, and multiple regressions. Further discussions will be provided in Chapter 6.

Participants

After all appointments with the workshop leaders had been made and surveys collected, 385 teachers had participated in part I of the project. Teachers of AP courses often are more experienced teachers, but there was still a reasonable sampling of teachers with fewer than six years of teaching experience (36.3%). Table 4.1 describes the distribution of the sampling of teachers surveyed for this portion of the study. Participants were instructed to leave any question blank they did not feel comfortable answering. The percentages not totaling 100% are due to the participants who chose not to respond to those individual questions. When questioned about their teaching license and how it was obtained, there was a higher percentage of teachers who chose not to respond. This response rate can indicate a lack of clarity with the question and this should be addressed in future uses of the instrument. Approximately half of the teachers attending the workshop were local commuters to the workshop from the state holding the workshops, and approximately ninety percent of the participants were teachers from that state. The other participants included teachers from other countries.

Table 4.1

Demographics of participants surveyed in Part 1

	Quantity	Percentage
Gender		
Male	145	37.7
Female	232	60.3
Years of Experience		
0-5 years	145	36.3
6-10 years	83	21.6
11-15 years	75	19.5
16-20 years	34	8.8
21-25 years	18	4.7
26+ years	29	7.5
Number of Schools Worked In		
0	16	4.2
1	110	28.9
2	98	25.8
3	72	18.9
4	45	11.8
5	18	4.7
6+	21	5.6
Highest Degree Held		
Associate's	1	0.3
Bachelor's	197	51.2
Master's	170	44.2
Doctorate	16	4.2
Currently Working on Degree		
Yes	52	13.5
No	331	86.0
Hold Valid Teaching License		
Yes	337	87.5
No	35	9.1
License Obtained		
Traditional Method	229	67.9
Lateral Entry	92	27.3
Did not Respond	16	4.7

Age		
21-25	51	13.2
26-30	68	17.7
31-40	124	32.2
41-50	79	20.5
51-60	51	13.2
61+	11	2.9
Ethnicity		
Caucasian	324	84.2
African American	25	6.5
Hispanic	9	2.3
Asian	5	1.3
American Indian	5	1.3
Multi-Racial	2	.5
Other	8	2.1
Type of Schedule Used		
4x4 Block	224	58.2
A/B Day Block	32	8.3
Hybrid Block	36	9.4
Traditional	75	19.5
Other	16	4.2
Subject Taught		
Math	73	18.9
History	87	22.6
Foreign Language	21	5.5
Science	104	27.0
English	80	20.8
CTE	6	1.6
Art	1	.3
Other	2	.5

There was a wide range of participants involved when compared based on demographic information as well as details of their teaching career, such as how they obtained their license and what type of schedule they teach with at their schools.

Teachers with a valid teaching license either obtained their license in a traditional manner when they graduated from a college or university or they obtained it through a lateral entry process by taking certification courses after they began their teaching careers. The teachers surveyed taught using several different scheduling patterns at their individual schools. A 4x4 block schedule was the most prevalent type of schedule. In a block schedule, students are in each individual class longer and in return, only attend four courses a day. A 4x4 block schedule is when the students attend the same four classes for one-half of the school year and then attend four different courses for the other half of the school year. Other versions of a block schedule would be an A/B block or a hybrid block. In an A/B block, the students would attend four courses each day but alternate days with four other courses, which results in eight courses being studied during a given grading period. A hybrid block schedule is a combination of a 4x4 block and an A/B block where some courses meet daily and others meet bi-daily. The other option for schedule is a traditional schedule where the students attend shorter classes, but they attend six to eight courses a day.

The dependent variables in the study were explored for normality and all statistical analyses were conducted using SPSS version 17.0. All skewness and kurtosis levels were within normal ranges on the variables with each value being less than the absolute value of one. The stress variable only contained three outliers with each of them being participants with extreme low stress levels. Conversely, the burnout variable also contained three outliers, but they were three participants with extreme high levels of burnout. The self-acceptance variable only contained two outliers and those consisted of participants with extreme low self-acceptance scores. The tests were conducted without

these outliers, but no significant impact was found by eliminating those scores. The job satisfaction variable also contained three outliers consisting of three participants who stated they were “very dissatisfied” with the teaching profession. However, due to the nature of the single question, this was expected and those outliers remained in the dataset.

The means and standard deviations of the dependent variables are reported in Table 4.2. Burnout scores range from zero to six with six being the most “burned out.” “Self-acceptance” ranges from one to five with a higher score indicating more sufficient preventive coping skills. “Job Satisfaction” was the result of a single scale score where a score of zero meant “very satisfied,” one was “somewhat satisfied,” two was “somewhat dissatisfied”, and three was “very dissatisfied”. Finally, each participant was given a stress score which was the difference of their perceived demands and their perceived resources. Due to the order of the variables in the difference, a positive score would indicate the teacher feels the demands are higher than the resources which would reveal higher stress.

Table 4.2

Means and Standard Deviations of Dependent Variables

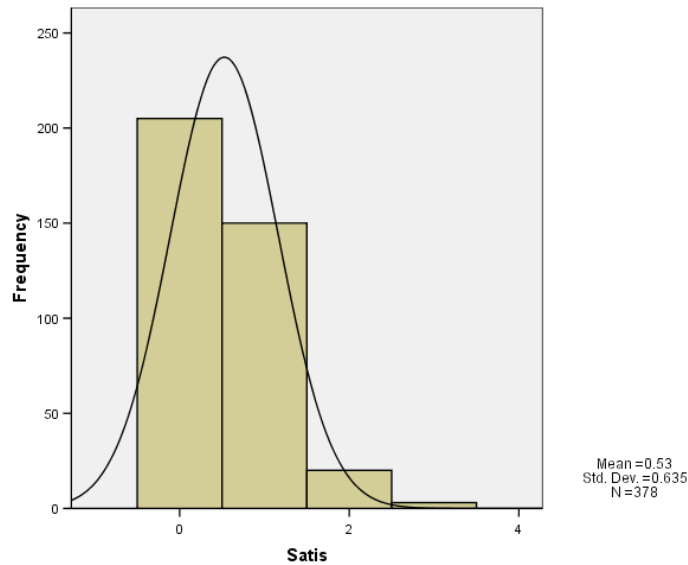
<u>DV</u>	<u>M</u>	<u>SD</u>
Burnout	1.91	.82
Stress	-.209	1.05
Self-Acceptance	4.06	.483
Job Satisfaction	.53	.635

Reliability and Normality

Job Satisfaction

All teachers participating in the study were asked how satisfied they were with the teaching profession. The answer choices ranged from 0 (very satisfied) to 3 (very dissatisfied). Perhaps their commitment to teaching was an indicator of their job satisfaction, but 93% of the teachers surveyed stated they were either “very satisfied” or “somewhat satisfied” with the teaching profession. This could be the result of sampling bias because students enrolled in AP courses are generally college-bound students who tend to be more dedicated to education. This could serve as a reason that this particular sampling of teachers appeared to be more satisfied in teaching as a profession, but this was not unexpected. Due to this situation, the data for this variable was skewed to the right. Seven participants chose not to answer the question resulting in $n=378$. The frequency histogram is shown in Figure 4.1. Due to this outcome, job satisfaction will not be used as a variable to stratify and conduct group comparisons by satisfaction levels; it will be used only as an outcome variable in an effort to determine whether other factors can contribute to a teacher’s job satisfaction.

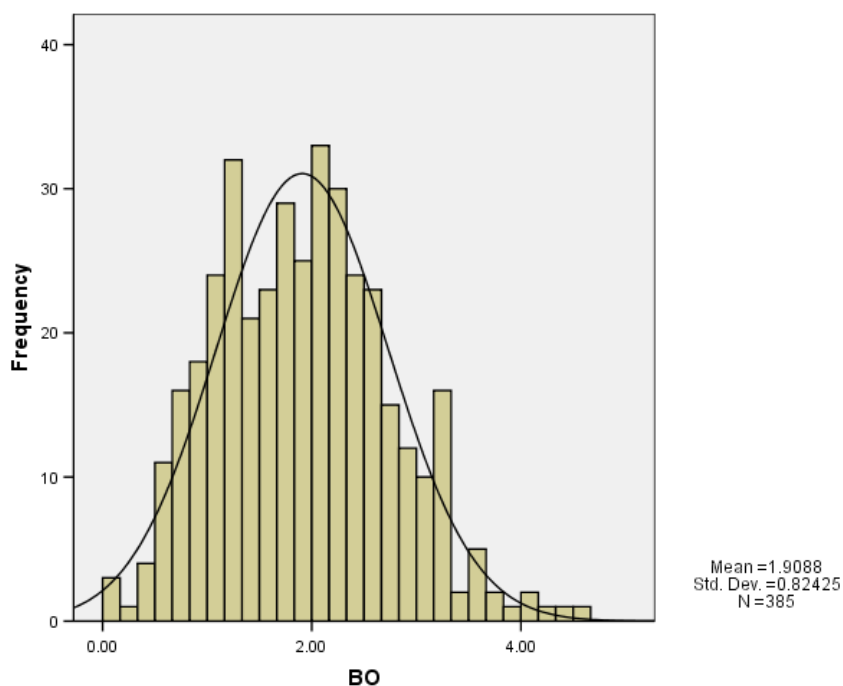
Figure 4.1. Frequency histogram for job satisfaction



Burnout

The three individual surveys were analyzed for reliability. It was found that the reliability coefficients were comparable to those found in previous studies. From the MBI, Emotional Exhaustion ($\alpha=.868$), Depersonalization ($\alpha=.718$), and Personal Accomplishment ($\alpha=.633$) all posted moderate results for Cronbach's alpha. When combined for a "burnout" score this was found to be even more tenable ($\alpha=.895$). No reportable skewness or kurtosis was found in the burnout variable. This can be seen from the frequency histogram and normal curve found in Figure 4.2.

Figure 4.2. Frequency Histogram for Burnout



Stress

The two components of the stress score for each teacher posted strong reliability coefficients. The teachers' self-reported appraisal of resources ($\alpha=.910$) and appraisal of demands ($\alpha=.930$) combined generate a stress score for each participant. When the CARD was designed, the creators found that teachers whose self-reported demands were greater than their self-reported resources ($D>R$) suffered more stress than those teachers who felt the resources surpassed the demands ($D<R$) (Lambert, McCarthy, & Abbot-Shim, 2001). Because of this correlation, they found the difference between the two scores adequately measured an individual teacher's stress. In this study, the resource score was subtracted from the demand score to determine a stress score for each teacher. A positive number would indicate higher stress than those teachers acquiring a negative

number. The bivariate correlation between resources and demands was found to be small ($r=.104$), but when combined to create a stress score, they create a high reliability ($\alpha=.895$). The frequency histograms and normal curves for resources, demands, and stress are all found in Figures 4.3, 4.4, and 4.5, respectively. It was found that the skewness and kurtosis of these scores were all within normal ranges. One participant skipped an entire page of the CARD resulting in one missing result for resources as well as a missing result for stress.

Figure 4.3. Frequency histogram for Resources

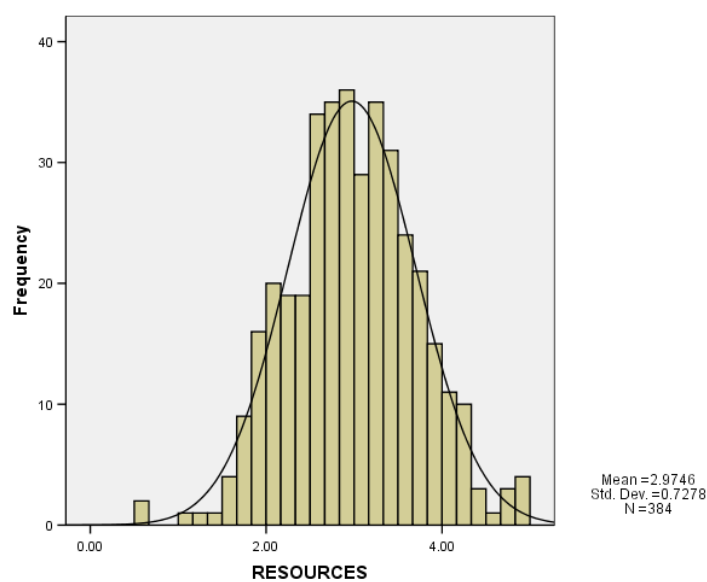


Figure 4.4. Frequency histogram for Demands

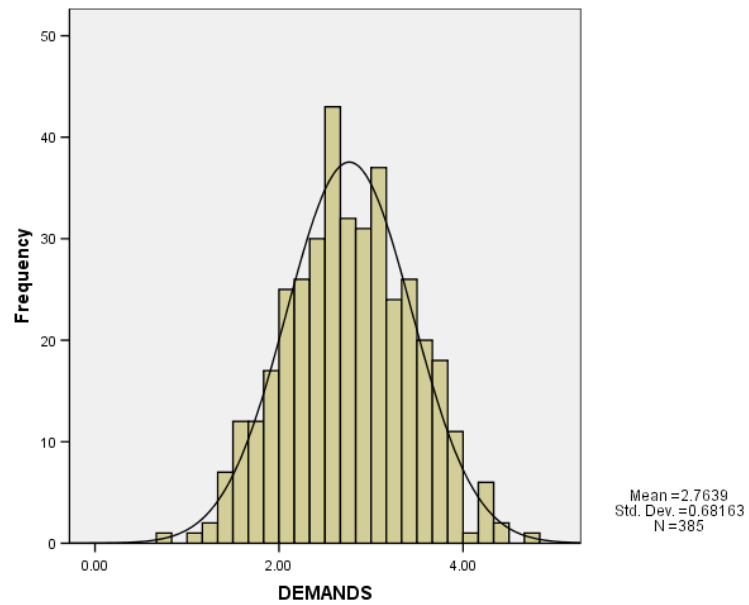
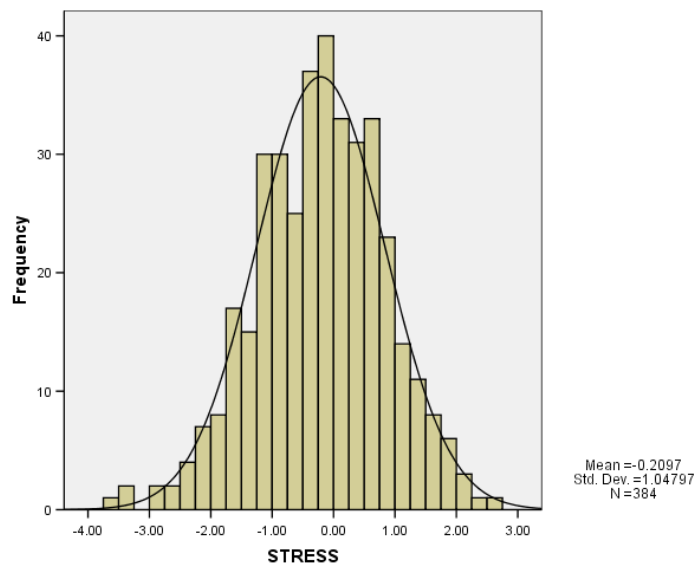


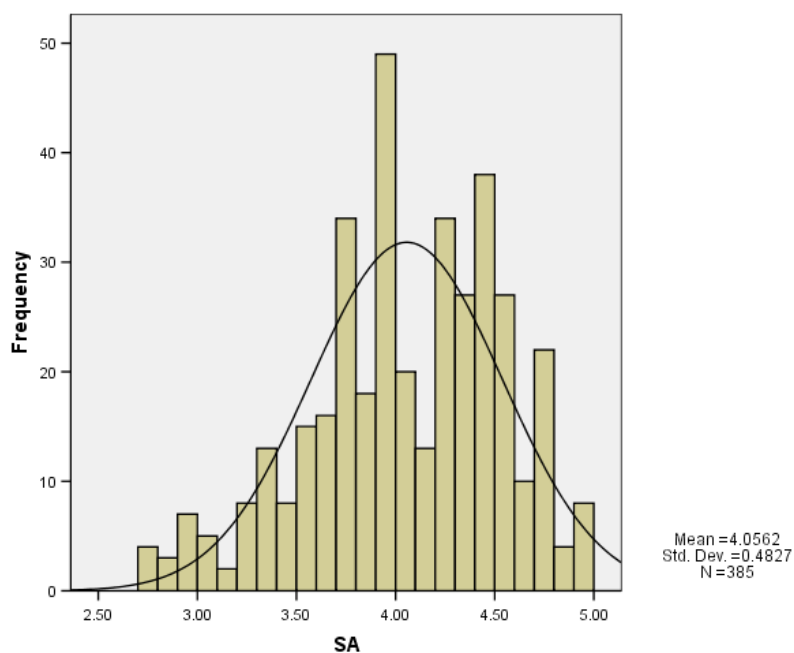
Figure 4.5. Frequency histogram for Stress



Self-Acceptance

The shortened Preventive Resources Inventory was found to be a valid test of self-acceptance ($\alpha=.846$). Each question presented a different idea with extreme and moderate answer choices using a Likert Scale. In ten of the fifteen questions there was at least one participant who selected the most extreme answers. In five of the questions none of the participants made the choice of “strongly disagree.” The frequency histogram and normal curve are shown in Figure 4.6. There was no significant skewness or kurtosis of self-acceptance indicating normality in the data.

Figure 4.6. Frequency histogram for self-acceptance



Analyses

Stress and Burnout of New and Experienced Teachers

An independent t-test was conducted to determine if there is a significant difference between the stress and burnout levels of new and experienced teachers. The

descriptive statistics are reported in Table 4.3 below. The means indicate a very small difference between the two groups' stress scores and only a slightly higher burnout score for the novice teachers. When the t-tests were conducted, however, it was found there is no statistically significant difference in either score for the two groups ($t_{str} = 1.541$, $p = .456$, $t_{bo} = 1.987$, $p = .5$).

Table 4.3

Descriptive statistics of stress and burnout scores of new and experienced teachers

		<u>N</u>	<u>M</u>	<u>SD</u>
STRESS	0 (<=5 yrs)	145	-.104	.991
	1 (>5 yrs)	238	-.274	1.080
BO	0 (<=5 yrs)	145	2.020	.854
	1 (>5 yrs)	238	1.849	.797

Stress, Burnout, and Job Satisfaction

A multiple regression analysis was conducted with the dependent variable being the participants' responses on a single item about job satisfaction and the independent variables being burnout and stress. The independent variables were found to be moderately correlated ($r = .502$), but the Variance Inflation Factor remained at a reasonable level ($VIF = 1.329$). The regression analysis was found to be significant ($R^2_{adj} = .337$, $F = 96.77$, $p < .001$) and both stress ($\beta = .129$, $p = .008$) and burnout ($\beta = .508$, $p < .001$) were found to be significant indicators of job satisfaction with burnout being a stronger indicator of job satisfaction. The results reveal that 34% of the variance in job satisfaction of teachers in this study can be attributed to stress and burnout.

Dissatisfaction in a profession can lead to departures by the professionals in that career.

Although 34% may not seem like a large percentage of variance, it could mean a large

number of teachers that continue teaching and opt not to leave the profession. That variance indicates the possibility of a substantial number of teachers remaining in the profession if a remedy is found to reduce stress and burnout. This could result in more successful teachers, improvement of schools, and better educated students.

Factors Contributing to Stress and Burnout

Two more multiple regression analyses were used to determine which factors contribute to stress and burnout among the teachers in the study. The tests are outlined in Table 4.4 below.

Table 4.4

Variables of Multiple Regression Analyses

	DV	IV
Test 1	Stress	Number of Student Taught Year of Experience Age Gender Self-Acceptance (Preventive Coping Skills) Job Satisfaction Burnout
Test 2	Burnout	Number of Student Taught Year of Experience Age Gender Self-Acceptance (Preventive Coping Skills) Job Satisfaction Stress

Correlations

Pearson correlation coefficients were computed among the dependent variables. The results are reported in Table 4.5 below. “Students” refers to the number of students the teacher taught in the previous school year, “yrs. exp.” is the years of teaching

experience for the teacher, “SA” is self acceptance (indicates preventive coping skills), “satis” is self-reported job satisfaction, and “BO” is the burnout score for the teacher.

Table 4.5

Pearson Correlation Coefficients of Independent Variables

	Students	Yrs. Exp.	Age	Gender	SA	Satis	Stress	BO
Students	1	-.009	-.031	-.070	-.037	.136**	.096	.119*
Yrs. Exp.	-.009	1	.741**	.003	.116*	-.143**	-.186**	-.128*
Age	-.031	.741**	1	-.075	.104*	-.140**	-.125*	-.130*
Gender	-.070	.003	-.075	1	-.049	.051	.080	.098
SA	-.037	.116*	.104*	-.049	1	-.401**	-.314**	-.540**
Satis	.136**	-.143**	-.140**	.051	-.401**	1	.382**	.572**
Stress	.096	-.186**	-.125*	.080	-.314**	.382**	1	.499**
BO	.119*	-.128*	-.130*	.098	-.540**	.572**	.499**	1

** Significant at the .01 level

* Significant at the .05 level

The correlation coefficients indicate significant bivariate correlations between some of the independent variables. Job satisfaction tends to correlate significantly with all variables, with the exception of gender which does not correlate with any of the variables. Additionally, the teacher’s years of experience, self-acceptance, age, and stress all correlate with each of the variables, with the exception of the number of students taught and gender.

Test 1, Stress

Mahalanobis’ distance was computed to determine if multivariate outliers occurred in the dataset. Three participants were found to be outliers ($p < .01$) and they were removed from the dataset. Additionally, seventeen other participants failed to

receive a score for at least one of the variables which resulted in missing data for those participants.

From the Pearson correlation coefficients found in Table 4 above, it was determined that years of experience, age, job satisfaction, self-acceptance, and burnout were all deemed significantly correlated to stress. Variance Inflation Factors (VIFs) were computed and none were found to be unacceptable. The highest VIF was found to be for age (VIF = 2.263). The results of the multiple regression were found to be significant ($R^2_{adj}=.263$, $F=19.527$, $p<.001$). The results indicate that years of experience, job satisfaction, and burnout are the statistically significant predictors of stress with number of students, age, gender, and self-acceptance being not significant. The standardized and unstandardized betas are reported in Table 4.6 below.

Table 4.6

Results of Multiple Regression Test 1

	Unstandardized β	Standardized β	t	Sig.	VIF
Num Students	.002	.073	1.594	.112	1.048
Yrs. Exp.	-.019	-.156	-2.313	.021	2.252
Age	.062	.077	1.139	.255	2.263
Gender	.101	.047	1.035	.302	1.023
Satis	.212	.129	2.293	.022	1.563
BO	.492	.385	6.280	.000	1.850
SA	-.025	-.012	-.214	.831	1.447

Test 2, Burnout

When analyzing this multiple regression, eighteen participants were not included due to the lack of a score for one of the independent variables. Mahalanobis' distance was

computed to find multivariate outliers. Two participants were deemed outliers ($p < .01$) and both were removed from the dataset.

Similar to the first test, all of the independent variables, except gender, were found to have bivariate correlations with burnout. The Variance Inflation Factors were again found to be within reasonable ranges with the highest VIF (2.285) being for years of experience. The results of this multiple regression were also found to be significant ($R^2_{adj} = .504$, $F = 53.791$, $p < .001$). The outcome of the multiple regression analysis reveals that job satisfaction, self-acceptance, and stress are the significant predictors of burnout with number of students, years of experience, age, and gender not being found significant. The standardized and unstandardized betas are reported in Table 4.7 below.

Table 4.7

Results of Multiple Regression Test 2

	Unstandardized	Standardized			
	β	β	t	Sig.	VIF
Num Students	.001	.041	1.095	.274	1.051
Yrs. Exp.	.003	.028	.497	.620	2.285
Age	-.020	-.031	-.557	.578	2.270
Gender	.056	.033	.888	.375	1.021
Satis	.429	.332	7.819	.000	1.324
SA	-.562	-.331	-8.052	.000	1.236
Stress	.207	.263	6.390	.000	1.246

Further analysis of the results along with the results of the qualitative portion of the study will be discussed in Chapter 6 of the study. Chapter 5 will present the results of the participant interviews.

CHAPTER 5: QUALITATIVE DATA ANALYSIS

This chapter discusses the results of the interviews of the four participants chosen for telephone interviews. Teachers of mathematics were chosen for the interviews in order to create a starting point for comparison of ideas of teachers in other discipline fields. Final discussions and analyses are in Chapter 6.

Participants

Participants were asked to provide their contact information on the final page of the survey in the event that they were chosen to participate in Part 2 of the study. They were given the option of remaining anonymous by leaving this information blank should they not want to be contacted for future questions. Once collected, 245 teachers (64%) included contact information for future questions. The mathematics teachers were stratified based on their stress levels and preventive coping skills. Once stratified, seventeen mathematics teachers were in Group 1, twenty-four in Group 2, twenty-two in Group 3, and only nine in Group 4.

The first participant chosen in Group 1 was a personal friend of the researcher. Since they may have been privy to additional information the other participants were not, this participant was not selected and the next randomly-selected participant was contacted. Additionally, the first participant selected in Group 4 did not respond, so a second teacher randomly selected from that group was interviewed. All teachers interviewed resided at a great distance from the researcher, so the interviews were

conducted via telephone and recorded for transcription. Appropriate steps were taken to ensure the anonymity of the participants.

Group 1 (Low Stress, Low Coping) Representative: Candace

Candace was chosen as the participant from Group 1. She is a public school teacher that has been teaching for thirty years at the same school. Her school is not in the state in which she attended the AP workshop. Her school uses a traditional schedule. Candace holds a Master's degree and stated she is very satisfied with the teaching profession.

Group 2 (Low Stress, High Coping) Representative: Maggie

Maggie has only been teaching for four years and has taught at only one school. She teaches at a fine arts magnet school outside of the state in which the AP workshop was held. She holds a master's degree in Mathematics Education. At the time of the interview was working towards an educational specialist degree and was contemplating entrance into a doctorate program in the future. Maggie's school also uses a traditional schedule. She stated she is only somewhat satisfied with the teaching profession.

Group 3 (High Stress, Low Coping) Representative: Becky

Becky has been a teacher for nineteen years and has taught at five different schools. At the time of the interview she taught at a public school in the state in which the AP workshop was held. Her school operates on a 4x4 block schedule. In addition to teaching Becky had worked in other professions for seven years. She holds a bachelor's degree in Mathematics. Becky also stated to be only somewhat satisfied with the teaching profession.

Group 4 (High Stress, High Coping) Representative: Janel

Janel works at an out-of-state private school that uses a hybrid block schedule. She has been a teacher for only three years, but has taught at two different schools. The first school at which she taught was in the state where the AP workshops were held, but changes in her life required her to move out-of-state. She worked at another profession for one year between her two teaching assignments. Janel holds a bachelor's degree in Statistics and Mathematics Education. She indicated she is very satisfied with the teaching profession.

Stress and Coping

Different Schools, Different Stress

With the exception of Candace, who has taught at the same school for thirty one years, the teachers all felt that the stress levels were different at each school where they have taught. Maggie has been teaching for only five years, all at the same school, but she could still remember vividly her student teaching experience and how the stress level at that school was not as high as the stress levels at her current school. At the time of the interview, she was teaching for a top-ranked magnet school in her state. While she stated that the pressure for teachers to produce top ranked results was significant, she also stated that it is acceptable as a tradeoff since they taught "great students."

Becky spent some time teaching at two middle schools before she settled into teaching high school. She described her time while teaching middle school as "doing time" because it was her first four years of teaching and she felt she was being suppressed because she did not have enough experience to find a job she was truly qualified for.

Middle school to me was just a far more stressful period. That is not my first love, that's not what my training was for, but it was where I could find a job. You know I always joke about that, I refer to those first four years of teaching as 'doing time.'

Janel had more difficulty discussing the difference between the stress levels at the two schools where she had taught. She taught at the first school for only one year before getting married and moving out-of-state thus having to change jobs. She agreed that she was much more stressed during her first year of teaching, but she felt that her judgment might have been clouded by the fact that it was her first year of teaching and not necessarily the school where she taught. She feels the small age difference between her and her students played a role in her stress level that year, as well as the fact that she had to study the material she was teaching every night in order to stay current with her lesson plans.

Stress Relief: Other Teachers, Family, and a Nap

The teachers were asked what methods they use to relieve stress. The overwhelming response centered on the support of other teachers and that of their family. Becky, Janel, and Maggie all agreed that being around other teachers with whom they could decompress was the best form of stress relief for each of them.

Janel stated that a stressed teacher is only detrimental to their students. So, she felt it was most important to take care of herself and calm herself down so she can be more supportive of her students. When asked about the most stressful days at work, both she and Maggie stated they went home and took naps to help them feel refreshed.

Becky was perhaps the most candid of all of the teachers about her methods of relieving stress. She passionately described how her husband, grandson, her dog, as well as her religion get her through difficult days.

I go home and I have a wonderful husband who will let me rant and rag, let me blow it out, and I know this will probably sound crazy to a lot of people, but there is nothing more relaxing than curling up with my dog...and just petting her and talking to her and stroking her. She's always happy to see me, animals are wonderful you know, and I go to see my grandson a lot, if I've had a really, really bad day I go to see my grandson on the way home and sit...and if he's sleeping I can just sit and look at him sleep and all is right with the world you know? And...I am very active in church, I prayed a lot this year and that's no lie, I have probably prayed more this year.

Test Scores and Administration

All teachers interviewed were asked, "Do you feel the pressure of high stakes testing causes teachers to leave the profession?" None of the teachers hesitated before they said "Yes." During the conversations with these four teachers, the concern over test scores was a constant reference in their stories and feedback. Their responses ranged from a "laissez faire" attitude to one of being extremely nervous. The underlying concern, however, was the same: Administrators put tremendous pressure on teachers to produce high test scores.

Candace articulated the idea simply by stating that the pressure on testing forced teachers to teach how to take the test and, because of this, teachers lose autonomy in the classroom. Becky also expressed the idea that standardized testing costs a tremendous amount of money for school systems and too much time and money is "wasted on testing." Janel teaches in a private school where state standardized tests are not required. She has friends in the profession in public schools, however, and they have been told that their job status depended on their students' test scores. Maggie, the teacher in the top

ranked school, almost yielded to her administrator's pressure for test scores. She spoke about how she almost quit teaching the previous year because of the tremendous pressure.

That's one reason I thought about leaving. I don't know why, but last year it really got to me. It was almost too much to handle, but again I think that might be a personality issue too...is that I take it too personal, that I have to just...I really have to know that if I try my best, I can't control whether someone sleeps through the test.

While administrators can place enormous pressure on teachers to produce high test scores, there are other things that they can do to help alleviate stress on teachers. Teachers expressed the importance of discipline support from administrators. This support allowed teachers to teach without disruptions from those who did not wish to learn. Candace stated that in addition her administrator attempted to reduce the amount of paperwork and extra duties in which they must participate. Similarly, Becky appreciated that her administrators did not require them to attend every after-school event and meeting. This allowed her more time for doing her job completely.

Janel seemed to have one of the simplest suggestions for helping teachers alleviate stress from administrators: "I think they have to remember what it was like when they taught." She says that most administrators were previously teachers and many of them may have forgotten how demanding the profession can be. Maggie also added that simple encouragement also can increase the confidence level of teachers.

I think they could do a better job of encouraging. I think sometimes they get caught up with their people...breathing down their throat about how numbers have to be. Then they're breathing down our throat about how numbers have to be and they forget to say 'hey, we think you're doing a really great job.'

Mathematics Teachers

Needs of Mathematics Teachers

The teachers interviewed did not seem to feel that mathematics teachers had *more* needs than other teachers, but they have *different* needs. The most prevalent need mentioned by these teachers for mathematics teachers was the need for specialized professional development. Becky and Maggie both noted that mathematics courses undergo more curriculum changes than courses in other disciplines. Therefore, they stated, there is a greater need for professional development when these changes occur. Maggie also stated that mathematics teachers have to participate in after-school tutoring and remediation sessions more often than teachers in other disciplines. Teachers of other disciplines often used this extra time for their lesson planning and grading.

Mathematics Teacher Shortage

Only one teacher interviewed felt the need to increase the salary for teachers of mathematics. Others felt a differentiated salary increase was not fair to teachers in other disciplines who may work just as hard as a mathematics teacher.

Janel proposed a novel concept for retaining mathematics teachers. She suggested letting mathematics teachers specialize in a specific area of mathematics. Many teachers of history and science specialize in one aspect of that discipline and she felt that mathematics teachers could benefit from the same process. She stated that if mathematics teachers teach only in one area such as Algebra, Geometry, Calculus, or Technical Math, then they would not feel they are “spread too thin” among their courses. This could result in a stronger ownership of courses and more successful teachers.

Candace discussed the need for more respect in the teaching profession by stating the following: “If your doctor says something, you would never think to refute them, but if a teacher does, a lot of time parents don’t even think twice about saying ‘I don’t think that’s right.’” This lack of respect from parents was a common issue among all of the interviewees. All teachers interviewed agreed that communication with parents is not a desirable part of the job. Becky and Janel both recounted instances within the last year where parents were excessively rude with them to the point at which they could not continue the conversation. In Becky’s case, the parent wanted a conference with her, but she refused the conference unless an administrator was present. Maggie believed her personality causes her to dread this portion of her job as she did not like confrontation and admitted that communicating with parents usually involved some sort of confrontation. She dismissed this issue; however, and stated that “no job is perfect.”

College Preparation

The participants in the study were asked about their college preparatory classes for becoming teachers. They were asked if they felt the mathematics courses they were required to take as undergraduate students were too difficult for potential teachers. They all agreed those courses were very difficult for them at the time, but none seemed to think they were not necessary. Candace and Maggie both stated that they felt the courses were relevant to them later in their careers because they helped build logical connections between mathematical topics and the courses prepared them to be better problem solvers. Maggie joked that she felt they “made us take those advanced mathematics courses in college in order to feel what it’s like to not understand something so we can sympathize with our students.”

Janel was the only participant who inferred that she did not think that her higher level mathematics courses were necessary. She never specifically stated she felt they were not needed. Instead, she expressed her disappointment in the lack of pedagogical courses that trained her how to *teach* mathematical concepts. She felt an exchange would have been optimal where they reduced the number of mathematics content courses and replaced them with mathematics pedagogical courses.

I feel like the downside to the math education programs in colleges, as much as I think they do a great job on the education side, we take all these advanced math classes and then we go teach like algebra one and no one's told us how to teach factoring. You know we did all these advanced things and then we go back and teach the most basic, and so I think that sometimes it is hard to remember how to go back and teach the way we can do it.

Teacher Retention

Salary

None of the teachers felt the salary was sufficient to support a family and have financial security. Maggie was the only teacher who stated that she felt that the salary was adequate. She did admit that she was a single female who did not have a family to support and she felt that if she did have a family then she did not feel it would be sufficient. When asked if they could place a number on what they felt their salary should be based on their specific years of experience, none could do so. However, they felt they just should be comparable and competitive with other professions external to education. Janel felt that there were too many teachers of mathematics attracted to other professions because education could not compete with outside industries and their compensation packages. Candace also commented about the lack of value on education.

We have to put more value on education. I mean when you have people that enter the sports field and they make more money in a few years that a teacher would

make in a lifetime, then we are saying that that is a more valuable profession; That our country thinks...that some type of extracurricular thing is more important. If you look at the Asian communities, they value education, and you know they are always pushing for their students, or their children to excel, and that it's not a stigma to be very educated. So I think it has to begin in the lower grades, with parents and children and our society really.

Candace and Janel both commented that teaching is not a profession that you enter for the salary. They said that teachers are aware of the salary before going into the profession and there are other reasons why a person could become a teacher. Candace states "I think the most important thing when you do try to go into a career, is to go into something that you really, really, care about...then you won't worry about not having the money." Janel's response was "anyone I believe who really wants to be a teacher because they want to be a teacher, doesn't really do it for the money because you know going in that there's not going to be a lot."

Worst Attributes of the Profession

Each teacher was asked to describe the worst element of the teaching profession. None of the teachers were very informative in their responses, and they all struggled with coming up with responses. Candace replied that classroom management and discipline of the students was the worst part. Becky felt that the schedule was not convenient if you had sick children. Maggie responded with specific ideas, but her nonchalance with those ideas seemed to reveal she was not overly passionate about those ideas. She suggested that she would like to leave campus to go to lunch each day and that she did not appreciate having to complete "word walls" and "essential questions" in her classes. Janel, who worked in a private school setting, commented on the additional pressure on teachers in her school for the students to make all A's. Since the students' families pay

for them to attend the school, there was a higher expectation for them to pass and do well in all of their courses.

Perks of the Profession

Unlike the previous section when teachers were asked to describe the most unfavorable elements of the profession, when the teachers were asked why they remain in the profession and what the “perks” of the profession were, they were all honest, candid, and vivid in their responses. Overwhelmingly, all teachers agreed that they teach “for the students.” Maggie commented that the health benefits and retirement plans were very helpful. Janel liked the fact that teaching was more casual and less formal than other professions. Becky loved the longer holidays and extra days off, even though she took work home with her over the breaks. She also commented that even if the profession was not convenient if one had an emergency, such as a sick child that, overall, the profession is very “family-friendly.”

Even though a number of tangible results were discussed, they all expressed their love for teaching and the students. Becky stated that she could go home frustrated, aggravated, and ready to quit and her husband would ask “Tell me again why you teach?” She would respond:

I love the kids, they’re not students to me, they’re my children and ever since I’ve gotten back into high school they are my children...I go back the next day because I don’t believe that anybody else will take as good of care of my children as I will.

She also stated when asked about the perks that “I get to spend my day with kids everyday and I love it.” She went on further to say:

I don’t know, I think the perks of teaching is that if you love kids it’s a way to spend time with kids and hopefully feel that you can make some kind of

difference in their lives...I mean we spend a lot more time with them than their parents do at this high school age, a lot of them, not every one of them, but a lot of them, so it's the opportunity to give them a positive influence.

Candace described the feelings she had when her students come back to the school to visit after they have graduated.

When they come back and talk to you, that's when you actually know that effect, that you have touched somebody's life, and then that gets passed on to the next generation, so even if I, if I do die, I know that a little part of me is all these people. That's how I think about it.

Janel saw as a reward when students made good grades in her class. This reward, to her, outweighed the less desirable parts of the profession.

I just feel like the reward is greater...when that kid gets an A on the test or I just love being around the kids so...I can deal with all the rest of it because I feel like there's a reward there you know. I feel satisfied at the end of the school year...when I see the kids graduate...I feel like I accomplished something.

When asked why she remains in the teaching profession, Maggie jokingly responds "because I signed a contract." She then describes the reason as:

When it comes down to it, it's not about the test scores and when I really think about it, it's more about the students and I still enjoy interactions with students and making those interactions every day. When it comes down to it, that's what I always get down to, that's why I stay, because that's why I got into teaching. It's not because I have this great love for math, like I am still trying to decide if I even like math. It's just that I got into teaching for the students and so that's why I continue to stay.

Advice for Future Teachers

The Teacher Follow-up Survey found that over one-third of teachers leave the teaching profession or change schools after their first year of teaching (Cox, et al., 2007). The first year of teaching is very critical and Maggie discussed her first year of teaching. She made a promise to herself that she was going to give it two years before she made a decision of whether she would stay or go.

I just I knew that the first year was supposedly really, really, really hard and so I said ‘well after two years I’ll make a decision,’ and then after the second year I ended up loving it, and really every time I think about what else I would want to do, I can’t ever really come up with anything.

Candace offered advice to her students that are considering entering the teaching profession.

I tell my students...that are going into teaching, I said ‘you really have to be someone who can multi task, and if you can’t multi task you’re going to find it very difficult to teach, because you have to be able to carry on a conversation, think ahead, and also be someone who’s going to be able to be aware of what’s occurring around you in your classroom.’

Overall, Janel described the stress as the following: “there are great days and then there are really stressful times, I just think it kind of comes and goes. I think if it was like super stressful everyday there’s no way I could do it.” As Maggie states, “The pros always out weight the cons.” In the end these teachers continue in education apparently for the love of the profession and the students.

CHAPTER 6: DISCUSSION

This chapter includes discussions and further analysis of the quantitative and qualitative portions of the study. The integration of the two parts is included in the discussions in this chapter. The chapter concludes by revisiting the six original research questions and the results as well as final remarks by the researcher.

Years of Experience

Research shows that up to fifty percent of teachers leave the profession by the close of their fifth year of experience (Hanushek, 2007, Ingersoll & Smith, 2003). The Teacher Follow-up Survey reports the number of teachers that leave after the first year, the number that leave between the first and the third years, between the fourth and the ninth years, and other more experienced groups. It is unclear if this designations of the groups were designed based on theory or in an attempt to make the groups symmetric. Based on a number of other studies, it was decided that for this study “novice” teachers would be those with up to five years of experience and that “experienced” teachers would be those with greater than five years of experience.

The t-test showed that the teachers in these two groups determined by experience did not have a statistically significant difference in their stress and burnout scores. Teaching is a stressful career at all levels of experience. Perhaps the causes of stress are different for those teachers in their inaugural year of teaching than for those in their twentieth year of teaching. More experienced teachers generally carry more non-

classroom duties such as committees and coaching whereas less experienced teachers may struggle more with teaching responsibilities.

In the qualitative portion of the study, Becky specifically stated that she seriously considered leaving the profession after her fifth year of teaching.

I had all of the bottom barrel weakest classes, had no bright spot in my day. That was the year I had three students that went to prison, you know, and it was just emotionally, it just tore me apart and I was frustrated, I felt like I was working myself to death and they weren't getting any better, like I was working really hard but the kids weren't working very hard...and no matter what I tried, I would try games, I would try you know different approaches...oh it was crazy and it was...just in a very difficult situation where I just thought, I do not know if I want to do this the rest of my life.

Maggie also discussed thoughts of leaving the profession. She seriously considered leaving at the end of her fourth year due to pressure from her administrators to produce high test scores.

It is interesting to note is that when the number of years of experience was included in the multiple regression tests, it was found to be a significant predictor of stress, but not a significant predictor of burnout. This indicates that all experience levels of teachers may suffer from burnout. The negative beta values in the multiple regression test for stress indicate that as a teacher's experience level goes up, the stress score tends to go down. This anomaly might be explained by the choice of the cutoff point between novice and experienced teachers and that it might need to be lowered. Perhaps novice teachers should be defined as those with up to three years of experience instead of five. To further investigate this concern, a test was conducted using this data that presented inexperienced teachers as those with less than three years of experience and experienced teachers as those with three or greater years of experience. However, conducting the test

with this particular stratification did not change the results for this data set ($t_{str} = 1.848$, $p = .065$, $t_{bo} = 0.658$, $p = .511$). By changing the stratification levels, only 78 teachers remained in the inexperienced group and 306 in the experienced group. The unmatched groups could result in data that is not tenable for a study of this nature. This could be an interesting change for future studies comparing the stress and burnout of novice and experienced teachers when the teachers are not in the specific scenario of those used in this study.

Factors Contributing to Stress and Burnout

The multiple regression analyses conducted reveal that years of experience, job satisfaction, and burnout were all significant predictors of stress. The beta values indicate that as years of experience increases, stress decreases, while as burnout increases stress increases as well. There was a positive beta value for job satisfaction, but job satisfaction was coded with zero being most satisfied and three being least satisfied. This indicates the reverse of how the results may immediately appear: as job satisfaction decreases (score rises) the stress increases. The results indicate that years of experience, job satisfaction, and burnout contribute to 26% of the variance of the stress scores. With the large variance accounted for being attributed to years of experience, job satisfaction, and burnout, it seems feasible that if local, district, and state administrators could find ways to increase job satisfaction and reduce burnout, then the stress level of teachers should decline, resulting in fewer teachers leaving the profession.

The second multiple regression test shows more statistically significant results. It reveals that job satisfaction, self-acceptance, and stress are all significant predictors of burnout. The beta values indicate that as job satisfaction and preventive coping skills

decrease, burnout increases. Also indicated is that as stress increases burnout increases. The results of the regression analysis reveal that those three are statistically significant and these predictors account for over 50% of the variance in the burnout scores. Whether the R^2 value is considered large or small is generally based on the type of study and the variables being measured. When referring to the retention and general well-being of teachers, 50% has been considered as a very large number. A much larger question now remains: If teachers can be taught better preventive coping skills and become more satisfied in their profession while suffering less burnout, can the number of stress-related departures be reduced by 50%? The departures would not include those teachers that retire or leave the profession for personal reasons. The results should target those teachers that leave stating reasons such as “pursue job outside of teaching,” “dissatisfaction of teaching assignment,” or “dissatisfaction of teaching as a career.”

Job Satisfaction

In this study job satisfaction was a single item contained on the Classroom Appraisal of Resources and Demands. There are many nationally normed and validated job satisfaction surveys that could be used for future studies. The reason that one was not included in this study was an effort to reduce the number of questions on the survey. Maggie, who was only “somewhat satisfied” with the profession on her survey spoke about her dissatisfaction in the telephone interview eight months after filling out the survey by saying: “I would say I probably like my job about 80% of the time but then reality...I think I was telling my Dad this, he’s like ‘That’s fantastic. Nobody likes their job 100% of the time!’” Her father has a valid point and she even stated earlier in the interview that “no job is perfect.”

The General Social Survey (GSS) conducted by Tom W. Smith (2007) at the University of Chicago found that only 47% of Americans are satisfied with their jobs. Surprisingly, teachers were found to be near the top of the list of professions where the participants were generally happy. Clergymen, firefighters, and physical therapists were the top three most satisfied at 87%, 80%, and 78% reporting being very satisfied, respectively. Special education teachers were near the top of the list with 70% very satisfied, all teachers were next with 69%, and education administrators followed with 68%. The participants in the GSS study were “full-probability samples of adults living in households in the United States.” This study has been conducted yearly since 1972 and in this 2006 study, 4,510 participants were interviewed. They were asked two questions: “On the whole, how satisfied are you with the work you do – would you say you are very satisfied, moderately satisfied, a little dissatisfied, or very dissatisfied” and “Taken all together, how would you say things are these days—would you say you are very happy, pretty happy, or not too happy?” There was a significant correlation found in the answers of the two questions.

Participants in this study were asked how satisfied they were with the teaching profession. They were offered similar responses as they were asked to check “very satisfied,” “somewhat satisfied,” “somewhat dissatisfied,” and “very dissatisfied.” Of the 380 teachers who answered this question, only 54% responded as being “very satisfied”. This number is lower than the 69% reported in the GSS study. The mean score in the GSS study was 3.61 with a high score indicating higher degrees of satisfaction. The mean score in this study was .53 with lower scores indicating high satisfaction. If the .53 was

normed to meet the same criteria as the GSS study, the mean would be 3.47, which is similar to the results found in the GSS study.

Stress and Coping

The random choice of the teachers selected for participation in the interviews in the second part of the study was stratified by the stress and preventive coping skills. Candace was the participant chosen from Group 1 indicating that her stress and coping skills were both below the average of the group. Having lower stress may be a reason for Candace being in the group consisting of teachers with below average coping skills. Candace seemed to be the least stressed of the four teachers interviewed and her lower coping skills could be because she has never been stressed enough to be forced to develop strategies for dealing with severe stress. Of the four teachers chosen for interviews, she seemed most satisfied with teaching as a profession as she has been teaching for thirty-one years at the same school. Of course, she found individual parts of the profession frustrating such as the lack of respect for the teaching profession, but she never discussed feeling so frustrated she wanted to leave or change schools. Candace was asked to describe her most stressful day and she could only describe a day where she had an apathetic student to disrespect her in class. Many teachers encounter this type of student behavior on a daily or hourly basis. When asked how she deals with stressful days, her only response was “I just try to forget it” which reveals she may not have specific skills for dealing with the stress of the profession, but her responses also show that she may not have dealt with many of the same stressors as other teachers.

Maggie was the participant chosen from Group 2, a group consisting of participants with stress levels below the group average and preventive coping skills above

the group average. Teachers with lower stress levels and higher coping skills would be the teachers who seem less likely to leave the profession due to stress-related reasons. This would seem to be the ideal group placement for teachers because it appears their successful coping skills can help them reduce their feelings of stress. When comparing her responses for dealing with stress with the other participants, she named the most strategies for coping with stress, which seemed reasonable since she was in the group with higher coping skills. She discussed the importance of the support of other teachers, but also said going home, taking a nap, and exercising were all ways she dealt with stress. Maggie seemed to be the most indecisive teacher in the group when discussing her career as an educator and was even able to change her own opinions by talking about her stress. At the beginning of the interview, she discussed the frustrations of the profession, but when she was asked about the worst part of the job and the perks of the job, she said:

The pros always out weight the cons. Well, I think a lot of people take work home with them and when I was student teaching I had two different teachers and one teacher said don't take work home...so when I'm at work, I work really, really, really hard. You don't see me really socializing a whole bunch with peers, coworkers and so I don't take work home so that's not a big deal. I can't think of anything wrong now... You talked me around to liking my job again. Good job. I can always be talked back around.

Maggie seemed to portray the ability to adequately measure the good and bad portions of the job without weighing significantly on the less desirable parts. This personality trait could be the reason Maggie is in the group with lower stress and higher coping as she has the ability to better control her attitude and feelings. This ability was revealed in the above statement when she was able to convince herself she did like her job.

Group 3 consisted of teachers with stress levels above the group mean and preventive coping skills below the group mean. Teachers with high stress and low coping

skills would be the teachers who are most likely to leave the profession due to stress-related reasons. Becky was the participant chosen from this group and she did fit the description of a teacher who would have above normal stress levels; however, she did offer her own ideas for coping with the stress of the profession. Of the four participants, Becky was the most vivid and candid in her responses. She was the most genuinely distraught with the teaching profession and this came through with her responses. She even partially blames herself for her stress by saying, “I’m probably my biggest stressor, stress inducer on that..., I demand out of myself a lot and maybe I am unrealistic, maybe I’m not, I don’t know, but the pressure for scores...” When asked about how she copes with stress, she was the main advocate for family and faith for dealing with stress, so her preventive coping skills being below average may be the only inconsistency among the groups.

Teachers with stress scores above the group mean and preventive coping skills above the group mean were placed in Group 4. The teachers in this sample seem to implement strategies for coping with stress, but for various reasons, those strategies do not seem to reduce the stress significantly. Janel was the participant for this group. She spoke about the stress of her first year of teaching in public school and how she left for a business profession during her second year that turned out to be more stressful than teaching. She had settled into a private school and she expressed the tremendous amount of stress that is placed on teachers at this school from the parents who are funding their child’s education. Her school setting in a private school could be the reason her stress levels are higher than other teachers. When it comes to coping with the stress, she provided one particularly meaningful response by saying, “You must take care of

yourself.” She later added the idea that the teacher is not helpful to the students if the teacher is not calm so it is most important that the teacher calm herself down first. This is a very broad coping mechanism but could prove to be very resourceful, especially since she was placed in the group with higher coping skills.

Research Questions Revisited

Do teachers in the first five years of teaching experience higher stress and burnout than their more experienced colleagues?

By stratifying the teachers into two groups based on their years of experience, it was found there is not a statistically significant difference in the stress and burnout scores of teachers in their first five years of experience when compared to teachers with more than five years of experience. Analyses were conducted on the sample when the groups were stratified with a cutoff point of three years of experience, but similar results were found. However, when stratified with a three year cutoff, the groups were not as balanced which could indicate the results are not tenable. Future studies should be conducted with a population of teachers with more balanced experienced levels.

What variables contribute to a teacher’s stress and burnout?

Two separate tests were conducted to test this question with stress and burnout as independent variables. It was found that years of experience, job satisfaction, and burnout were statistically significant predictors of stress. More specifically, as years of experience and job satisfaction increase, stress decreases and as burnout increases, stress increases. Additionally, it was found that job satisfaction, self-acceptance (preventive coping skills), and stress were statistically significant predictors of burnout. The beta values for this reveal that teachers with higher job satisfaction and higher coping skills experience lower

burnout and teachers with higher stress have higher burnout. With 26% and 50% of the variance of each independent variable accounted for by the dependent variables, more research is warranted that could determine how to better support teachers by improving the dependent variables. Further analysis could include dependent variables such as average class size, number of classes taught in a school year, and a stronger interpretation of job satisfaction.

It may seem logical that persons who undergo extreme stress for extended periods of time would eventually become burned out with their current situations. Because of this phenomenon, burnout is a logical progression of stress and it was found to be a significant predictor of stress. On the other hand, many would feel that burnout would not precede stress. However, it was found in this study that stress could be a predictor of burnout, but it should be noted that when stress was a predictor of burnout, self-acceptance (coping skills) was also found to be a significant negative predictor of burnout. This can be interpreted that those teachers with better coping skills would have lower burnout, even if they have higher stress due to their ability to cope with stressful situations.

Are teachers with higher stress and burnout more dissatisfied with the profession?

Many people are employed in stressful positions, but may be very satisfied with their position. Firefighters and airline pilots are some of the most satisfied in their position (Smith, 2007) and few would argue that those are not stressful positions. However, in this study, burnout and stress were both significant predictors of a teacher's level of satisfaction with the teaching profession. The test revealed that teachers who are more burned out and stressed are more likely to be dissatisfied with the profession. Since

stress and burnout are found to be significant predictors of each other, the reduction of either factor could result in teachers who are more satisfied with teaching as a profession. This increased satisfaction could potentially reduce the number of teachers who leave the profession to pursue careers outside of education.

From the viewpoint of the teachers, what are school administrators doing to help reduce stress and increase retention?

Responses to this question were not obtained from the survey in the first part of this study. The four teachers participating in the second part of the study were questioned about their administration and how they felt their administration helped or hindered their stress levels. Although the teachers in the study admitted that their administration has a tendency to increase their stress levels with added pressure on test scores, the teachers interviewed in this study were able to supply some specific items their administrators were currently doing to help alleviate their stress. Support with disciplining students, not requiring teachers to attend every afterschool meeting and event, and cutting down on paperwork and extra duties were all mentioned that help teachers do their job with ease. Previous studies have found student discipline problems and time management are problems for teachers and this support seems to parallel those findings. The lack of more significant responses could reveal that the efforts to retain teachers are not advertised enough to truly be effective, but it could also mean that there are no specific strategies in their school systems for retaining teachers and reducing stress. Further investigations that pose the same question to administrators would be an interesting angle on this problem of teacher retention.

What efforts are being made to retain mathematics teachers?

Along the same lines of the previous question, the responses for this question were obtained from the qualitative data of the study. When questioned about how their schools retain mathematic teachers, none of the teachers could give specific, current, and relevant answers. Becky mentioned that a neighboring school system was offering signing bonuses for teachers of mathematics. More drastically, Maggie noted that her state was contemplating a rule that new teachers hired in “high needs areas”, such as mathematics, would be hired and begin their pay scale at the salary as those teachers with five years of experience in order to entice more teachers in those areas. Maggie did not condone this idea as she felt that was unfair to teachers in other disciplines who work just as hard as mathematics teachers. Once again, a study where this question was posed to school administrators may result in drastically different responses. Perhaps the participants’ lack of specific responses about their current school system’s tactics show that they are not enticed to stay in the profession by extravagant resources and outpouring of financial sources. They are more attracted to feeling “worthwhile” (Becky), having “great students” (Maggie), the reduction of menial tasks (Candace), and fewer meetings (Janel).

Do mathematics teachers believe they have the same needs as teachers in other disciplines?

None of the teachers felt mathematics teachers were more privileged than teachers in other disciplines, but they did feel that some of the needs were different. The most common response was the need for specialized professional development. Becky and Maggie both stated that mathematics curriculum undergoes more changes in the

standards more often than other disciplines. They were in agreement that mathematics teachers need to be better trained when these changes occur. On the contrary, Becky felt that all disciplines have varying needs, indicating that mathematics teachers were not more in need of items than teachers in other disciplines. Candace, being a science and mathematics teacher, felt that science teachers had more needs than teachers in other disciplines due to the “rather subjective” nature of the material and the time required to prepare for lessons. Surprisingly, none of the teachers mentioned specific tangible items that could be purchased with additional funding. An occasional mention of technology did occur, but only when the teachers were at a loss for a more descriptive answer. None of them seemed overly passionate that they were at a loss of technological resources that they needed in order to do their job effectively.

Final Remarks

Teaching is a stressful career and few will refute the significance of the amount of stress involved in the career. Numerous studies exist researching stress and burnout. When Freudenberger (1974) initially began his research on burnout, he started by researching burnout on all professions, not specifically education. This led up to discussions on the teaching profession. When discussing who is prone to burnout, Freudenberger claims those most at risk are “the dedicated and the committed” who are “seeking to respond to the recognized needs of people.” That description can be interpreted to include teachers who “would rather put up than shut up.” When even more pressure is added from administrators, stress levels increase and burnout worsens. Unfortunately, this causes many teachers to never see beyond their fifth year in the profession. Whether society approves or not, teachers are partially responsible for helping

prepare children for life outside of school. All teachers will teach students that cause problems, directly disobey the teacher, go to jail, or even worse scenarios, but in the end, it is clear that teachers teach because of the children.

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APPENDIX A: SURVEYS
Maslach Burnout Inventory – Health and Human Services (MBI-ES)

(Maslach, Jackson, & Leiter, 1996)

On the following page there are 22 statements of job-related feelings. Please read each statement carefully and decide if you ever feel this way about your job. If you have never had this feeling, circle “0” (zero). If you have had this feeling, indicate how often you feel it by circling the number (from 1 to 6) that best describes how frequently you feel that way.

HOW OFTEN:	0	1	2	3	4	5	6
	Never	A few times a year or less	Once a month or less	A few times a month	Once a week	A few times a week	Every day

1. I feel emotionally drained from my work.	0	1	2	3	4	5	6
2. I feel I treat some students as if they were impersonal objects.	0	1	2	3	4	5	6
3. I can easily understand how my students feel about things.	0	1	2	3	4	5	6
4. I feel used up at the end of the workday.	0	1	2	3	4	5	6
5. I've become more callous toward people since I took this job.	0	1	2	3	4	5	6
6. I deal very effectively with the problems of my students.	0	1	2	3	4	5	6
7. I feel I'm positively influencing other people's lives through my work.	0	1	2	3	4	5	6
8. I worry that this job is hardening me emotionally.	0	1	2	3	4	5	6
9. I feel fatigued when I get up in the morning and have to face another day on the job.	0	1	2	3	4	5	6
10. Working with people all day is really a strain for me.	0	1	2	3	4	5	6
11. I don't really care what happens to some students.	0	1	2	3	4	5	6
12. I feel very energetic.	0	1	2	3	4	5	6
13. I can easily create a relaxed atmosphere with my students.	0	1	2	3	4	5	6
14. I feel students blame me for some of their problems.	0	1	2	3	4	5	6
15. I feel burned out from my work.	0	1	2	3	4	5	6
16. I feel frustrated by my job.	0	1	2	3	4	5	6
17. I feel exhilarated after working closely with my students.	0	1	2	3	4	5	6
18. I feel I'm working too hard on my job.	0	1	2	3	4	5	6
19. I have accomplished many worthwhile things in this job.	0	1	2	3	4	5	6
20. Working with people directly puts too much stress on me.	0	1	2	3	4	5	6
21. In my work, I deal with emotional problems very calmly.	0	1	2	3	4	5	6
22. I feel like I'm at the end of my rope.	0	1	2	3	4	5	6

Preventive Resources Inventory, Self-Acceptance Survey

*Developed by Christopher McCarthy, Ph.D. University of Texas at Austin
Richard G. Lambert, Ph.D. University of North Carolina at Charlotte
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Using the scale below, please indicate how much you agree or disagree with each statement by circling a response.

1 = Strongly Disagree	2 = Disagree	3 = Neutral	4 = Agree	5 = Strongly Agree
-----------------------	--------------	-------------	-----------	--------------------

1. I know who I am.	1	2	3	4	5
2. I know how to think about situations in a positive way.	1	2	3	4	5
3. I am comfortable with the circumstances in my life.	1	2	3	4	5
4. I have goals that keep me focused.	1	2	3	4	5
5. I lead a well-rounded life.	1	2	3	4	5
6. When problems come up in one area they don't affect my overall happiness.	1	2	3	4	5
7. I do not want to trade my life for anyone else's life.	1	2	3	4	5
8. I have enough money for my needs.	1	2	3	4	5
9. I am able to prevent stress by having clear values in my life.	1	2	3	4	5
10. I can accept the fact that things will not always turn out the way I want.	1	2	3	4	5
11. I accept my imperfections.	1	2	3	4	5
12. I am grateful for who I am.	1	2	3	4	5
13. I may not always get what I want.	1	2	3	4	5
14. I have limitations.	1	2	3	4	5
15. I can usually see many ways to attack a problem.	1	2	3	4	5

**Classroom Appraisal of Resources and Demands
(CARD)
Middle and Secondary Version**

*Developed by Richard G. Lambert, Ph.D. University of North Carolina at Charlotte
Christopher McCarthy, Ph.D. University of Texas at Austin
Molly H. Fisher, M.A., University of North Carolina at Charlotte
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We are interested in learning about the demands of your profession and teaching responsibilities, and the resources you have to handle those demands. Your responses will be kept strictly confidential and anonymous. No information about your individual responses will be shared with anyone. We appreciate your time in completing this questionnaire.

Tell us about the children you taught at your school last year. For multiple choice questions, please circle the answer that best describes the percentage of students with that characteristic in your classroom.

1. How many children did you teach last year? # _____
2. How many of the children you taught came from homes in which English is not the primary language?
A) 0-5% B) 6-10% C) 11-15% D) 16-20% E) More than 20%
3. How many of the children you taught had learning disabilities?
A) 0-5% B) 6-10% C) 11-15% D) 16-20% E) More than 20%
4. How many children had poor attendance?
A) 0-5% B) 6-10% C) 11-15% D) 16-20% E) More than 20%
5. How many children had behavior problems?
A) 0-5% B) 6-10% C) 11-15% D) 16-20% E) More than 20%

Tell me about whether you have considered leaving the profession.

6. During your entire teaching career, have you ever considered leaving the teaching profession? Yes _____ No _____
7. Have you applied for a job outside the teaching profession during the last year? Yes _____ No _____
8. Have you applied for a job outside the teaching profession during the last five years? Yes _____ No _____
9. Did you apply for a job outside the teaching profession during your first year of teaching? Yes _____ No _____
10. Did you apply for a job outside the teaching profession during your first five years of teaching?
Yes _____ No _____

11. Help us to understand your plans for next year. This information will not be shared with anyone.
I intend to continue teaching. Yes _____ No _____

If you answered no, please check the primary reason for your decision.

- _____ Promotion out of the classroom.
 _____ Continue my education but plan to return to teaching.
 _____ Personal reasons (family move, spend more time with children, pregnancy, family illness, retirement, etc.).
 _____ Professional reasons (pursuing another career, no longer like teaching, stresses of teaching, low pay, lack of recognition, etc...)
 _____ Other (please specify) _____

Using the scale below, rate how **demanding** your profession or teaching responsibilities are in these areas.

1 = Not Demanding	2= Occasionally Demanding	3 = Moderately Demanding	4 = Very Demanding	5= Extremely Demanding	
12. Number of children taught per day.	1	2	3	4	5 NA
13. Children with limited English skills.	1	2	3	4	5 NA
14. Children from diverse cultural backgrounds.	1	2	3	4	5 NA
15. Range of developmental levels.	1	2	3	4	5 NA
16. Number of children performing below standard.	1	2	3	4	5 NA
17. Children with learning disabilities.	1	2	3	4	5 NA
18. Children with physical disabilities.	1	2	3	4	5 NA
19. Homeless or transient children.	1	2	3	4	5 NA
20. Children with poor attendance.	1	2	3	4	5 NA
21. Disruptive children.	1	2	3	4	5 NA
22. Children who do not follow directions.	1	2	3	4	5 NA
23. Children with problem behaviors.	1	2	3	4	5 NA
24. Children who require more time and energy than most children.	1	2	3	4	5 NA
25. Paperwork requirements.	1	2	3	4	5 NA
26. Number of program / administrative disruptions to the daily schedule.	1	2	3	4	5 NA
27. Organizing and advising school-related events, clubs, sports, and other activities.	1	2	3	4	5 NA
28. Amount of physical classroom space.	1	2	3	4	5 NA
29. Classroom environment conditions (heating, cooling, lighting, etc.).	1	2	3	4	5 NA
30. Availability of instructional resources (supporting materials, teacher guides, etc).	1	2	3	4	5 NA
31. Availability of instructional materials (non-consumable materials; manipulatives, books).	1	2	3	4	5 NA
32. Availability of instructional supplies (consumable materials; pencils, paper, markers, etc.).	1	2	3	4	5 NA
33. Availability of instructional technology (computers, software, printers, scanners, etc.).	1	2	3	4	5 NA
34. Instructional materials and resources that are out dated (not the current editions, etc.).	1	2	3	4	5 NA
35. Time and effort working with protégé teachers (teachers you are mentoring).	1	2	3	4	5 NA
36. Meetings you are required to attend.	1	2	3	4	5 NA
37. Time spent performing non-teaching related duties (monitoring bus, cleaning, etc.).	1	2	3	4	5 NA
38. Parent conferences and contacts.	1	2	3	4	5 NA
39. Formal testing and objective assessments.	1	2	3	4	5 NA
40. References for students going to college or other extracurricular programs.	1	2	3	4	5 NA
41. Grading student work.	1	2	3	4	5 NA
42. Preparing lessons.	1	2	3	4	5 NA
43. Setting up the classroom for instructional activities.	1	2	3	4	5 NA
44. Preparing classroom materials.	1	2	3	4	5 NA
45. Externally imposed changes to the expectations for your job performance.	1	2	3	4	5 NA
46. Overall how demanding is your profession?	1	2	3	4	5 NA

Using the scale below, rate how **helpful** each of these resources is with classroom and teaching responsibilities.

1 = Very Unhelpful	2= Unhelpful	3 =Neutral	4= Moderately Helpful	5= Very Helpful	
47. Office staff at your school.	1	2	3	4	5 NA
48. School system personnel.	1	2	3	4	5 NA
49. Parent support of school learning activities (field trips, providing materials, etc.). ntsparents,	1	2	3	4	5 NA
50. Parent support of learning activities at home (homework, enrichment activities, etc.). ntsparents,	1	2	3	4	5 NA
51. Community volunteers.	1	2	3	4	5 NA
52. Administrators at your school.	1	2	3	4	5 NA

53. Support personnel for children with learning disabilities.	1	2	3	4	5	NA
54. Support personnel for children with physical disabilities.	1	2	3	4	5	NA
55. Support personnel for gifted or talented children.	1	2	3	4	5	NA
56. Support personnel for children with limited English skills.	1	2	3	4	5	NA
57. Support personnel for children from diverse cultural backgrounds.	1	2	3	4	5	NA
58. Support personnel for children with problem behaviors.	1	2	3	4	5	NA
59. Support personnel for children performing below standard expectations.	1	2	3	4	5	NA
60. Support personnel for computers and instructional technology.	1	2	3	4	5	NA
61. Counselors or family services workers.	1	2	3	4	5	NA
62. Department Chairs.	1	2	3	4	5	NA
63. Other teachers (peers).	1	2	3	4	5	NA
64. Mentor teachers (if applicable).	1	2	3	4	5	NA
65. Staff development opportunities.	1	2	3	4	5	NA
66. Materials for children with learning disabilities.	1	2	3	4	5	NA
67. Materials for children with physical disabilities.	1	2	3	4	5	NA
68. Materials for gifted or talented children.	1	2	3	4	5	NA
69. Materials for children with limited English skills.	1	2	3	4	5	NA
70. Materials for children from diverse cultural backgrounds.	1	2	3	4	5	NA
71. Materials for children with problem behaviors.	1	2	3	4	5	NA
72. Materials for children performing below grade level.	1	2	3	4	5	NA
73. Instructional resources provided by your school or program (supporting materials, teacher guides, etc.).	1	2	3	4	5	NA
74. Instructional materials (non-consumable materials, manipulatives, books).	1	2	3	4	5	NA
75. Instructional supplies provided by your school or program (paper, pencils, markers, etc.).	1	2	3	4	5	NA
76. Overall, how would you rate the resources available to help you with the demands of your classroom?	1	2	3	4	5	NA

Tell us about yourself.

77. How many years have you worked as a teacher? # _____

78. How many years have you worked in other professions? # _____

79. How many years have you worked at your current school? # _____

80. At how many different schools have you taught? # _____

81. What is the highest degree you have completed? High school _____ Technical School _____ Associate's Degree _____
Bachelor's _____ Master's _____ Doctorate _____

82. In what fields were your degree(s)?

83. Are you currently working toward a degree? Yes _____ No _____

If yes, what degree and in what field? Please specify.

84. Do you have a current and valid teaching license? Yes _____ No _____

If yes, how did you receive your license?

Traditional Method (i.e. 4 yr degree) _____ Non-traditional (i.e. lateral entry) _____

85. What is your age? 21-25 _____ 26-30 _____ 31-40 _____ 41-50 _____ 51-60 _____ over 60 _____

86. What is your gender? Male _____ Female _____

87. What is your ethnicity? Caucasian _____ African American _____ Hispanic _____ Asian _____ American Indian _____
Multi-Racial _____ Other _____

88. What type of schedule did your school use last year? 4x4 Block _____ A/B Day Block _____ Hybrid Block _____
Traditional _____ Other _____

89. Which courses did you teach last year?

90. In each blank tell us how many courses of each of the following levels you taught:

Remediation _____ Regular _____ Honors/Advanced _____

AP/IB _____

91. Do you spend our own money for classroom supplies and materials? Yes _____ No _____

If yes, how much money did you spend on supplies last year? \$ _____

92. What are the five biggest challenges you face as a teacher? Please prioritize your top five choices from the list below with a score of 1 being the most challenging and 5 being the fifth most challenging.

_____ Salary	_____ Administration	_____ Parents of students	_____ Community Support
_____ Community type (urban, rural, etc.)	_____ Violence	_____ Student apathy	_____ Long hours
_____ Additional duties outside classroom (bus/bathroom duty)	_____ Students with problem behaviors	_____ Your knowledge of content	_____ Students' knowledge of content
_____ Professional Development	_____ Poor communication among teachers/administrators	_____ Lack of preparation time	_____ Coaching or sponsoring school clubs
_____ School Committees	_____ Special Needs Students	_____ Other (please describe)	

93. Do you have any additional comments about the demands of the teaching profession?

94. Do you have any additional comments about resources that are helpful to you in dealing with the demands of your profession?

95. Check the answer below that best describes your attitude about your teaching career:

- I am very satisfied with my teaching career
 I am somewhat satisfied with my teaching career
 I am somewhat dissatisfied with my teaching career
 I am very dissatisfied with my teaching career

96. Do you have any additional comments about the stress of the teaching profession?

Thank you for participating in this survey, your input is greatly appreciated! Please know that all responses are anonymous and your individual responses will not be shared with anyone other than the primary investigator of this project.

This research project will contain a second part that is qualitative in nature and involves discussions with teachers about the contexts questioned above. If you are willing to be called for a telephone interview or face-to-face interview, please fill out the information below. If selected, you will be contacted between the time of this survey and December, 2009.

Name: _____

Home Address: _____

Home Telephone: _____ School Telephone: _____

Name of School: _____

Location of School (city, state): _____

School District: _____

Thank you for your time!!

APPENDIX B: INTERVIEW PROTOCOL

Stress and Coping:

1. How many years have you been a teacher?
 - a. At how many different schools have you taught?
2. Do you think that your stress level was different in each school?
 - a. If yes, what is different about the different schools?
 - b. Why do you think one job was more or less stressful than others?
3. Tell me about one of your most stressful days at work.
 - a. How did you handle the stress of that day?
4. On other stressful days, what relieves you of the stress?
5. Do you think your administration helps or worsens your stress level? How?
 - a. What can your administration do to help reduce your stress?

Retention:

6. Have you ever considered leaving the teaching profession?
 - a. If yes,
 - i. How often do you have these feelings?
 - ii. Did you consider leaving during your first year of teaching? How has the frequency of these feelings changed over time?
 - iii. What makes you want to leave?
 - iv. What convinces you to stay?
 - v. What can your administration do to help overcome these feelings?
 - vi. What can your colleagues do to help overcome these feelings?

- vii. Have you ever gone so far as to apply for other jobs? In or out of education?
 - viii. Have you considered what types of jobs you would be qualified to apply for outside of education?
- b. If No,
- i. What makes you happy (or satisfied) about teaching?
 - ii. What could happen that could change your mind?

Math Teachers:

- 7. Do you think the needs for a math teacher are the same as the needs for teachers in other subject areas?
 - a. How are they different?
 - b. What would be helpful for a math teacher, but might not be helpful to teachers in other subject areas?
- 8. Do you have suggestions that would help combat the math teacher shortage in education?
- 9. Have you ever struggled with the content in teaching mathematics?
 - a. If yes, what could have better prepared you?
 - b. How did you better prepare yourself in this situation?
- 10. Do you think college math content courses are rigorous enough for math teachers?
Should they be easier, harder, or the same?
- 11. What suggestions do you have that may improve your content preparedness for teaching math?

12. Should the requirements for preparation of pre-service mathematics teachers in college be changed? If so, how should they be changed?

Other Questions:

13. Do you think a teacher's salary is sufficient to be financially secure?
 - a. What is an appropriate salary for someone with your experience?
14. Do you think the pressure of "high stakes" testing is causing teachers to leave the profession?
15. What would you consider the "perks" of being a teacher?
16. What are the worst parts about being a teacher?
17. Do you think communicating with parents is a stressful part of teaching?
18. How much time do you spend during the day on tasks not related to teaching? (hall duty, bathroom duty, bus duty, supervising students, etc.)
19. What types of professional development do you receive that are helpful? Not helpful?
20. Does your current job support collaboration among teachers?

APPENDIX C: INTERVIEW EXCERPTS, CANDACE

Researcher: Oh that's great. So what makes you stay at this one school?

Candace: I just um enjoy teaching there and I graduated from there so I am kind of like grew up in that area.

R: Do you think that this particular school is stressful to be working at?

C: No.

R: So what does your administration do to make it less stressful?

C: They're very supportive and they try to keep the amount of paperwork that we have to do down to a minimum, so that we can teach, and they unusually take care of a lot of the duties and things. We do have some duties: we go out and have to do some afternoon duties and things like that, but most of the things like lunchroom duty and that kind of stuff is done by the administration.

R: Oh that's great, So how much time to you think you spend each day with the outside, non-teaching duties?

C: Well just with the yard duty and things like that, we only have to do it four times a year and it's for a week. So, and then you mean paperwork like lesson plans and things like that,

R: Well lesson plans would be considered teaching, part of your teaching job, but like meetings and conferences and things like that.

C: I would say per week maybe max, I would say 30 minutes, per week, because we don't have meetings every week either. They try to keep those down to twice a month.

R: So tell me about the most stressful day you have had at work.

C: The most stressful day I had at work would be when one of my students was studying for another test and informed me that they didn't need to listen to my class.

R: So what happened, what did you do?

C: That was probably the most stressful. I had to bite my tongue not to say something back to him.

R: So when that student left, and you were fuming angry, what did you do to relieve the stress of that?

C: Let me think, well, I just tried to keep teaching and focus on that because I was pretty angry when they left and then I just go into my next class teaching and they were very good. You just kind of forget about it.

R: So, in general is there anything that you do to relieve stress after any other days that might be stressful?

C: No not really I just uh try to forget it.

R: Ok. Have you ever considered leaving teaching?

C: No. I love teaching.

R: So, what makes you so (inaudible) of being a teacher, that you've never considered leaving?

C: I just love it, I don't know, I would like to say it's in my blood cause my parents, my father was a teacher, my aunts were teachers. When I was younger that's all I wanted to be was a teacher. I just enjoy being with the students. I told my students that I really want, it's the control. They all laugh when I say that. I say I went into this so that I can be the center of attention all the time. They do just like you, ah that's funny Ms. _____, and I said plus I like that power and then they laugh at me too, cause I am just so, you know, dominating.

R: Oh really, ok because my next question I was going to ask you if you think the needs of math teachers is different that the needs of teachers in other subjects?

C: Well, our needs are different I think.

R: So how do you think they are different? This is good for you since you actually teach science and math.

C: Well, science has a lot of prep work, and then you are able to let the kids kind of discover things. Were as in math we can have some discovery of things but they don't have to, and I have done a lot of hands on things with the students, but it's not to the point that you do in science. So I think science takes a lot more preparation beforehand and with math it's a lot more concrete also, because the concepts are just kind of cut and dry. Were as in science you have some things like were you do labs and that type of thing is rather subjective. Whether they have to write up things and I think anytime they start writing, that it become subjective to the teacher whether you are getting that idea across or not. In math you, umm. I think it's more rote, but is more concepts that are concrete than with the science. Cause with science, and I did ecology and biology, it's, you have concrete concepts but then you also have to do things to back it up, and you have theories and principles that you have to discuss.

R: So do you know we have almost all states have a math and science teacher shortage. Do you have any suggestions for a way you think can help.

C: Bring them in? Well, I think you could bring a lot more teachers in if they were respected more. You know we are professional and we are held up higher than almost any other professional, but we aren't respected. We are held to a higher regard, but we don't get the respect from the community that other professionals do. Like if your doctor says something, you would never think to refute them, but if a teacher does, a lot of time parents don't even think twice about saying I don't think that's right.

R: How do you think that we could. .

C: Raise the respect and . .

R: How can we change that, that opinion?

C: We have to put more value on education. I mean when you have people that into the sports field and they make more money in a few years that a teacher would make in a lifetime, then we are saying that that is a more valuable profession. That our country thinks that you know, that some type of extracurricular thing is more important. If you look at the Asian communities, they value education, and you know they are always pushing for their students, or their children to excel and that it's not a stigma to be very educated. So I think it has to begin in the lower grades, with parents and children and our society really. This may with the new President, because he's really started to put a focus on not just a focus on well your doing this all wrong, but a focus on we need to have more students excelling in education. For a long time it was just plain as well you're not doing what you're supposed to be doing and we're not towing the mark. Don't get me started on having the kids take the FCAT test and I am getting graded by somebody else's work.

R: So do you think the No Child Left Behind and all the testing and that stuff. Do you think that causes teachers to leave the profession?

C: Yes. I think it makes us have to teach to the test. If you want to be some of the kids, and some of the kids don't care.

R: Right. Have you ever struggled with content in teaching math or science I guess?

C: Oh yea, I had to study. When I first started cause see I was a biology major, so when I first started teaching, I had to study and I was usually only about two sections ahead of my students all the time. It was real hard, but now after I have taught it for so long, and that's what I tell my students, it's not that I am a good math person, it's just I have done it longer. I have more experience doing it than they have.

R: So what do you think could have better prepared you to teach the math courses?

C: Oh I had very good preparation. I just, if you don't use the concepts then you lose all that information and it's not as easy to do, so that's why I had to go back and study. When I started teaching calculus I had probably been out of college for 10 years., and hadn't done any calculus, had been teaching other math, but not calculus. So I had to go back and do all those problems to refresh my memory and I think I learned more actually as a teacher than I ever did as a student.

C: You have to go back and you kind of have time. That's where I like teaching advanced placement because we learn all of the concepts and then we are able to go back now and do different problems and pull from all these different concepts because you know that one questions can have five or six things inside that one question, and that they have to know how to do and or have to know those ideas and synthesize them together to able to come to a conclusion. I just think that advanced placement, because I taught dual enrollment calculus, which is where they get high school credit and college credit at the same time. And then I taught advance placement and I said I didn't think it would be that much different, but it is a big difference, and people look at me like your really stupid when you say that and I say well look, I have taught both of them I said I can tell you that I'll put my advanced placement first year student up against and college second year calculus student, and they just look at me. I say they have to be a walking textbook.

R: So do you think the math classes that a math teacher would have to take, so think back to when you went to college, and you were getting your math, the math side of your degree. Do you think those math teachers are rigorous enough for future teachers?

C: Oh yea, I had some hard classes.

R: Or maybe they are too rigorous?

C: No I don't think they are too rigorous, but I had some hard classes and one thing that I think math does is teaches you to think logically and to be a problem solver, and be analytical in thinking. I think that is something that other subjects, science possibly, but other subjects don't really do is to teach that logic and thought processes that you need to have, a lot of kids say to me well I'm not ever going to use this, I said yes you are because your using skills, you may not use this information, but you will use the skills that you had to refine in my classroom in order to do other problem solving. I do think that, I know when I went to school the courses I thought were difficult. I thought they were, but it was just I when I came out from teaching I didn't go directly into those subjects. I usually, when you are a first year teacher, you don't get upper level classes. You get the lower level group. Which is probably good because when you get older you're not as patient.

R: Do you think that that causes some of the younger teachers to leave?

C: Yes. It does cause some of the younger teachers to leave. Simply because sometimes their education, the education program at their school hasn't prepared them for what classes really are like.

R: This is great because my next question is I was going to ask you in your 31 years of teaching I know you have experienced a lot of new math teachers. Do you think the requirements for pre-service math teachers, while they are still in college, do you think those or adequate or do they need to be changed? Because you said the new teachers aren't really prepared to deal with this type of student.

C: Well I think that when you do your internship I think you learn a lot. Especially if you have a directing teacher that allows you to take over the class and teach and actually be there just to guide you. I had two directing teachers that were outstanding and they helped me a lot, I remember things that they told me and my education courses, they were pretty good, but I think it was the internship, and you know now they are allowing professionals to teach that haven't gone through that internship. I think that is why we've lost some of the teachers, because they haven't had those education courses or the time to have someone there to guide them through, because you can have a mentor, but that's your classroom. Whereas when I was an intern or my directing teacher would leave me, but he was always around the corner or he was always there to bail me out or help me and say you should have done this and that. Were as if you just have the mentor you may meet with him every periodically and discuss this happened and that happened. I just think the internship really helped a lot and I have seen quite a few times where people haven't gone through that, I don't know in North Carolina if, I thought everybody had to go through and internship. When I went to school before you could get your teaching certificate you had to of interned a semester.

C: They do that, yea they do that now with because they have allowed professionals. You know like we have a woman who was a lawyer that's teaching our government classes and things like that and US history, but she was a lawyer. Well being a lawyer is completely different from being a teacher, and but she does very well. You kind of have to be a disciplinarian. I found that the teachers that do well that have come out of from a profession that are disciplinarians are pretty good. Because they've already had that time, they already know, I have to keep this straight, this straight and this straight. You have to be multi tasked. I think that was one of the hardest things when I went into teaching, was to be able to stay two steps ahead of my students in a problem. Wonder what Johnny is doing in the back of the room behind my back and making sure you know that everything was going smoothly. Doing the kinesthetic learner and then trying to help the verbal person and trying to help the one that's visual, you know all those types of learners. So, I think that was the hardest thing, and then just cause I had been working with a calculator so much to remember what 2 times 3 was. I tell my students that too that are going into teaching, I said you really have to be someone who can multi task, and if you can't multi task your going to find it very difficult to teach, cause you have to be able to carry on a conversation, think ahead, and also be someone who's going to be able to be aware of what's occurring around you in your classroom.

R: Do you think a teacher's salary is sufficient for what they do and is sufficient for them to be financially secure?

C: No, but I don't think pumping money into the system is the answer, but no I don't think so, if you look at the hours that some teachers spend.

R: So do you think you could put a number on someone, say for your years, with your years of experience, do you have a masters degree?

C: Yes, I do.

R: So with a masters degree and 31 years of experience do you think you could ever put a number on what you think is appropriate?

C: Oh I don't know. I just think we need to be competitive with the other professions if you want to be pulling in your good teachers. I think you just have to be competitive because I know when I went out of college, I went into it, I always told my students when they ask me about teaching, I said I love it. So getting paid to do something I love is just icing on the cake for me, and I said you know I am married and my husband makes money so I don't really have to worry about it. I said so I didn't go into this profession for money. I said I could have gone in and worked for a company being in biology, being in the sciences I could have gone into an industry and made the money. So I said the most, I think the most important thing when you do try to go into a career is to go into something that you really really care about, and I said and then you won't worry about not having the money.

R: So what do you think are the perks to being a teacher?

C: The perks, my students. No really, I just, it's my students, to watch them learn and to watch them come back when they have gone away to college and tell me you know this really helped, or this really impacted my life. Although when they come back and talk to you that's when you actually know that affect, that you have touched somebody's life, and then that gets passed on to the next generation, so even if I, if I do die, I know that a little part of me is all these people. That's how I think about it.

R: What do think are the worst part about being a teacher?

C: The worst part of being a teacher I think is to have to do the class room management. I think that's the worst part. Now I have been very very lucky this year, I think I have died and gone to heaven because my students are so good this year. I mean usually you have classes that are good, but I teach seven periods and all seven of them are like perfect little angels. You know the time when you first start teaching and I call it the honeymoon, and they first get into your classroom and everybody is really good, and they come in and sit down, but then they get to know people that are in the class room and they get to know you and they start to let up a little bit and they are not as good, but my honeymoon has lasted.

R: Do you think communicating with a parent is a stressful part of being a teacher? Maybe not this year, but in other years.

C: No, really when I have communicated with parents, they've been pretty receptive. I think they like it if you communicate with them prior to a bad incident. So if you make those communications, if you talk to them and bring up something good, you know how when I went through my education courses they always said to us, when you go in there even if the only thing you can think of is that Johnny always comes in with a smile on his face, says something good. Something you know, before you start to do any type of discussion with them about his behavior or something like that and then always end with something good and I think that if you make that attempt to talk to parent you can usually tell when students come in if you are going to have problems with them and if you can make that positive contact before you have to call them and

talk to them about maybe some problems, that it helps, and I have tried to tell others, being there for 31 years I try to tell other teachers this when they are first coming in, but they look at me and go ok yea.

R: So do you think. Where do you think you get the most advice? Especially for new teachers? Where do they get the most of their information?

C: Where do they get. Well, and I did this too, when you are a brand new teacher you had this idea of you can conquer the world and you can do everything and you a very gullible I think because you just haven't been in a situation where you had to tackle the problems that you usually get your first few years, because you've got to establish a reputation, and I think once you establish that reputation, then it becomes easier. Like my reputation always proceeds me, my students have you know after being there for 31 years they tell another group and that group tells another group and that group tells another group and this group tells another group and I mean they even do it during the day. They'll go Ms. Campbell is not in a good mood today don't , don't do anything to make her mad but and that's what I try to tell my teachers and I you know that little saying that don't smile till Christmas. I said well when you are a brand new teacher and all the boys think you are a hottie and the girls think you are their friend, I said you're, it's going to be really hard for you, but you've got to be the adult, and you've got to be the person you know if they uphold all the rules got to be the person that doesn't bend anything you've got to be the person that don't laugh at their jokes when it's now appropriate even if it is appropriate you probably shouldn't even laugh. Do it later. I think that was the hardest thing for me was to be a witch.

R: So what types of professional development do you think is appropriate, what's helpful, what's not helpful, or some that you've attended maybe?

C: oh I was just going to tell you, I attended a workshop from Clara Lamears and she was a teacher of English in California and she got burned out and left the profession and went to do, work for a hotel doing public relations and that type of thing and while she was there she read a lot of self help books and did some went to some seminars and things like that and she decided that the business community had some really good ideas that could be applied to your classroom. So the classroom, the workshop that I went to was how to improve self esteem of your students. That if you could improve their self esteem then they would succeed and they'd feel better about themselves and it's just like a little circle it just feeds off of each other. So I went and she said that she would have been, she would have left the profession if she hadn't gone and done this little thing with the hotels and did all this self help and then she came back and started applying the concepts. Like I do standing ovations with my students and that's where we stand in front of the room and I call somebody's name up and they come up and we cheer for them I say we are going to cheer for them just as if they had been the football player that ran across and made the winning touchdown, or the basketball player that made the last basketball basket, or the track person. I said why can we cheer for people in sports like that, we stand in the crowd and just cheer and cheer and nobody even hears it. Well I said we can let everyone in the classroom that they are a member of our class. And I said so that's what we are going to do and we do that every day. Well that was her thought I mean that wasn't mine, but it really caught on, she said you should shake everybody's hand when they come into the room or at least greet them if they

don't want to shake your hand and say you know I am so happy you are here today, and say their name and look at them she said because have you ever seen a child that you have made a connection with and that way when you get on to them or when you have to reprimand them you've made that positive connection when they first came in. You may be the only person that they have made eye contact with and they'll remember that and they'll respond to you better, and so I started doing all those kinds of things and it really did make a big difference in my classroom. I did one little thing where they had to write down on a piece of paper what their failures, what was their biggest failure and they were to write it down on a piece of paper and then they were to write down their success. What was the best thing they have ever done, and so I said I want you to ball the failure up and I want you to throw it at me. I said this is the one time you can throw paper at the teacher and so they did and I said now I want you to look at that other paper that you wrote your successes on and they did and I said that's how your life should be you should look at your successes and you wrote down your failures, you acknowledge your failure but you throw that away you don't dwell on it you dwell on your successes and that is how you will succeed in life, and those are things that I learned when I went to this workshop about building self esteem.

R: That's wonderful I love that idea. That's great.

C: She was fantastic and she said she did go back to teaching and that that's what she started doing and she said it really turned her life around it wasn't like that she was complaining all time because all the kids were receptive. I think that if students know that you care, and that you really want them to succeed, and you show them that, they'll respond. I mean even the kids that are the worst kids in the school, and they'll respond because sometimes school is the only outlet that they have, it's the only place that they get a good meal, it's the only place that is clean, it's the only place that an adult actually responds to their needs, and that's sad to say that we have some kids like that, but we do. I have kids that stay at school and I probably see them more than their parents do. Simply because they feel safe there, and that's sad. I did a whole big paper when I was doing my masters on it.

R: No, no this is great, this is great and it's on totally no related note but I wanted to ask you about collaboration. Does your school support collaboration among the math teachers or the other faculty members?

C: Do you mean like do the science teachers get together with the math teachers and try to coordinate?

R: Yes that and also just within departments as well.

C: Oh yes, we do a lot of collaboration within our department . I think the math department doesn't do as good a job as like English and history. They do a really good job, you know, like they coordinate some of their assignments so that when they are doing certain things in history they're also writing about them in English. I don't think the math does it as well.

R: How do they organize that?

C: How do they organize it? I think they get together and plan a schedule and they say okay this is what I am going to be doing this year and then the English teacher says okay well I can have them right this easy, they are going to be writing anyway so I will just have them write it on this and that. So that they can kind of use it In dual, and we tried to do some of that with science, but it didn't work as well, but we did try to do it in the science with the math and the science especially with trig and physics, and it worked pretty well with it, but I've lived in both worlds in science and in math. Math teacher or a math professional does things a lot different than science, a science person, does that sound funny?

APPENDIX D: INTERVIEW EXCERPTS, BECKY

Researcher: Ok, so do you think that between the five different schools you been at do you think the stress level that you had is different at each school?

Becky: Yes, definitely

R: And why?

B: Middle school to me was just far more stressful period. I had, that is not my first love, that's not what my training was for, but it was where I could find a job. You know I always joke about that I refer to those first four years of teaching as doing time. You know, I mean

R: Yep

B: But, and I would say at each high school it's been different, the first high school I was at was at Lee Senior and they were at that time the only high school in the county, but know it's split to two high schools. We had around 2300 students my small geometry class was like 28, 29 and that was my small class, you know, Columbine occurred while I was teaching, it's probably the one current event that has happened during my lifetime that I know the least about because it hit too close to home and we were, there was just too many ways that we could have been just like that, and so it's one of those things that I chose not, I guess, subconsciously chose not to know detail about, because it was too close to what I was living, and there was stresses like that, like I say you know, my worst discipline problem here, I know I really shouldn't complain, I have five former students from there that are either on death row or in prison for life, and so it was a whole different level of stress, as far as students were concerned, as far as, academics, I'm probably my biggest stressor, stress inducer on that. I, I demand out of myself a lot and maybe I am unrealistic, maybe I'm not, I don't know, but the pressure for scores was somewhat when I was in Lee county and it was getting more and more when I left but that was at the beginning of ABC's coming in and really being pushed for that you know. I think ABC's in and of itself stresses teachers about scores not just for themselves but because you get external stress from this year here it's just been horrible for us in that respect. We have a new assistant principle and new principle and a new superintendant all at one time

R: Do you think the pressure of the high stakes testing and the ABC's and No Child left Behind, do you think that causes teachers to leave the profession?

B: Oh definitely, definitely

R: So tell me about one of the most stressful days you've ever had at work

B: This year, we had to meet with the new position, the new superintendant created, we didn't have him before, academic coach and we had to go over and disseminate last year's testing data and they've made a change in, like up until this school year we were not teaching algebra in the eighth grade and now they are and we have gone over through all the data and it was all laid out

by teachers name, by objective where you as a teacher ranked as far as in comparison of the state and comparison of the county and comparison of your school. Ok, and you were not by yourself, it was everybody, you know like the whole math department was there, so it was laid out there in front of everybody, you know and it was like well so and so better at this objective you all need to meet with her and find out what she's doing because look at how good her scores are compared to yours and then and then it would go through all this stuff and then I made the comment that you know that next year's algebra one scores next school years will not be as good because I mean I thought it was just a statement of fact because we will not have the cream of the crop taking algebra one anymore and I was verbally attacked by this academic coach about "so we're just going to hold kids back just because of scores" and I said I was just stating that we can expect that they won't be as good, you know I mean it was just like, when I left out of there I was just like a ball of nerves, not only had everything that I'd been taught just been you know laid up there and fortunately most of my stuff was really good, but heavens the only EOC that, well no, I take that back the only EOC that she really disaggregated up there that I was involved in was geometry and I've been teaching it for ten years straight. Let's hope that I'm doing something right with it, you know, you know, but it was very stressful to sit there and you, it was very stressful to me to watch her make other teachers squirm about look all of your objectives are below these are highlighted they're below, they're below blah blah blah blah you know and I just felt like it was a very demeaning exercise.

R: So how did you handle that, like you said that you left and were just a ball of nerves? What did you do afterwards to help calm your stress?

B: Well, we as a department came back and um you know, and we kind of decompressed together, cause nobody whether their scores were good or not felt comfortable in that situation and how it was handled and I think fortunately as a department we came together and went now let's look at this a little more realistically you know and so because what doesn't show up there is that this one teacher had honors and did not have any

R: Of course

B: College prep kids this other kids teacher didn't only have college prep students she also had a class of those that had already fail it two or three time and were taking it again you know I mean and so we kind of went through that and said ok now let's talk brass tacks you know about stuff and we kind of tried to go through that and kind of you know because if that was brought up at all when we were in the meeting with the academic coach those are just excuses.

R: Uh

B: Yea, see what I am saying and so that's why it's been a bit a bit of a stressful year, our new principle is also very, very rigid and but some things have gotten too lax and I will agree that they had, but

R: So you think that your administration actually increases the stress level of the teachers?

B: At times. At times I think he does and at times I think he really decreases it.

R: What does he do to decrease it?

B: Things like ok, before it was every time there was an induction into any CTE honor society, beta club, any (inaudible) night all that kind of stuff, past principles have called it a PTO and it or even if it wasn't a PTO it was a required you know think and it would be that you would just sit there I mean there was no interaction really you know there was no time for like parent teacher conferences there was no time that wasn't even suggested or offered or anything it was just like a command performance and this principle doesn't do that. He doesn't believe that you have to be there for everything certain things yes, but not every little thing which is good you know which I think is good he has cracked down on a lot of, he and the assistant, the assistant principle is just wonderful regarding discipline problems, any kind of discipline problems that you have you know when you've done everything that you can do and when you finally send them out you know, now if your just sending them out for frivolous stuff no you're not going to get the support that you think, you know, but I have some kids and the biggest thing they do in fourth period is they are excessive talkers but it's to the point where I can't teach because and it's just that they're wonderful kids there's just too many of them that are too good of friends all together, you know groupie, but she knows, I've communicated with her all semester long, you know, I've spent an hour and a half on the phone with parents, I've done this, I've had them at break, I've done xyz and she knows that so when I write one up and send them down there it won't be a slap on the wrist.

R: Right

B: Because I've communicated with her and she knows what I am doing, you know, so the principles really supportive about discipline and he does not tolerate you know anybody with you know outbursts and stuff like that, you know, no, there's no part of that for this in our school, if they're distracting from learning they need to go, and that reduces stress so that does help it's just it seems like this year they're adding like I said I think part of what our principle adds really is coming from the superintendent's office, you know like we're supposed we moved into a new school, we have new, lots of new technology and we're supposed to be incorporating all that new technology and we get limited training on it and then it's just play with it and you know like me I've been teaching twenty years we didn't have computers in high school at all and it wasn't until really the latter part of my college that I was really using computers on a regular basis, knew nothing about internet until well into my teaching years so you know to just play with a program, I don't know, I don't know how to play with a program

R: Right

B: You know whereas those that are younger and grew up with computers computers computers they know how to, let me the help, let me do this, or let me do that and let me see what this does and let me see what that does. I'm like afraid if I do some of that that I am going to crash it, you know, and and so there's there that's part of it and then we're supposed to incorporate all the new technology we're supposed to incorporate thinking math now into everything we do. We're supposed to go and observe each other and we're supposed to be meeting to find who's got the best strategy for teaching every little thing and on top of that we are supposed to tutor after

school to help our kids to make sure they're doing, making our lesson plans, you know, and the list goes on

R: Right. So when you have these stressful days what do you do at the end of your day to relieve your stress so that you actually want to come back to work the next day?

B: I go home and I have a wonderful husband who will let me rant and rag, let me blow it out, and I know this will probably sound crazy to a lot of people but there is nothing more relaxing than curling up with my dog, with my dog and just petting her and talking to her and stroking her and she's always happy see, animals are wonderful you know and I go to see my grandson a lot, if I've had a really really bad day I go to see my grandson on the way home and sit and if he's sleeping I can just sit and look at him sleep and all's right with the world you know and it's that's really you know um I am very active in church, I prayed a lot this year and that's no lie, I have probably prayed more this year and then after I've ranted and raved my husband says, so tell me again why is you teach?

R: And what do you tell him?

B: I love the kids, they're not students to me, they're my children and ever since I've gotten back into high school they are my children and I go back the next day because I don't believe that anybody else will take as good of care of my children as I will, and that's honestly, you know, and I have other friends that I teach with here and that's you know it's just how we feel, it's just you know. Teaching is not really a choice, it's a calling, if you're going to truly be effective and you're going to truly be happy in it. I think you have to approach it as a calling, not just a profession.

R: Have you ever considered leaving teaching?

B: Yes

R: And how often do you have those feelings?

B: Oh last week I had, well no, I didn't consider leaving teaching I considered changing jobs.

B: Changing positions, when I was at my..I'll be honest with you I really seriously considered getting out of teaching completely at my fifth year.

R: Why fifth year, what was going on that year?

B: Fifth, sixth year, somewhere in there. Just I had all of like the bottom barrel weakest classes, had not bright spot in my day. That was the year the I had three students that went to prison you know, and it was just emotionally it just tore me apart and I was frustrated, I felt like I was working myself to death and they weren't getting any better, like I was working really hard but the kids weren't working very hard

B: and no matter what I tried, I would try games, I would try you know different approaches and try you know and it was just like, oh it was crazy and it was you know I was, I don't know just in a very difficult situation where I just thought, I do not know if I want to do this the rest of my life.

R: So what made you stay?

B: The second semester I got a class that was different the other classes two of my four classes, two of my three classes were really, you dreaded them, it was a challenge every day, but I got one class that, it was like I guess they made me feel like they needed me and when I felt like I was needed, it changed my approach to them and it changed everything, for that class and then that kind of spread into my other classes and one day a student was like I can't remember what he said and I said but I can help you understand and he looked at me and I said that's why I'm here. I can help you. Really? Yea, and I remember distinctly him looking at me and says well put your chair right here and I did, I sat down, I pulled the chair over and I sat right there beside him and helped him one on one right then while rest were working on something and he was one of like the ring leaders of whether the day was going to be good or the day was going to be bad, you know and it was like one, he realized I could help him and his grades started coming up, he kind of spread that among his buddies in the class and that was the turning point.

R: So, let's talk about being a math teacher, do you thing the needs for math teachers are the same as the needs for teachers in other subjects areas?

B: Oh, I've think I'm sure that other areas need a lot too, but being in math I think that we need a lot more training and we need a lot more staff development when curriculum changes come around, there's teachers teaching stuff that like I don't ever remember doing this in high school, you know, and oh my gosh, they'll talk about something they'll go ah god I don't remember parametric equations, I don't even remember doing them in college you know, and you come up with stuff like that and thank you sweetheart, but I think that like with all this change in technology and and everything that I think the we do need extra assistance in that.

R: So do you think the college math course that you take as an undergraduate student in college, do you think that they're hard enough for math teachers or too hard, or?

B: You know, see I've been out twenty years, when I took them, they were far beyond anything I'd ever teach, you know I remember a college professor at state when my advisor and I'd ask him why do we have to take theoretical modern linear algebra, I said come on and he goes because one day you might get your masters and I said yea, and he said and you might decide shoot I can go on and get my PhD and I said ok and he said and then well I'm going to teach at the university level and I said alright and he goes and you might have to teach that class and I said yes and he says so you need to taken it at least once and I'm like that's it? He says (inaudible). So I think a lot of the courses do, I think that the math courses in and of themselves if the student takes it seriously I think that they're starting with enough to cover high school mathematics, even AP calculus, but I only had, you see I've never taught AP stats, I've only ever had one stats course and that's all that was required.

R: So, what do you think, what kind of suggestions, or what would you say is something that is helpful to retain math teachers or help with the math teacher shortage that we have in education?

B: And I know it's not popular, but I think that a differential in payment.

R: So you are saying that math teachers should get paid more than other teachers, just because they are harder to find?

B: Yes, I do, I mean, they are harder to find, most people who have that much ability in math don't go to the teaching profession and I think that you know if you have ones that are going to then, you know it's just like so many counties have signing bonuses that depends on what you are going to teach whether or not you get a signing bonus and you know they give a signing bonus for math teachers. Well they do here in this county but they don't give anything extra to math teachers who stay here, you know, like I said last week when I was so frustrated about some other stuff, I was like shoot there's another system just not 15 minutes down the road and a friend of mine's moving there next year, twenty five hundred dollar signing bonus, you know, I could use twenty five hundred dollars and if it's worth it to sign on a math teacher, wouldn't it be worth an extra thousand a year, that's a hundred a month, you know, two hundred a month would be great but you know something to say we appreciate keeping you here

R: So do you think a teacher's salary is, in general...do you think they're sufficient to be financially secure

B: No

R: Do you think you could put a number on what a decent salary would be for teachers or for someone with your experience, say 20 years of experience, you have a master's degree?

B: No, I have a bachelors, but with twenty years of experience I still barely make over \$40,000 it's like maybe 45 with twenty years of experience and a bachelors degree, you know, I have a son who has a high school diploma and a few college courses working for Coca-Cola and making almost twice my salary

R: Right

B: By himself, you know I mean, if they say they value teachers then they need to agree to that the other thing is that every time the budget comes up, you know we're going to cut things in school, you know, when they starting this ABC testing program they send thousands and hundreds of thousands and probably millions and all the testing that they do we excessively test out students, excessively test our students and I really think that money could be better spent, I don't think we need to test them as much as we do, I mean cause and everything ties to a test, everything's tied to a test score and every since ABC started I've seen this in teaching in the twenty years I've been in it I uses to be able to do what I call teaching and when I'd be in the middle of something I could say ok and here you can pull this in and we could do something that was fun and related to it. Well now it's all you can do to get all of the curriculum in the semester, heaven help you if you have a snow day or you miss a day or two due to assemblies or you know

a tornado drill of whatever that interrupts your class, you know, it's just like you have to push push push push, go go go go go, and now our counties pushing to do benchmarks testing and so they're wanting to do testing at certain levels certain points each semester to so you can look and see how they're doing on the stuff you know the information that you've taught which on paper sounds like a really good idea if you had more time in the class room, when we went to 90 minute period days, 90 minutes blocks for math that is not good cause they don't have any time to absorb and like right now I've been made department chair and my algebra teachers are screaming about this benchmark testing, hasn't gone on to any other subject yet, but that's another day they lose of teaching cause they have to have them in the computer lab that day to test them and so it's very frustrating because they don't feel they have enough time to teach what they need to teach now, and you know either they need to adjust curriculum somehow and not expect so much or be more specific as to what's going to be tested or back off on all the testing and I mean I know you have to judge it somehow and maybe that's the you know the only way they can do it but I don't know there's got to be a balance somewhere, you know what I'm saying

R: So what do you think are the perks of being a teacher, like we've talked about all the things that stress us out and all these things, what's good, what do you think are the perks of being a teacher?

B: I get to spend my day with kids everyday and I love it

R: Good

B: I really really do, the perks are longer holidays, you know I have a week and half to two weeks off at Christmas, I always have a long weekend at least Thursday, Friday, Saturday, if not Wednesday, Thursday, Friday, Sunday for Thanksgiving, we get a whole week for Spring Break and it's right at Easter, you know there's those kinds of things. It's not a shorter day because if I leave here at 3:15 which is rare I usually have a cart full a bag or something full of work to take home with me, either that or I stay to five to seven at night, you know, and I'm here well before the 7:45 time that's required I'm usually here an hour ahead of that, so it's not shorter days but I would say the longer vacations for people who have small children it's great because you know you're off when they're off I think it's family friendly in some respects in other respects it's very difficult to get off and be out if you're sick because you can't just walk out you've got to leave plans for you know, do this this this this, take a breather, go to the bathroom now, this is the last chance you get, you know, that kind of stuff and so as far as being out with sick children it's not convenient. I don't know, I think, I think the perks of teaching is that if you love kids it's a way to spend time with kids and hopefully feel that you can make some kind of difference in their lives, you spend, for us, I mean we spend a lot more time with them than their parents do at this high school age, a lot of them, not every one of them, but a lot of them, so it's the opportunity to give them a positive influence.

R: So do you think communicating with their parents is one of the stressful parts of being a teacher?

B: Sometimes and sometimes not. Sometimes I had a situation this fall that it was a very stressful situation to the point where I would not have a conference with them without an administrator present and then there's other communications I've had some that have been extremely supportive and absolutely wonderful so you know that goes both ways, but I think it can be a very very stressful because it seems that a lot of parents it's like what did you do to make my child feel this way or what did you do to my child, you know, it's no longer listen out, listen and hear everything out you know that kind of stuff, so.

R: So how much time do you think spend during the day on task that are not related to teaching you know your bus duty or hall duty or meetings and things like that?

B: I probably spend at least an hour and a half every day on stuff that is not directly related to teaching or preparing for teaching, filling out paperwork, doing forms, doing reports, you know, that kind of stuff, sometimes we just want to scream let us teach and leave us alone

R: So, as far as professional development, you mentioned before that the technology training would be helpful, have you ever received any type of professional development that you think was exceptionally helpful or what is not helpful for teachers or just give me some ideas there.

B: Well when I was in ___ county we had a staff development then that was probably more influential and affected my teaching more than anything we ever did and it was this lady we called the brain lady and it was brain study and how the brain of a teenage works versus the brain of an adult and how you need to approach them and how you need to go about things, you know, that was probably the most interesting and helpful staff development I've ever had. It was, I mean, it was all brain based research, so that was good.

R: So what do you think is not helpful, what have you had in the past that hasn't been very helpful?

B: I think the topic would have been good the presenter was not it, her approach shut everybody down and that was thinking maps we have to do. There were two teachers that we thought were going to do the presentation and ended up that the academic coach did it and it was all about me all about me all about me, one of those kinds of things

B: And so I mean I think it just kind of shut everybody down to the point where they just didn't really care, you know, and you could see it go across the room you know, but and I think had they let the two teachers who had been they went to training in the fall we didn't have this staff development till February you know they had the kids doing in their classes and they really got gung ho behind it and I think they could have gotten us more gung ho behind it had they been the two presenters and not her.

R: Right. So how does your job now at your school, how does it support collaboration among staff members, I mean among the department or among all departments or whatever?

B: Well they're, we're working on the professional learning community as far as across the whole county, we have two systems in our county, we have Clinton City and Sampson county

schools and there's four high schools in the Sampson County schools and they're working on doing a universal pacing guide which they developed this fall and today in fact they're meet for professional learning community about more about doing stuff alike and stuff like that. We talk about stuff within our department a lot, since we moved across the street, like I said we just moved into a new building, a brand new school our wing, our hallway except for one teacher is all math teachers, and then we have one teacher who is around the corner and then two teachers who are at the other end of the hallway, the other wing, the front wing, so we're a lot closer geographically so we tend to talk about, we get the opportunity to see each other, so we talk about stuff more and so we're always eating lunch together and we throw things out, you know, and that helps, and so I think that's really been a big plus, also our exceptional children's teacher who teaches predominately math, I think she has one English, but the rest of it is all math and is now on our math hall and that has been phenomenal because there's things that you know when we have students who are 504 or LD and they are in our room they're not pulled into her room, she has great strategies to help us when she gets stuck on something and she says well how do you all teach this because this is you know it's like they're having such a difficult time, you know we're right her to say oh I teach it this way or I show'em this way, you know and that is been, that's been priceless collaboration, I mean really, it really has

B: No, I mean I love what I do, I get frustrated some days, I do love what I do and I think that that's key

B: to staying in teaching, cause when it gets to the point where you know, you hate to go to work every day you need to change and I always swore if I got to that point that I'd leave it cause I had enough teachers that I felt like were just biding time

B: That I didn't want to be one of them

APPENDIX E: INTERVIEW EXCERPTS, MAGGIE

Researcher: Ok, do you think that your job at your current school and then your student teaching, do you think the difference in the schools had different stress levels?

Maggie: Definitely.

R: And then why do you think they were different?

M: Well were I student taught, I teach at a fine arts magnet school right now and we are currently number one in the state, which is fantastic and quite an honor to teach at, but at the same time, the pressure is enormous as far as the pressure from the administration about test scores and making sure your test scores are great and where I was before it was a lot more laid back, so I mean you have you trade some things like you have great students for the most part where I am now and I don't have to teach any type prep courses or anything like that but I have the added pressure of making sure my test grades are fantastic and if they aren't great the administration automatically thinks that it's something I did rather than it might just be a student.

R: Right. So tell me about one of the most stressful days you've had at work.

M: Well usually the most stressful time and so this would be last year is right before the AP tests and the end of course tests and I guess just getting the students ready and the anxiety of if they're going to do good and knowing that in a way the way that the administration views me as a person and my performance is dependent upon how those students do and it's completely out of my hands at that time but it's right around that time so in the beginning of May. So it's coming up soon.

R: So how do you handle that stress when you've got this you know you're preparing the students and you're worried about the test scores. How do you handle that type of stress?

M: Oh gosh. Probably not very well. I guess as far as my personal life well, oh gosh.

M: Yea, ok, I guess just talking to some of my coworkers and the other people in the math department that, so that would be a stress relief or exercising at home that would be a stress relief. Sometimes I just take a little nap and get away from everything. Things are usually better when I wake up.

R: Right. So do think your administration at your school, you mentioned the test scores and stuff. Do you think that they worsen your stress at school?

M: I don't know. I think that I have a tendency to take everything personally which in this job is probably not the way to go, but that just personality wise is what I do and so I feel like there is stress added from the administration. I mean they definitely are not saying its fine we know you tried your best, it's more of a get those test scores up and how much percentage did they increase and that kind of thing. So I would definitely say that they are an added stress.

R: So what do you think the administrators can do to help reduce the stress and still keep the rest scores up?

M: I don't know. I think personally at our school that as far as the administration it's a pretty small school so when I say administration I'm talking about the principle and the assistant principle. So it's just two people. I think they could do a better job of encouraging. I think sometimes they get caught up with the their people are breathing down their throat about how numbers have to be. Though their breathing down our throat about how numbers have to be and they forget to say hey we think you're doing a really great job. So.

R: Have you ever considered leaving teaching?

M: Just about every time this year. This time of year every, every year this time of year. I said it backwards. Not every day this year. The actually the teacher that teaches next to me and I we've decided by October and around March right before spring break is kind of like the burnout time and we're always like we just kind of joke around like what else could we do with our lives, but we can't ever come up with anything so, but yes I have considered leaving teaching.

R: What about your first year of teaching? What was that like, did you consider leaving that year?

M: Well, I kind of, I made a promise to myself that I was going to give it two years.

R: That's good.

M: I just I knew that the first year was supposedly really really really hard and so I said well after two years I'll make a decision, and then after the second year I ended up loving it, and really every time I think about what else I would want to do I can't ever really come up with anything.

R: So when you get stressed out, you know, about the test scores, and this time of the year what do you think that really makes you want to leave teaching?

M: I think it's, let me think, I think as far as wanting to leave it's like a level of frustration. In a way there's only so much you can do and when that's not good enough you don't really know where to go from there and then that's just about the level of frustration and anxiety and then about that time of year you just get burnt out.

R: So what convinces you to stay?

M: Well I signed a contract I can't just step out, but I think when it comes down to it, it's not about the test scores and when I really think about it's more about the students and I still enjoy interactions with students and making those interactions every day, when it comes down to it that's what I always get down to that's why I stay, cause that's why I got into teaching it's not because I have this great love for math like I am still trying to decide if I even like math. It's just that I got into teaching for the students and so that's why I continue to stay.

R: So what about, what about your colleagues and your math department members when you have one of these days were you're feeling doubt and you think oh I just want to leave this place, what can your colleagues do to make you feel like you want to stay? And what do they do?

M: I think I talked about the administration not being very encouraging but as far as my colleagues they are very encouraging, so they kind of take up the slack from the administration they're good about listening and then just saying you know what you are doing a good job and just reminding me I guess why I want to be here.

R: Right. Have you ever actually gone so far as to apply for other jobs?

M: I did apply for a PhD program a couple of years ago and got an assistance ship and everything I was pretty sure I was going to move and do that for a little while but I just it just didn't seem quite right at the time so I didn't.

R: Right. Right. So do you think you applied for the PhD program to leave teaching or to remain in teaching?

M: I think to ultimately start teaching in college. To leave the high school atmosphere. I really do enjoy teaching it's just sometimes the high school atmosphere and the middle school atmosphere is a bit confining.

R: Ok. So let's talk about just being a math teacher. Do you think the needs for math teachers are the same as the needs for teachers in other disciplines?

M: Definitely not.

R: So what do you think is different?

M: Ok, Ok, with the state of _____ we just did a complete revamp of the curriculum and so as far as professional development I mean I talked to my history teacher friend and history doesn't really change I mean there's a few little things you can change about the way you present something but the revamp of the math curriculum, it's completely different. So as far as professional development, people need to be trained on that, and what's expected and those kind of things. I do feel like sometimes math it's a little bit harder to be a math teacher maybe a science teacher cause we have to stay after and help students and it's not very often a history teacher has to stay after and tutor somebody. So as far as professional development what was the other things?

M: As far as supplies our county does not do a very good job about technology to be in a, I wouldn't consider a wealthy county, but our there our superintendant makes a lot of money and like we just have not very good computers and just as far as allocating money towards that they are not good at that and I think that math is a place where you definitely need technology and as far as teaching tools, smartboards and things like that are very very helpful and those aren't things that are necessarily provided for us.

M: From the technology stand point we our administrator two years ago or maybe it was last year gave some teachers smartboards and some other teachers not smart boards and she like I think she started out trying to put one in every department and us over here in the math department who could really use one and use it well one person got one were as in the history department and the English department they didn't really need the capability of the smart board they could have just used an overhead, not overhead.

R: Right. Do you have any suggestion that you would think might help combat this math teacher shortage that we have? Cause we all know there is a shortage of math and science teachers. What do you think would help alleviate that shortage, as a math teacher?

M: Well our governor, ok first of all I'll tell you what is not a good idea and then I don't know what that will do for you. The paper came out with and I mean the way that money is know you know all that stuff. I doubt it will go through, but one of his ideas to kind of recruit math teachers which I did not think was even the slightest bit fair was that if you teach in a high needs area and one of those being math. That you would start at like a five year salary versus your first year salary and I really don't think that's a fair option to help recruit. I mean why should a math teacher get paid more than a science teacher or a history teacher you know? We're still working the same amount of hours I mean in the end it pretty much all evens up you always have the teachers who don't do their job, but if they are doing their job, you're working about the same amount.

M: I'm not, as far as, how to, I think a lot of people are kind of scared of math. Like as far as elementary school teachers you have an abundance of those and a lot of those could probably teach middle school math, but maybe they just had a bad experience, they don't think that they're capable. So maybe encouragement along the way that they are capable of actually doing this.

M: I know. Like when I tell people what I do they're like uh. Glad it's you not me. Which doesn't make me feel very good about myself, but I mean I never really thought of it that way. When I decided to be a math teacher, I thought of things, I knew I wanted to be a teacher and then I thought of what I could teach, and I'm like well I could teach math. I know that I will always have a job. So I decided on it that way. It wasn't like a super great love for math.

R: Right. Have you ever struggled with teaching some of the content in your math classes?

M: I mean there have been some that I've had to like, well ok In AP statistics definitely they, I mean when I when I got hired they were like would you be interested in teaching AP statistics and of course I was like of course I would. Thinking I'll never have to do that and then the next year they're like ok. Have fun. So. I definitely with that material had to study it and think of ways that it made sense to me and then think of ways I can explain it so that would make sense and but now I am really good at that material as far as the new curriculum I am like what in the world are they trying to get out here and so that takes some brain power, but nothing that I wasn't ever able to figure out.

R: So what do you think like you know your first year teaching AP stat you had to do some extra studying and preparing what do you think would have better prepared you to teach that course?

M: If I had paid attention to statistics in college.

R: So do you think that the college math content courses that math teachers are required to take, do you think those are rigorous enough or too hard?

M: I think that they are definitely rigorous enough. I think its. I used to kind of joke around that they make use take all those math hard math classes so that we would feel, like blah I can't speak, Feel what it's like to not understand something so we can sympathize with our students but I mean the more I get into something I am now able to see how different things connect because I was my mind was expanded to think a certain way when I was in college and so I loved my college program I thought it was fantastic and really prepared me well. I went to the University of ____ for my undergrad.

M: I actually went there for my masters to, so I don't think it's too rigorous I wish I would have I mean just for my personal sake I wish that I would have been encouraged to do a dual major in education and math cause I think I would have had like two more classes or something. But I think the way that _____ does it is they have a mathematics education department which is a lot of schools don't have that because there is not a need.

R: No you did, your fine. So do you think that a teacher's salary is sufficient enough to be financially secure?

M: Yea, I think so, I mean I've never been in want for anything or need of anything.

R: That's good.

M: But I also, but I mean well first of all the benefits are fantastic and I am a single person, I am not raising a family. I think it would be difficult to raise a family on just my salary, but I mean, I think it's plenty, I think it's enough, I am not unhappy with the salary.

R: Right, so you said the benefits are fantastic, what do you think are the perks of being a teacher?

M: Well, when I am saying the benefits like health insurance cost me \$56 a month versus \$200 a month. Dental insurance is like 10 or 15 bucks a month versus however much it is somewhere else. The retirement system is great and so working for the state is definitely does have perks versus I don't I mean never have to worry about that 401k stuff that everybody. I mean I didn't even know what that meant for the longest time. I just I am doing the teacher retirement system of _____, that's where my money goes and I know that when I retire that it will be safe and that I'll get a salary till I die so. So those are definite perks.

R: So what do you think is the worst part about being a teacher?

M: it would be. This isn't the worst. It would be nice to be able to leave for lunch every now and then. Well now that we are talking about it, now I kind of like it. I might come back around.

M: The pros always out weight the cons. Well I think a lot of people take work home with them and when I was student teaching I had two different teachers and one teacher said don't take work home and so when I'm at work, I work really really really hard. You don't see me really socializing a whole bunch with peers, coworkers and so I don't take work home so that's not a big deal. I can't think of anything wrong now.

R: Do you think like communicating with parents is a stressful part?

M: Oh yes. I do hate communicating with parents, but I think that's also a personality issue. I don't like conflict and sometimes I have to deal with conflict, that's everywhere, that's not just in teaching, and I've only had a handful of bad experiences with parents. So I wouldn't even, but I mean, things could, no jobs perfect.

M: I would say I probably like my job about 80% of the time but then reality, I think I was telling my Dad this, he's like that's fantastic. Nobody likes their job 100% of the time.

M: Yea, so I'm like oh in that case maybe I'll stick with it. I think also when you're younger, I mean, so this is just my fifth year teaching I'm 27 so like my first two or three years your always like is this what I am supposed to do for next 30 years and even now I am like 25 more years that seems like a long long time, but I mean there are different areas I mean I have thought about getting into administration eventually or maybe I would go back and get a PhD. I still haven't answered your question. I don't know, oh ok, I know. I really hate the essential question thing and having to do the word wall. That's the worst thing.

R: So how much time do you spend during the day on non-teaching tasks, you know meetings and hall duty and bus duties and things like that.

M: I have hall duty every day. Any given week between 30 and 60 minutes a day.

M: Usually not more than five hours a week.

R: Ok, do you think that that takes too much time out of your day for your actual teaching duties?

M: Not really.

M: We. I mean we split it up pretty well I have hall duty, it's like a 30 minute period and we split it up between 3 people for the hole year. So I have that 30 minute period for 12 weeks out of the year but then I am done with it, so that's not that big of a deal. I have lunch duty like twice a nine weeks. That's only for 30 minutes. I have bus duty twice a year for a week. It's really not that bad.

R: You mentioned earlier about the testing and stress this time of year. Do you think that the pressure of all the testing actually cause teachers to leave the profession?

M: That's one reason I thought about leaving. I don't know why but last year it really got to me. It was almost too much to handle, but again I think that might be a personality issue too is that I take it too personally that I have to just you know I really have to know that if I try my best I can't control whether someone sleeps through the test.

R: What type of professional development have you received in the past that's helpful or some that's maybe not helpful?

M: We talked about one of the things the school did that I thought was pretty helpful is they brought somebody in that talked about grading and what you should count as grades and like if someone doesn't bring in their progress report is that really worth a grade? What grades reflect and that type of thing. I thought was interesting, that's something that I had never been talked to about that's kind of this is the way it was done when I was growing up or you know we have a lot of math professional development with the county and they aren't always beneficial but my mom's a teacher and she says if can take away one thing then the course (Inaudible).

R: What makes you think those are maybe not helpful?

M: Well it kind of gets to the point where if you have a teacher workday you have a pullup every single time so you're not really able to plan like you would like to. I think that those days could better be planned used planning lesson planning with another teacher that teaches my same subject and we could really benefit from that time rather than having to sit through something. So I think that maybe it's just a little too much like I don't mind them every now and then but every single one.

R: Right. So, how does your job, your school that you're at now, how do they support you and as far as collaboration among your math department peers or other teachers in the school?

M: Honestly, not very well. We had asked for the same planning period, cause we are teaching a class that's never been taught before, ever. So, it takes a lot of planning on our part, so we'd asked for the same planning period and they didn't honor that so not very, they aren't very helpful.

M: You talked e around to liking my job again. Good job. I can always be talked back around.

APPENDIX F: INTERVIEW EXCERPTS, JANEL

Researcher: Ok, do you think your stress level is different at the two different schools where you taught?

Janel: I, I definitely think yes, but I think part of it was my first year at the public school was my very first year ever and I never got to have a second year at that school, so I don't know if my stress level would have decreased because it was my second year, so it's hard to say why the differences were

R: Why do you think your first year was so stressful?

J: One just being so young and I was 22 and I was teaching 18 year olds so I think there was a lot of stress in that teaching an AP class, you know, when they door closed it was just me and that was a very overwhelming feeling for me so I was really stressed about that and I had nothing so it was like literally every night starting from scratch to get ready for the next day so and my personal life I was planning a wedding, my husband, my fiancé had moved to another state so I just think it was a very overwhelming year for me on all accounts.

R: What do you think would of better prepared you for that first year?

J: I think as much as my student teacher mentor was she did not give me a lot of freedom in terms of I had to use everything that she would use for class, I had to do all of her tests so although I got the experience of being in front of the classroom I never got the experience of preparing the lessons for that day everything was always hers so although I had to prepare myself using that I never had to create anything so my preparations would take a very short amount of time so I didn't get that experience of spending hours and hours getting yourself ready so I think that would have helped immensely to have more of that real life experience in my student teaching year

R: So tell me about one of the most stressful days you've ever had at work, it could be your first year or at your new school.

J: Yea, I know, you know I'd have to say any Monday my current year because we have, we have alternating days schedule so I don't see every class every day, but on Monday I have to see all my classes, I also have student council meeting and I have my ninth grade advisors meeting, so I go from 10:15 to 3:30 and then I tutor right after school and there was one Monday unfortunately were one of our students had committed suicide and just coming in and dealing with that and then teaching five classes in a row and just literally having kids like break down in class not really knowing what to do and just knowing that there was zero time for me to react in any way myself throughout the day because there was no chance for me to step out and be me and not their teacher so I think that was probably one of the most stressful days I've had

R: Wow, so how did you handle that?

J: It was going, they gave us the option to skip meetings that week if we needed it was really, I was sleeping, it just it was taking the day to like take care of myself and go home right after work and I just tried to be around like you know other teacher friends and but really cause during the day it really has to be all about them you know having teachers come in and sit with your kids while you had to take a kid outside and just let them cry or try to find the school psychiatrist so, but think at the end of the day just leaving and then really trying to just to take care of myself cause you can't be any help to them you know the next day if you haven't tried to anything to calm yourself down so.

R: So do you think your administration at your school worsens the stress at your school or helps the stress level?

J: Overall at my current school I think they definitely add to the stress I think they are the main reason for the stress

R: Ok so what do they do that makes everyone so stressed?

J: We recently changed to administration system where instead of having like two deans where they each cover two different grades we now have four deans so we have like and they added another assistant head position so we have like 6 administrators just in the upper school alone and no one seems to know what they do and they don't seem to know what they do so they just each try to come up with these like initiatives to make it seem like for them to be doing something that they never follow through on so it's like all this work that we're having to go through and then it just goes nowhere like they told me when I interviewed that I would never teach anywhere with more meetings and I was like oh how bad could it really be? And it's like honestly I mean we'll have a meeting to plan a meeting and it's really is ridiculous the amount of meetings and extra stuff that's thrown on and they just it's like they never even talk to each other either so that makes it very difficult

R: So what do you think can do to reduce the stress of teachers?

J: I think they have to remember what it was like when they taught as many classes as we do our administrators get a reduced load so they're only teaching like on class so this one time they decided to change to move up when our interim reports are due by a week and they couldn't understand why we were so frustrated because they could fit it in their schedules but they don't teach four classes a day they only teach one, they don't advise, they don't have any of those other responsibilities I think sometimes it's easy for them to forget what it's like when you didn't have all the periods free during the day except one I think it seems like it's really easy to forget that

R: Ok Have you ever considered leaving the teaching profession?

J: I actually did once when I moved here I had a job that fell through it was too late, school was going to start in like a week so I was like well I've always wondered what it would be like if I taught in an office atmosphere so I worked at the Princeton review which was doing educational

materials and I hated it I didn't even last a year. So the stress there was actually even worse and the work wasn't as fulfilling so I decided that I'd much rather be back in the classroom.

R: So why do you think it was so much more stressful working in an office environment?

J: They were starting the division new and a lot it just was very unorganized and I was on an account that unfortunately did not have a lot of other people on the account and when there was a deadline there was a deadline you were there till you know 1, 2 o'clock in the morning if you had to be you know I had to travel to Nashville, TN for a week every month so it was just a lot of demand with very little guidance I was doing the job of two people ahead of me and not getting paid for that and it was just they were asking a lot

R: So now that you're back to teaching what makes you satisfied with teaching?

J: In a sense you know there's you know you your still asked being a teacher you're still asked a lot I certainly work more you know at least my old my other job when I came home I wasn't I didn't have anything else to do were as when you teach you come home and you still have so much to do but I don't know I just feel like the reward is greater you know and when that kid gets an A on the test or I just love being around the kids so if I'm like I can deal with all the rest of it cause I feel like there's a reward there you know I feel satisfied at the end of the school year you know when I see the kids graduate like sometimes I feel like I feel like I accomplished something

R: Ok, do you think the needs for math teachers are greater than the needs for teachers in other disciplines?

J: I had (Inaudible) my experience added from I having friends having to look longer for jobs in those disciplines and also just between the two schools I've been at I know that we turn math teachers around quicker you know they move on to other experiences they go to engineering I think sometimes they're lured away by the more high paying jobs and then in a few cases that I've seen people who teach English and history seem to like go to a school and retire from that school so I know at our school it's very hard to get into the history and English department cause no one is leaving so I at least at my school I would feel like that is definitely true.

R: So what do you think they can do to help retain the math teachers that are being turned around so quickly?

J: You know I mean that's a good question you know they've done a lot at least at my school recently to bring our salary up to be competitive with the other private schools so they are trying on that front and anyone I believe who really wants to be a teacher cause they want to be a teacher doesn't really do it for the money cause you know going in that there's not going to be a lot. I don't know you know I find the one thing that was when I talk to other people in other disciplines that you know I teach three different math classes and they'll like specialize in like one type of history or they'll really specialize in one type of English and teach that elective and I guess sometimes with math with if we're spread too thin and we're trying to teach all these different courses I don't know maybe if they allowed us to like specialize in something or really

develop a curriculum without constantly changing us back and forth year after year I don't I don't know

R: So do you think a teacher's salary is sufficient to be financially secure?

J: Well I mean I probably couldn't live by myself in _____ with just my salary to be honest. So yea, I don't know that I mean I think as much as they try yea I don't know if they could, I know I know would probably have to have a roommate here

R: Have you ever struggled with the content of teaching math? Like especially since you're an AP teacher, have you ever struggled with the actual mathematics?

J: Well, I'll be honest that I've always told my department heads and I've turned down like tutoring calculus since I really I don't feel comfortable at all with calculus and I mean I teach AP statistics and I majored in statistics in college so I feel comfortable with it but there are times when I struggle you know with like the best way to explain it just because you know it's one of the things I feel like the downside to the math education programs in colleges as much as I think they do a great job on the education side we take all these advanced math classes and then we go teach like algebra one and no one's told us how to teach factoring you know we did all these advanced things and then we go back and teach the most basic and so I think that sometimes hard is remember how to go back and teach the way we can do it but how do we've been taught how to explain all these other things but never how to teach like you know how do you factor this trinomial so I feel like that could be difficult and I will definitely say I'm very uncomfortable teaching like anything above precalculus

R: So, what do you think would have better prepared you to teach like a calculus class? How could you have been better prepared for that?

J: I think if I had done better, I did really bad in calculus in college so I think I was just scared of it I think I've just like gotten into my head that I can't do it but at times like when I got to conferences and I'll sit in on like a calculus first year lecture I mean I do follow it so I guess I think it's really just more like probably me building my confidence and I could you know and just fig really if I really did put the time in to get myself comfortable with the concept I probably wouldn't be as horrible at it as I think but I just feel so much more comfortable with the younger kids anyway that I just it's just what I tell myself you know

R: So, you mentioned all those ridiculously hard math courses we have to take. Do you think they're too hard? Should they be easier?

J: Well I think some of them are too hard for what it is you're going to do when you actually go teach high school math like you know, no high school offers a calculus integrated with statistics course and you know we actually offer mutli variable at my high school but there's like two kids in it every year so I feel like math some of the math courses I had to take at State were although beneficial I mean I certainly think we need to be good math students and really understand the bas the basics and where everything comes from and where it goes from there but I don't feel

like anyone every prepared me to teach algebra one cause no one is going to high school very few are going to go teach like multi variable or anything above multi variable.

R: So you think maybe instead of some of those really crazy math courses you would have benefited more from more pedagogy courses for high school?

J: Yea, like you know just like you know ok here in case you forgot everything you learned in algebra one cause you took it like in the eighth grade you know here's like here's the real theory behind the algebra curriculum and here's the really key parts of the curriculum, here's the best way to approach the curriculum like cause I feel like that such a core course and so many teachers go into their first year and you know we're put that was in the public school I was put in algebra one no one wanted to teach algebra one, so all the new teachers started in algebra one and I just felt like I had taken one geometry course in college but other than that everything was so much more advanced. I did feel a little I could do the math obviously but I just felt a little lost in the best way to get to get the concepts across.

R: Oh wow, ok so think back when you were in _____, think about your first year of teaching, do you think all of those high stakes testing that we had to do, do you think that that causes teachers to leave the profession?

J: I would say yes in some cases. I can at the school I was at thankfully I wasn't I don't feel like we were constantly being talked to about it and like that was I never felt like my job depended on it but I do have friends that teach in other schools who are kind of like literally told that their job does depend on their scores and I feel like as a teacher that's got to be really hard to do year after year cause I don't think anyone goes into being a teacher thinking that their life has to revolve around the end of school, excuse me, end of grade tests. So I would definitely think that in some cases that could lead someone to just get so fed up that they would want to leave

R: Ok, what would you consider the perks of being a teacher?

J: I think we have a fun day, I think our day is different every day, you never go in and have the same day twice. I think if you have the right group of kids I mean like to walk in and I you know I kind of like feed off that energy it can be exciting and you get to build like the mentoring relationships with the students and I know it's different it's a little bit more casual and less formal than other jobs and I think we think we get to have more fun during our day than some other people do

R: Ok, on the other hand, what do you think the worst part about being a teacher?

J: I think we have a lot of pressure put on us, I think parent want us you know parents expect us to watch their kids during the day and get all the some parents think all kids their kid has the ability to make straight A's it's just you that are preventing it so unfortunately in a private school there's a lot of politics, I mean I know there is politics in public school but when a parents donating \$50,000 a year their school the administration also wants their kid to get an A as well so there's that but I think there's a lot of pressure and stuff sometimes that comes from parents and administration that can make that day less fun.

R: So do you think, you mention the parents and stuff, do you think you're as a teacher communicating with the parents about you know grades and discipline and things like that do you think that's a stressful part of being a teacher?

J: Yea, I definitely I mean I always dread when I have to call home if a kid got like a bad grade and like there's always that those one parent that has that reputation and so I had a horrible experience early this year that literally was just like sitting in there like screaming at me and I had to tell her that we were done so I think that yea that's a definite down side.

R: How much time do you spend each day on tasks that are not teaching related?

J: We have one period well since I teach an AP I only have to do one period of duty a week so I have an hour of that on Fridays. Otherwise I mean I have like home room two days a week and we have like chapel we have to go to once a week but otherwise it's just like answering emails just cause it's we're a laptop school so the kids send you emails all the time, the parents send you emails all the time and because we have 80 million meeting there's 80 million emails to read to get ready for the meetings so I find that like on some days I could literally sit down and just spend my one entire free period checking my email

R: What type of professional development do you receive that you think is helpful, so have you ever been to a workshop that was particularly helpful or one that maybe was not helpful?

J: Our up until this year unfortunately because of the financial situation the school has been like amazing in terms of if there's a conference you want to go to or a class you want to go to I mean I've taken two online classes, I've gone to three different conferences like they really are amazing with that. Unfortunately this year we lost a lot of our endowment so, their just a little less willing, but their I took an amazing sketchpad class online, I've been to that conference in Durham, twice I did the summer institute at UNC Charlotte, so their just really amazing in terms of profession development constantly sending out emails they get passed on to them to see if anyone's interested and so I think that's like really something that they believe in and that they want us to do.

R: Good. Ok does your current job support, or how maybe I should say how does your current job support collaboration among the teachers or especially the teachers within your department?

J: We do, I think that we have a really good system set in place in terms of it's not very strict, but if you teach a course with somebody else, you have weekly planning meetings with them, we have to have the same you know the test needs to be covering the same material they need to be of the same difficulty our grades have to be weighted the same way, and so it's nice having a person to sit down with and talk about well how did this go, how did that go, and at least in my case I want the teachers that I work with we wind up giving the same exact test I think it helps with the workload if you can split it up and it just seems to make more sense this way next year everyone all our kids who are going into algebra two they know that they got the same geometry now matter whether they're in my class or the other teachers class, so I think, I think because in the past it hasn't always been mandatory at our school, I think some people fight it a little more

than other and are used to doing whatever they want, but I think it's really great when you can sit in a room with somebody.

R: How do they, you said that you were required to meet once a week, do they, do you have common planning periods or something?

J: normally we do, because the way we there's like eight periods a day and we only teach four classes a day

J So there we have more than like one free period so normally there's like even if it has to be lunch then its lunch one day a week or something but normally it's pretty easy to find the time.

R: So if you have eight periods a day how long is each class period?

J: 50 minutes

R: Ok. Do you like that? Or do you prefer a longer period?

J: When I went into block I was like how am I ever going to do this cause in high school I had 55 minute classes and then I loved block cause you can get so much done and 55 minutes is hard I feel especially with the AP stat curriculum that it's like so rushed, but

R: But you meet every day

J: Right, right we do meet every day. I meet my AP stats kids every day, I don't meet my other kids every day, but I know it's 50 minutes can go by really fast

J: No, I mean just that obviously it comes waves you know there are certain times of the year that are worse than others but

J: I think right around we actually instead of report cards we do comment writings, we have to write these reports on every student, so I think right around when those are due it's really stressful you know but you know there you know there are great days and then there are really stressful times I just think it kind of comes and goes. I think if it was like super stressful everyday there's no way I could do it but I think one of the really I think when the stress is bad at least I've found that's really bad