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ABSTRACT

This paper compares the reasons that science teachers leave as cited in current literature, with the author’s personal experiences as a high school science teacher and those of the five participants. It takes an autobiographical view to compare the teaching experiences of the author with those of five participant teachers who were leaving teaching or were considering leaving the teaching profession. The need for teacher recruitment and retention in both Florida and Virginia are mentioned as well as the issue of high teacher attrition. Since the desire to leave teaching affects administrations, school personnel and most importantly student learning it is important to address who leaves and why. The study found that the reasons most often cited in surveys are vaguely accurate, but that teachers respond on a more personal level when interviewed in person about their reasons for leaving.
Since leaving teaching after a 16-month hiatus, the author has returned to teaching and discusses the reasons for her return and what she has learned about herself and her teaching from the participants whom she interviewed.
CHAPTER 1

Introduction and Framework

Asking questions is a part of human nature. When one begins to ask questions, it seems as if only more questions arise. As I began to ask questions about my teaching, I wondered who felt the same way that I did? Once I started asking, I started getting some answers. I though it was important to share what I had learned, so I decided to tell other people what I found out.

Why I Decided to Write My Thesis

I became interested in the subject of science teacher attrition as I decided to leave my job as a high school science teacher myself. As I was considering leaving, I sought to find out if other science teachers felt the same pressure, anxiety and general dissatisfaction that I felt with our chosen profession. I was also curious about how they dealt with these feelings and if any, like myself, were considering leaving. This thesis has compared my teaching experiences and the decision to leave teaching at the secondary level with that of other science teachers. It also explores the complex reasons underlying why I decided to return to teaching science at the high school level.

My original research questions centered around the similarities I hoped to find in our collective teaching experiences, the similarities in the reasons for our considerations to leave and, lastly, the subsequent outcomes and follow-up after we left or changed professions. I chose the answer the following research questions:

- What are the primary reasons that science teachers leave or consider leaving?
What experiences do teachers most remember that have influenced their decision to either leave or remain in teaching?

What are the things that teachers value in a working environment? How do they seek to match their values with those of their administrators and peers?

Do their value judgments affect their decisions to stay in teaching?

How did the teachers with whom I spoke evaluate their own satisfaction with their teaching jobs?

How many teachers whom I interviewed actually chose to leave, and if they did subsequently return to teaching, what were their reasons for staying in teaching?

I used my research questions to attempt to discern if the same teacher issues that I discovered in my own teaching were similar to those documented in published research. I also sought to discover if what my participants and I had experienced was common among teachers of science. I hoped to uncover any obvious similarities in each of our stories since we all taught high school or middle school science. After talking to each teacher, I hoped to make connections and see patterns that either agreed or disagreed with what the literature said and what my own experiences had been.

I was interested in discovering the backgrounds of the teachers whom I interviewed, and comparing them with my own background in an attempt to find similarities or differences that may or may not have influenced their decisions. It was also my intention to re-examine my motivation for returning to teaching after a 16-month hiatus.
Literature sources, a statewide legislative survey, as well as interviews with science educators who have left, or are thinking of leaving, have served as the basis for my external analysis. For the purposes of internal analyses, I have reflected on my own writings of my experiences as a high school science teacher for four and a half-years as well as include my thoughts concerning my current position as a Chemistry and Biology instructor at both the high school and community college level.

**Purpose of My Research**

The purpose of this research is to pinpoint and elaborate why some teachers, particularly bright, talented, and capable ones leave the profession of teaching science. Even though there is a preponderance of statistical evidence that attempts to quantify who leaves and why, I am more interested in what actual teachers have to say and how they feel about their own teaching experiences. Although the statistical evidence is obviously important, my goal is to uncover the underlying issues that they perceive, experience or otherwise present that may be compared to other teachers and their issues.

By asking specific and direct questions regarding their teaching, my intention is to explore more deeply how these teachers feel about their experiences, not just what they would have filled out on a written survey. I am continuing to attempt to carry on a dialogue with each of the participants in my study. As I am continuing to try to maintain contact, I am interpreting and analyzing what I perceive are their underlying reasons for leaving or considering leaving teaching, I am still attempting to provide them with feedback and solicit their responses.
In addition to information gathered by various state and federal agencies regarding teacher information, voluntary, written questionnaires administered directly to the teachers themselves seem to be the preferred and most widely used method of data collection in this particular field. I hoped to expand on the quantitative information collected by using qualitative research utilizing personal interviews and correspondence. In short, I hoped to reach the teachers on a more personal level.

To begin, I discuss the reasons for each of my prerequisite decisions that led to my decision to leave teaching at the secondary level after three years of teaching. In doing so, I hope to provide insight not only into my own experiences, but also provide information from other educators who have made the same career decision. By asking other teachers to examine their own motives for leaving teaching or remaining in teaching, I anticipate that this would provide a forum for teachers to grow in their own understandings of their decisions and perhaps influence the teachers in a positive way.

In my own experiences, it was helpful to have objective parties listen to my concerns, and often this allowed me to make better decisions regarding my teaching. I considered those opportunities ones in which I grew as a teacher, and I hoped to afford my participants the same experiences.

In all contact that I have had with the participants after the initial interviews, I have been looking for growth as determined by each of the participants concerning their own teaching. I have asked other practicing teachers for their responses to these same types of questions using a format that included an emergent design. I used personal
journals, notes, stories and recollections as well as formal and informal comments from participants made during taped interviews, electronic correspondence, and conversations for my analyses. After gathering the data from my participants, I evaluated my own experiences, as well as those of the participants in my research to see to what degree my findings agree or disagree with the published literature in this field. Analysis of my personal journals, the available literature and personal interviews with other science educators should reveal insights into my central questions regarding the true reasons of why science teachers leave.

What I Hope to Accomplish by Researching Why Science Teachers Leave Teaching

It is my intent that in conducting this research, I will be able to inform colleagues, parents, administrators, prospective teachers, and practicing teachers regarding what I believe are some unrealized or unmentioned reasons for the loss of such significant numbers of science teachers. It is clear that as we consider the reasons that science teachers leave, it may improve our chances of keeping them teaching by addressing their concerns.

Another consideration for conducting this study is to shed light on the issue of science teacher attrition by using my own experience as part of this movement. After reviewing this thesis, it should be clear that there is a more than a coincidental relationship between several factors involved with being a science teacher and the subsequent high attrition and burnout experienced by those who are qualified to teach science.
The last goal of mine is to impress upon school administrators and educational leaders that teacher attrition, particularly in the area of science is becoming an even greater problem that we must deal with if we are to retain qualified science teachers and stop what is known as the “revolving door” (Garcia, 2000, p. 1). There is growing concern among many school districts, state governments as well as the President of the United States, for how not only to retain, but also to replace much-needed, highly desirable professional teachers especially in the areas of science. I believe that it is extremely important to communicate what I believe are the most prevalent reasons why science teachers in my study leave. The results that I have found through this study and subsequent informal polling of colleagues in my current teaching position, I believe, are still supporting my original assumptions about why science teachers leave.

My Background

Before becoming a high-school teacher, I had a number of interesting, science-related jobs and experiences that included laboratory technician, veterinary assistant, and laboratory instructor and science laboratory tour guide. These preliminary experiences provided me with what I believe are a unique background for teaching. My undergraduate degree was in Zoology and not in education, so my training before entering the teaching profession has been bolstered more by real-world experiences than by actual teaching in a traditional classroom setting. I graduated from college, came home after not being accepted to the College of Veterinary Medicine at Auburn University, and began working in a
microbiology laboratory. It did not take long to realize that I was not utilizing my full potential as a laboratory technician and I decided to return to graduate school at Florida State University. Before entirely completing my degree, I took my first teaching job at Harrison High School. My second and third teaching jobs were at Statesville High School and Cedarville High School, respectively.

After I left the teaching profession at the secondary level, I became an educational representative for a university and traveled extensively in my attempts to recruit students to attend one of the now 24 countrywide campuses. During a 16-month stint of lecturing, traveling, interviewing and following-up with students, I realized that I missed the classroom environment. More importantly, I missed having real, genuine relationships with students. Even after an 800-mile move with my company from Florida to Virginia, I discovered that I was growing less and less interested in doing my job as a recruiter.

I often found myself wandering into science classrooms and inquiring about what they were lecturing on, what laboratory exercises they were doing and if I might come as a guest lecturer. At one school, I actually volunteered to come to the International Baccalaureate Biology class and help the instructor with the evaluations for his students. Since I had taught in an International Baccalaureate program previously, volunteering to help him seemed like the most natural thing for me to do. It was then that I realized what was missing with regards to my job satisfaction: involvement in science and student learning.
After a wonderful Christmas break in December of 2001 I began considering all of my financial, educational and personal obligations and I began to ask myself what really was missing that was making me unhappy in my current job. It was not long after that break that I made the decision to leave the recruiting position and seek out at least a part-time teaching job as an adjunct instructor at a local community college. I did this so that I could begin to get back into teaching. In addition to seeking an adjunct position, I figured that since I was certified in the State of Florida to teach high school Biology and Chemistry, I would put myself on the substitute list just to supplement my income until I could find another job. What ended up happening is still amazing in that my inquiry led to an interview and a job offer on the spot at a local high school teaching Physics. I am currently still teaching Biology and Chemistry at this school. The Commonwealth of Virginia has subsequently certified me in not only Biology and Chemistry, but Physics as well.

Theoretical Framework

I choose to view the phenomenological and constructivist frameworks for my research because I think that together, they encompass the most effective means for understanding my own teaching (Pinar, Reynolds, Slattery, & Taubman, 1995; Tobin & Tippins, 1993). I intend to use what I learn about myself as a teacher and as a person to evaluate how my teaching has influenced me personally and how my experiences may be
classified as those attributed to the phenomenon of something similar to what might be classified as professional burnout.

I have chosen as the primary theory for my investigation, phenomenology. This belief includes the idea that reality exists only as it is being lived and cannot be taken out of context and analyzed separately (Pinar et al., 1995). By reading popular phenomenological literature by authors such as Wilber (1999) and Pinar et al. (1995), my understanding of the purpose of phenomenological studies and their purpose has become clearer. I feel strongly that the kind of research that I am doing requires the depth of introspection prescribed within this theoretical framework. My reality with regards to my teaching experience is not separated from my life as I am living it, nor is it separated from the experiences and beliefs of my past. According to phenomenological theory, both my past and present attitudes, as well as my views and perceptions have shaped how I make decisions, how I view my own set of circumstances, and what are the constructs of my reality about these circumstances.

Constructivist beliefs have influenced my thinking about how I teach based on analysis of my own thoughts and feelings over the course of the past four and a half years. I agree with the tenet of constructivist theory that alludes to the fact that we can never truly understand underlying forces of nature (Tobin & Tippins, 1993). We cannot ever really “know” all of the factors that have influenced our decisions to make certain career choices, such as the one to leave teaching at the secondary level, just as I cannot know what are all of the reasons why good science teachers stay in teaching. What I can
do is construct my rationale based on my own experiences and what other teachers tell me of their experiences and evaluate them according to constructivist principles. A large part of what I acknowledge about my experiences is that they are unique to me, and I have been the one to live with them and through them. In the past five and a half years, I have been constructing my own reality of teaching and what it means to be a good science teacher; this was even when I was not in a classroom as an instructor. Based on what I have learned, I realize it is I who makes the decision whether to leave, stay or return to teaching.
CHAPTER 2

Literature Review

Who Leaves Teaching, Who Will Be Needed, and How Do We Keep Them?

It is estimated that 2.5 million more K-12 teachers nationwide will be needed in the next ten years to meet growing needs of schools, particularly in science, mathematics, and special needs (Hussar, 1999). The results of other surveys have been reported and the research on attrition rates of teachers agrees, indicating that the most talented teachers leave in the greatest numbers (Schlechty & Vance, 1983). I feel as if I am one of those talented teachers.

As I began to explore how many science teachers leave and why, I encountered an article in the Tallahassee Democrat that explained how the Florida Senate had been researching the same question. The intention of the Senate committee was to use a statewide survey to investigate why certain teachers in the state left and what it would take to get them to come back to teaching in Florida. The survey targeted special needs teachers, such as others and myself in the areas of science, mathematics, foreign language and special education. The basis for the survey was that there are approximately 72,000 individuals in the state of Florida who are certified, but currently do not teach. Data concerned the number of teachers who were certified and in what areas these teachers were certified to teach by the Florida Department of Education (Shaw, 2000).
Florida’s Projected Vacancies

According to documents prepared by the Florida Senate, projected vacancies for science teachers total eight percent of the net total vacancies for the State of Florida. These data are projected for the school years including 2000-2001 through 2009-2010 (Jennings, Burt, Latvala, Sullivan, 2000). The total number of projected vacancies equals approximately 1900 K-12 science teachers that will be needed over a ten-year period (2000-2010) in Florida, based on the original study in 2000. In a more recent article in the St. Petersburg Times, it is projected that as the population of the State of Florida grows larger, 20,000 more teachers will be needed before August 2003 (State needs 20,000 teachers, 2003). There is a significant difference in these two numbers. The original number of projected vacancies was based on the needs for science teachers as reported in 2000. The article mentioned the projected number of total teachers needed as projected from updated information.

I believe that efforts like this survey and my research are an important tool to ascertain different means of recruiting and retaining individuals, who are already certified to teach.

Even though the Florida Senate Budget committee did not focus specifically on science teachers, I feel that the data are indicative of how pressing the needs are for qualified teachers in many areas, not only in science. On the survey instrument, the teachers who responded to the survey were asked a series of questions concerning factors that might persuade them to return to teaching. At the time of the study, they were not teaching and were also asked why they left teaching. Teachers were asked to fill-in (by
means of bubbling-in responses on a computer form) five of the top reasons that best describe why they left teaching. In my opinion, the results were not surprising.

To begin with, it should be mentioned that the Senate surveyed not all of the 72,000 individuals who hold certificates in Florida. The original sampling size of 10,919 represented individuals who hold certifications in what are considered to be teacher shortage areas and these include: mathematics, computer science, science, exceptional education and foreign language. These surveys were sent to those individuals identified as qualified to teach in an area identified as a shortage area. I was not teaching at the time and I received a survey presumably because I held a current teaching certificate in the State of Florida with both biology and chemistry certifications. Of the 2,244 responses that were returned and completed correctly, an estimated “43% percent of respondents left due to factors related to the teaching profession rather than personal reasons.” This means that the remaining 57% left for what were regarded as personal reasons that include pregnancy/child-rearing and dissatisfaction with the teaching profession (Florida Office of Economic and Demographic Research, 2000a). What do these statistics mean? Who are the teachers behind these types of responses? These are some of the questions that I address.

United States Department of Education Addresses Teacher Attrition

According to the United States Department of Education, Office of Educational Research and Improvement, “attrition was highest among older teachers (those aged 60 and older) and among those aged 25-29” (National Center for Educational Statistics, 1997, p. 1). Also mentioned in the National Science Teachers Association report was that “as
expected, teachers with more than 20 years in the classroom are most likely to consider leaving the profession (44 percent)” (Garcia, 2000, p. 1). Retirement is their chief motivator, followed by dissatisfaction with the job. Of this large number of individuals who initially consider leaving, high attrition rates result from those who actually do make the decision to leave. Hence, the crisis for finding and retaining qualified teachers has become severe (Heyns, 1988; Jennings et al., 2000).

According to Farber (1991), evidence suggests that the teacher shortage in certain specific areas may get worse as time goes on. From all accounts of evidence that I have read is at least a concern that there will not be enough qualified science teachers to staff America’s schools if the attrition rates of young teachers continues to increase. I remember that I was told very often that someone with my qualifications and certifications would be highly sought because it was particularly hard to find someone with my background who would be willing to teach.

Even the issue of true teacher shortages is often debated. One of the most outspoken in this arena is C. Emily Feistritzer, President for the National Center for Education Information in Washington, D.C. Feistritzer believes that “[t]o claim there is a teacher shortage is simply wrong - there isn’t one and there won’t be anytime soon. One has to wonder about the agenda of someone who’s willing to claim otherwise” (Feistritzer, 1998, p. 2). Both Farber and Feistritzer emphasize different aspects of what are believed to be a teacher shortage. Feistritzer accounts for the term “new” teachers to include those who not only have just graduated from a university and taken their first teaching job, but also those who will reenter the profession after a break in service. She
argues that there are “plenty of people who are fully qualified to teach who are not teaching” (Feistritzer, 1998, p. 3). Farber on the other hand, emphasizes new teachers as ones that will enter the profession to fill projected vacancies and his study does not indicate what the “new” teachers were doing prior to entering or re-entering teaching either for the first time or after a break in service.

In the article discussed previously regarding the intent of the state of Florida to survey individuals who are certified to teach but chose not to do so, teachers re-entering the educational system would be considered “new” teachers (Shaw, 2000). I believe that this represents a way of attempting to retain and utilize talented individuals in the state of Florida in order to meet the needs of Florida’s future students in these critical needs areas. If Florida develops a better way of retaining qualified teachers, then the pressures to recruit and reward incoming teachers is likely to decrease. Florida has recently implemented a plan for alternative certification to encourage those individuals who wish to obtain a teaching certification after working in a field other than education (FATCP, 2003). Approximately 40 other states are also implementing alternative routes to teacher certification. An article in the Seattle Times, author Linda Shaw (2002) states that “The National Center for Education Information…estimates 175,000 people have become teachers through alternative routes.” This is a large number of teachers who were not certified through traditional means, but are helping to fill positions in many positions including science areas like chemistry and physics. C. Emily Feistritzer wrote an article regarding the issue of alternative certification programs and said that teacher alternative
certification problems attract many people to teaching who might otherwise not become certified (Feistritzer, 2002).

As a result of research from the Florida Department of Education, in Florida, the rate of teacher attrition of those under the age of 55 is projected to be 72% for the next ten years (Jennings et al., 2000). According to statistics provided by Martha J. Miller, an educational policy analyst for the Florida Department of Education, there are currently approximately 130,000 teachers in Florida’s public schools. Approximately 6.2% or 8,060 teachers are over 55 years of age. If the attrition rate for those under age 55 were 72% over the next ten years, this would mean that approximately 88,000 teachers in Florida would leave the teaching profession before they reach the age of 55 (Miller, 2000). These numbers indicate two important assumptions; first that most teachers who enter the teaching profession as young teachers will not stay long enough to retire from teaching and second, that those over the age of 55 are likely to leave anyway because they will be of retirement age. All of these studies would indicate that there is not necessarily a shortage of teachers, only a shortage of individuals who have been trained to teach and choose to stay. This point is critical to my study because it establishes that those trained and certified to teach science are certainly needed and something should be done to keep them.

**Private School Teacher Attrition Versus Public School Teacher Attrition**

On the following page is a figure from the Condition of Education 1997 Report, which details the percentages of full-time teachers who left teaching and the type of
school in which they taught. It should be noted that the comparison is only for public versus private schools, as no data were given for independent or charter institutions.

As indicated by the Figure 1, one point becomes immediately obvious. It is evident that the privately run schools have higher teacher attrition rates overall than the public schools. Each increment shown is for two complete school years and indicates the number of full-time teachers who left both private and public institutions. Not only is the attrition rate greater among private schools, but also the rate has remained fairly constant at around 10 percent over each two-year interval. I assume that factors such as lower monetary compensation and fewer benefits for private school teachers may be some of the reasons for increased attrition rates. The total number of teachers in private schools for the intervals shown ranges from 593,000 teachers to 620,000 teachers (Digest of Educational Statistics, 1999). If the attrition rate were consistently 10 percent, then this would mean that an average of approximately 60,000 private school teachers left in each
of the three, two-year intervals shown. There are no consistent indications whether or not private school teachers leave private schools to go into public schools.

For public schools, overall, the attrition rates vary from five to six percent (Figure 1). The Condition of Education report from 1997 (Figure 2), enumerates the percentage of United States teachers who left teaching by showing the numbers by age of the teacher as well as type of institution. For the public schools, the total number of teachers for the intervals indicated increased from 2,831,000 to 3,255,000 individuals from 1987-1995. If the attrition rates have averaged approximately 5.5%, then approximately 167,365 teachers on average left teaching at public institutions for the time intervals shown.

I have included the private school numbers (Figure 2) simply to contrast the public school figures, but I am primarily interested in public school teachers for my study. Figure 2 shows the ages of those teachers who left and the type or classification of the school from which they left.

**Comparison of Who Left Teaching According to Age**

In order to conceptualize the critical need for “new” teachers as defined by Farber (1991), we must assume that most young people graduate from an undergraduate institution between the ages of 21 and 24. Farber considers these new teachers because their first job out of college is as a teacher (Farber, 1991). These teachers will have between 1 and 4 years of teaching experience by the time they are 25, granted they go directly into teaching. It is shown that this group has the second highest attrition rate among private institutions, second only to all individuals who have not yet reached
retirement age. I fall into this category since I had less than four years of teaching experience and I was under the age of 29 when I left teaching. I have never taught in a private school setting. This chart covers two complete school years and does not address anticipated vacancies or projected attrition rates. I assume that at some point over the age of 65, all teachers leave because they will retire or die.

The greatest attrition rates of any category for either type of institution occur in the one from 65 years and older, which is indicative of retirement age for all teachers.

In private schools, the highest rate of attrition other than those over age 65 occurs in those individuals who are under 25 years of age (Figure 2). Private schools generally have higher attrition rates than public schools.


In contrast, the highest attrition rates other than those two groups greater than 60 and 65 years old, among public school teachers are the age group of 25-29 years of age.
The attrition rates for the next two intervals continue to decline until the interval of 50-59 years of age.

   The crisis of teachers leaving teaching has been identified, and according to the literature, it has only continued to get worse (NSTA, 2000). One question that has been posed with regards to who is leaving and for what reasons is the one regarding the academic credentials and the abilities of the teachers who are leaving. For example, a survey conducted by the state of North Carolina reports that after five years of teaching, 44 percent of teachers who came from colleges considered to be in the top quartile in the state had left compared with only 26 percent of teachers coming from the lowest quartile (Ponessa, 1996). This trend indicates that the attrition rates are highest among more academically inclined as well as better-prepared teachers (Heyns, 1988).

**Looking at Whom is Considering Leaving Teaching**

The concern that there will not be an adequate supply of qualified teachers in critical skills areas is echoed in the attempts of organizations like the United States Department of Education to determine which teachers leave teaching (NCES, 1995), but the question of why is addressed only as a corollary concern. In addition, local school districts and school administrators are looking for ways to retain qualified teachers to meet the growing demands for teachers in the 21st century, however, in doing so, they often fail to ask why some teachers leave so that the issues of attrition may be addressed. A recent survey conducted jointly by Scholastic Inc., the Council of Chief State School Officers, and the National Association of Science Teachers (NSTA), this survey
concluded that concerns over money and poor administrative support are the primary reasons that teachers chose not to stay in the classroom (Garcia, 2000, NSTA, 2000).

The NSTA survey, also conducted in 2000, asked why science teachers were considering leaving teaching. This survey found that 32 percent of science teachers with one to three years of experience were considering leaving, 37 percent of those with four to six years of experience, 33 percent of those with seven to nine years of experience and 37 percent of those with 10-15 years of experience (Garcia, 2000). According to this information, an average of approximately 35 percent, over one-third of all teachers who have less than 15 years of experience are currently considering leaving. I do not find this surprising as I fall into the category where the highest percent are considering leaving; this is found even for those with four to six years of experience. The report goes on to say that notably, each year, at all levels of teaching experience, large numbers of teachers surveyed are considering leaving the profession. Their dissatisfaction is a direct result of the school environment in which they work. This “revolving door” phenomenon leaves science as an academic area continually vulnerable to teacher shortages. In addition, frequent turnover of science teachers is common in about one-third of the respondents’ schools and districts (Garcia, 2000, p. 1)

As the issue of job dissatisfaction is addressed (Garcia, 2000), the top two reasons stated for respondents asked to clarify the causes of job dissatisfaction, were “poor administrative support and poor salary.” Again, with a majority of the published literature that I have encountered, these same two reasons are given repeatedly as the
reasons that most teachers are dissatisfied with their jobs (Cedoline, 1982; Dworkin, 1987; Farber, 1991; Garcia, 2000; Horovitz & Berry, 2000; Jennings, et. al., 2000).

Although the large numbers of teachers who are dissatisfied may shock some administrators and school board officials, I find it very easy to believe that these circumstances are realistic. My own experience has shown me that these feelings are prevalent even under what are perceived to be ideal or favorable teaching conditions. In every school where I have taught, I have had either a colleague leave, I have left within a short period of time, or I have seen a shortage of teachers qualified to teach certain classes. What I mean by this is that I found myself working with colleagues who did not necessarily have my background skills or classes and were therefore teaching a subject for which they were either may not have been adequately prepared or interested in teaching. In my opinion, this seriously compromises student achievement and I agree with Gerald Wheeler, the NSTA Executive Director said:

It is truly alarming that so many science teachers are thinking about leaving the classroom…continuing job dissatisfaction among teachers poses a serious threat to efforts to raise student achievement. Qualified science teachers will always be in short supply unless schools and communities address science teachers’ reasons for being dissatisfied in their careers. (Garcia, 2000, p. 2)

Who Is Teaching out of Field and Why?

Another initiative to ensure that qualified teachers fill our classrooms is the “No Child Left behind Act.” This legislation addresses the need and the goal to have highly qualified teachers for every student by the year 2006. (No Child Left Behind, 2003) Among the facts listed by this survey, it says “more than four million students in
physics, chemistry and history classes [have] teachers lacking preparation for teaching their subjects” (No Child Left Behind, 2003).

As a result of these shortages for qualified individuals, another issue for science teachers is how many science teachers are assigned out of field due to shortages of properly trained or credentialed individuals. See Figure 3 for data and percentages regarding those individuals teaching out of field. (NSTA Survey, 2000)

Responses of teachers to this question: In the past three years, have you taught subjects that you have not received at least an academic minor to teach?

<table>
<thead>
<tr>
<th></th>
<th>Middle School # of responses</th>
<th>High School # of responses</th>
<th>Both # of responses</th>
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<tr>
<td>YES</td>
<td>159</td>
<td>184</td>
<td>41</td>
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<tr>
<td></td>
<td>31%</td>
<td>24%</td>
<td>44%</td>
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<tr>
<td>NO</td>
<td>352</td>
<td>561</td>
<td>53</td>
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<tr>
<td></td>
<td>68%</td>
<td>75%</td>
<td>56%</td>
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Figure 3: Who is teaching out of their field? From NSTA Survey: Science Teacher Credentials, Assignments and Job Satisfaction. (NSTA Survey, 2000)

Even though the numbers of teachers teaching out of field are not a majority, this same study found that when asked, 48% of respondents replied that their school had experienced difficulty finding qualified science teachers to fill vacant science teaching positions. (NSTA survey, 2000)

In Florida, there are two particularly important tests that students take at several levels as they matriculate through school. The Florida Comprehensive Assessment Tests (FCAT) is given to students in grades 4, 8, and 10 for reading skills testing and grades 5, 8, and 10 for mathematics and science (Florida Department of Education, FCAT, 2003).
The students are tested against the Sunshine State Standards (SSS) and certain
benchmarks that are grade and age appropriate as designated by the Florida Department
of Education (Florida Department of Education, SSS, 2003)

Another standardized test that students must take in order to receive a high school
diploma in the state of Florida is the High School Competency Test (HSCT). A similar
test, the Virginia Standards of Learning (SOL) tests are given in the school where I
currently teach. In both tests, students are given the tests during their 9th, 10th and 11th
grade years. In Florida, students have four opportunities to pass both mathematics and
reading sections before the end of their senior year (Florida Department of Education,
HSCT, 2003). In Virginia, students must pass all Standards of Learning subjects including
English, U.S. Virginia History, Geometry, Algebra, Chemistry, Biology, Earth Science,
and World History with a minimum score of 400 in order to graduate from a high school
in Virginia (Virginia Department of Education, SOL, 2003)

As a result of tests like the FCAT, Virginia SOL and the HSCT, teachers including
those of us who teach science are being held accountable for our students’ scores. In
addition to expanding responsibilities and expectations, we are becoming discouraged by
being asked to do so much in one year. All teachers understand that realistically, these
types of standardized tests and the scores that students achieve are a building process
that takes several years, if not the students’ entire academic career.
Reasons for High Teacher Attrition

Now that it has been established that there are teacher shortages and many more science teachers will be needed in the future to either fill existing vacancies or projected ones, I will look at the possible causes, suggestions, and remedies mentioned in the literature and published studies.

Studies such as NCES (1995) also have linked a high teacher attrition rate to: lack of administrative support, inadequate teacher preparation programs, low pay, low morale, retirement, child-rearing, poor student behavior, desire for higher education, lack of autonomy, job dissatisfaction, lack of respect, low morale and low parental involvement (Figure 4). The rate of teachers qualifying for retirement is increasing and the rate of teachers entering the teaching profession is constantly decreasing. This is particularly true for science and mathematics teachers (NCES, 1995).

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<td>Lack of Administrative Support</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td></td>
<td></td>
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<tr>
<td>Inadequate Teacher Preparation programs</td>
<td></td>
<td></td>
<td>Yes</td>
<td></td>
<td>Yes</td>
<td>Yes</td>
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<tr>
<td>Lack of Teacher Autonomy</td>
<td>Yes</td>
<td></td>
<td>Yes</td>
<td></td>
<td>Yes</td>
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<td></td>
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<tr>
<td>Poor Student Behavior</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td></td>
<td></td>
<td>Yes</td>
<td></td>
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<tr>
<td>Retirement</td>
<td>Yes</td>
<td></td>
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</tbody>
</table>
Lack of Respect | Yes | Yes | Yes
---|---|---|---
Low Pay/Inadequate Benefits | Yes | Yes | Yes | Yes
Desire for Higher Education | Yes | | | Yes
Low Morale | | | Yes
Personal Reasons | Yes | Yes | Yes
Inadequate Parental Involvement | | | |
Job Dissatisfaction | Yes | Yes | Yes | Yes | Yes | Yes | Yes

Figure 4: Literature comparison for reasons for higher attrition rates among teachers. Compiled by the author.

Recently was stated that there are severe teacher shortages in the State of Florida.

A study conducted in 2000 projected that 11,500 new teachers would be needed before the next year, particularly in the sciences, technical areas and special interests (Daley, 2000). This may be attributed to the fact that fewer minorities, and women go into or are encouraged to go into the sciences, and that, therefore, leads to fewer teachers at both the elementary and secondary level who have an actual science background (Betancourt-Smith, Inman, & Marlow, 1994).

The United States Department of Education and the National Center for Educational Statistics report the top reasons for teachers leaving the teaching profession included: low pay, lack of administrative support, discipline issues and low morale (Hussar, 1999). Trimble (2002) said that teachers also deserve and need more respect in order to stay in the profession.
I have addressed each of these issues with the participants and cite personal examples of how and why I have found these reasons to be valid in my own teaching experiences. Compensation is always an issue for teachers because teaching tends to be a profession that is not paid necessarily by the hour for what is done and often has very intangible products in the forms of student learning outcomes. It has been only in recent years that a necessary importance has been placed on student learning outcomes and this emphasis is also causing many teachers to rethink their decision to stay in teaching (Horovitz & Berry, 2000). Since I now teach in the Commonwealth of Virginia, I am forced to consider SOL tests that are administered at the end of every year. (Virginia Department of Education, SOL, 2003). Lack of administrative support in my case when I was teaching in a different school was the inconsistent policies to which I was expected to adhere and the undermining of my authority with a student in the presence of a parent will be addressed. In addition to these two reasons, I will address student discipline because as one researcher stated in his research, “[T]eachers attributed the poor discipline in schools to the fact that ‘administrators and teachers are afraid of kids’ and one ‘has to be an attorney to get a student in trouble’” (Berry, 1985, p. 16).

Since administrative support has been highlighted as a major issue in the published literature, I find it interesting that an article in the Educational Research Service journal Spectrum, cites the top three “should-nots” for administrators and educational leaders. These are ineffective human relations, poor interpersonal communications and lack of educational priorities. The “should-nots” stated in this paper attempt to “identify the most harmful mistakes school principals make as perceived by a very important group -
the teachers whom these administrators supervise.” Included as reasons for job
dissatisfaction in this article were again: low pay, little respect, outside opportunities that
are far more prestigious and offer a regular schedule (Bulach, Boothe & Pickett, 1998, p. 2).

In a study conducted by the National Commission on Teaching and America’s
Future, it was suggested that when a beginning teacher has adequate teacher preparation,
the attrition of first year teachers decreases (NCTAF, 2003). This would suggest that lack
of preparation from their educational studies also contributes to high teacher attrition
rates, particularly in the first year.

The last of the major reasons mentioned for high teacher attrition is burnout on the
part of the teachers. Burnout is often considered as the concept of becoming unable to
deal with an issue due to some type of prolonged exposure or effort whose benefit is not
outweighed by the burden. According to the definitions of burnout, dissatisfaction with
your current career, disillusionment, hopelessness and general unhappiness are all
symptoms of burnout. Several sources give examples of situations in which teachers are
experiencing burnout. Farber (1991, p. 122) quoted a beginning teacher as saying, “Her
position was that if she gave as much [effort] to another profession as she did teaching
that she’d be far more successful and ultimately happier.” This statement is one of many
I have read that I believe characterizes a teacher who is experiencing the phenomenon
known as burnout. A majority of the published literature (Toulson, 1971; Truch, 1980;
Cedoline, 1982; Penny, 1982; Greenberg, 1984; Dworkin, 1987; Yee, 1990; Farber, 1991;
Vandenberghe & Huberman, 1999, Deutsch, 2003) lists or refers to this concept
repeatedly as one of the major reasons that teachers begin to search for other occupations.

Although information is available on most fields, burnout for science teachers, specifically, is harder to pinpoint in the literature. I feel that this is due in part to the fact that science teachers often do not either recognize or acknowledge that they are experiencing this phenomenon, and therefore, it may go unreported in the literature.
CHAPTER 3

Methodology: Fourth Generation Evaluation

As I was beginning my thesis, I needed to determine which method of research I would use and how I would go about answering my original research questions. I chose what I felt would be the best method for what I wanted to accomplish and began the research portion of my thesis.

The methodology to be used to further research on these issues is fourth generation evaluation (Guba & Lincoln, 1989). According to Guba and Lincoln, one of the first steps of fourth generation evaluation is to establish a written agreement to adhere to conditions for productive hermeneutic dialectic. I have chosen five participants who are either former science educators or who are contemplating leaving the profession. In the initial stages of my research, I scheduled a time to interview each of the participants using a set of pre-selected questions (See Appendix A, Interview Questions). I utilized an emergent design format so that I would be able to ask participants to elaborate on a particular point when necessary (Guba & Lincoln, 1981). In order to inform the participants as part of my member checks (Guba & Lincoln, 1989), I wrote a consent form that subjects signed at the time of the initial interview so they understood what was expected of their participation. So that I could carefully assess and evaluate what the participants had to say, I asked if I could tape-record their interviews. They were informed that at any time during the interview, they could request that I stop the taping
and not continue. This consent also guaranteed that they will have access to the records and documents as outlined by Guba and Lincoln (1989) (See Appendix C, Informed Consent Letter).

The second step of fourth generation evaluation involves organizing the team of evaluators, in which I am the evaluator. The political implications have been considered in the consent for anonymity for each of the subjects. I will not utilize their real names, nor will anyone have access to transcripts or taped recordings with the exception of Dr. Penny J. Gilmer, the interviewee, and myself. I have obtained the approval of the Use of Human Subjects in Research Committee to conduct the interviews and have submitted a proposal of my intended purpose for this research (See Appendix B, Approval Letter from Human Research Committee).

The third step of fourth generation evaluation is by far the most difficult to establish, but I have identified the stakeholders as pre-service science teachers, current science teachers as well as school officials and administrators. Each of these groups has a stake in the outcome of this study because they are the ones who will be directly affected by the conclusions. Pre-service and current teachers may be made aware that they are vitally important in schools, and school administrators and officials will be faced with the dilemma of filling the vacancies left by teachers who decide to leave teaching.

In addition to establishing the stakeholders, it is important to establish credibility. Triangulation is a common method of establishing corroboration when doing qualitative research (Denzin, 1971). I have chosen to triangulate among the recognized problem of higher rates of teacher attrition, my own journal entries, and personal interviews with
teachers who have left or are considering leaving teaching. Triangulation inherently has three sides and each supports the other two. This provides a basis for credibility of the research because I was able to support what one source says by finding a similar or plausible reason cited in another source. In many cases, two sources state similar information and this corroborates the conclusion that if the other supports one, then both must be credible sources. If this is not the case, I explore the reasons for the lack of support. If it is supported, this helps to establish credibility in the research as well because the participants have most likely not read about nor discussed in any great detail current literature regarding teacher attrition rates and causes. As the three sides are somewhat independent of each other initially, I hope to use this method to bring them together in support of each other.

I will establish credibility among my peers through peer debriefing by discussing the generalities of the participants’ concerns and solicit their input and also through the offering of alternative interpretations to both my peers and the interviewees. Since I am the not the only member of the team which includes my major professor and members of my committee, I believe, this is the fairest way to lend credibility to both what I am saying and to what the interviewees choose to emphasize.

In order to provide the basis for a hermeneutic dialectical process, the fourth step, I have transcribed each of the five interviews and analyzed what I believe are the motivations behind each subject’s reasons to leave teaching or consider leaving teaching. I have proposed alternative interpretations that allow the subjects to adopt negate or offer an alternative interpretation. If this form of feedback does not elicit enough input from the
interviewees, I have allowed them to read my analysis and interpretations of our discussions as a narrative and add or modify the text, as they feel appropriate. After analyzing the subjects’ responses and comparing them with my own, I have attempted to re-visit each subject either by written or personal correspondence and ask them to review my interpretations for accuracy. This constitutes the hermeneutic dialectic in that we are negotiating the meanings and interpretations so that we may come to a consensus about what they mean. Initially, I anticipated that there would be in-person follow-up sessions that were also to be tape-recorded (when possible) and transcribed. As it turned out, none of my participants and I had a great deal of in-person contact after the initial interviews. Most (if not all) contact since the taped interviews has been via the telephone and email. I acknowledge that the two participants that do not live in Tallahassee were at a slight disadvantage due to the distance involved in meeting with them personally. Also, since I now reside in another state, personal meetings are not convenient. Electronic correspondence is by far the most feasible means of communicating with the participants.

I provided member checks by returning copies of all transcripts and correspondence to the interviewees for review and feedback purposes. I gave each participant the opportunity to make comments, elaborate, omit or clarify information discussed in these correspondences at any time. Dr. Gilmer was also asked to review the transcripts as well. Any unresolved issues regarding what to do with my evaluations was discussed with Dr. Gilmer.

I compared the reasons, stated or implied, for teachers leaving the profession, from their interviews and the literature as well as to my own experience and summarized
the similarities and differences. As stated earlier, I included the Senate survey information to provide information specifically from teachers who are no longer teaching in Florida. There is not a similar Senate study being conducted in Virginia at this time, so I have relied solely on information from Florida.

I compared the data from reading the transcripts for each participant and identified themes or common factors for dissatisfaction that each teacher had experienced. Some examples of these themes included things like discipline issues, personal issues, and lack of administrative support as well as monetary compensation. Once I was able to identify these themes in both the literature and the participant’s interviews, I reviewed my own journals and looked for similar themes and the regularity to which they were referred. I asked myself on what themes or issues did the participants seem to focus? Which themes did I have in common with my participants? What themes did each of the participants have in common with each other? What themes or issues did the participants mention that were also mentioned in the literature? When taking all of these questions into account, I made some very strong correlations between what the teachers told me, what I experienced, and what was documented in the literature.

Although I see limitations in this study, I acknowledged that the participants who do not live within the same town are less likely to be interviewed more than once in person. Also, I understand that written electronic correspondence will be the most likely means of communication between those two participants and myself. This has proven to be true in light of my move to Virginia and the length of time that has elapsed in completing this thesis. Also, I understand that the results that I have interpreted may not
necessarily be generalizable to any particular larger population and may be unique to the
circumstances under which I have investigated them.

According to the final step of fourth generation evaluation, allowing the reader to personally experience what I have researched and allowing them to understand is the ultimate goal of this research (Guba & Lincoln, 1989). I hope that after reading my thesis, it will be clear why others and myself had chosen to leave teaching at some point and in my case, later decided to return.
CHAPTER 4
Tracing My Early Experiences

I believe that in order to understand where I have come from, it is important to trace my own growth and background. My teaching experiences have varied, as have my life experiences. In order to witness the growth that I have made as a teacher, I have included my reasoning for each decision I have made as I have progressed throughout my career.

Teaching-related Early Experiences

When I think back to all of the experiences that I have had that relate to teaching, many could be categorized as teaching experiences. From first memories of a pre-school fashion show, the best look for me was that of a prim-and-proper teacher complete with bun, glasses and high-necked dress. Little did I know back then, that teaching would become my true calling.

Anyone who knew me as a small child, even as young as seven years old knew that all I had ever wanted to be or do was become a veterinarian and then come home to take care of my grandfather’s animals. I stayed with him every summer and some weekends, my mother had to fight with me to go home and bathe because I wanted to ride the horses one more time or play with the new puppies. Becoming a veterinarian was clearly my sole intention and when it came time for me to apply to college, I applied to only one school seriously—Auburn University. Even though I received a scholarship to attend the prestigious University of Miami in Coral Gables, Florida, I still had my heart set on going to Auburn. I was accepted in October of my senior year of high school and
just knew that I would go there and be a success as a science-minded, focused, pre-
veterinary student.

My College Experience

To say that my experiences were less than completely positive as an undergraduate would be an understatement. Chemistry wiped out my first semester G.P.A, my homesickness became a real factor in my ability to stay at school for longer than the five days of the school week before I went home on the weekends. I was shocked and dismayed at the competitiveness I encountered in the cadre of students who had similar ambitions. Each and every one of them wanted all A’s for their transcript as well as the established work experiences that would help them get into veterinary school. While I was an undergraduate, I volunteered at the horse unit, found a job in a research laboratory and decided to pick up a laboratory instructor position in the Biology department. I thought that all of these experiences would help me also look like a more viable candidate for veterinary school.

I had no clue at the time, but this decision to go boldly as a sophomore to the department head and ask for a position, as a laboratory instructor, would literally change the course of my thinking about teaching. It took no time at all for me to realize that I was a good laboratory instructor and when evaluations were returned, I got great marks. I specifically remember reading the comments sections and getting a “high” from the compliments students paid me. Not to say that they were all completely flattering, but I can honestly say that most were.
It did not occur to me until years later that those experiences would lead me back to considering teaching as a full-time profession. I applied to the College of Veterinary Medicine with marginal grades, non-resident status and experiences that did not seem to impress the committee. I was not accepted, and after the initial disappointment, I returned home to lick my wounds so-to-speak and begin to decide what else I should do.

My First Job After College

Luckily, I had interned as an OPS laboratory assistant with the Department of Agriculture the summer before I graduated from Auburn. By all accounts, it was a very positive experience and I returned to work there in the next summer. My colleagues were wonderful, the work environment ideal, but there was still something missing. Over the course of the next year, I kept asking myself what I would enjoy doing and what would make me happy. I kept recalling how good I felt teaching the Biology laboratories at Auburn and decided that maybe I should consider going back to teaching. I knew that I also wanted to continue my education by getting my Master’s degree, so I called the Science Education department of Florida State University and spoke with Professor Ken Tobin. Dr. Tobin encouraged me to apply and it was there that I began my graduate program of study.

Even though my decision for a thesis topic took much longer than necessary, I began taking my educational foundations classes and getting into the curriculum in science education. Concurrently, I began working at the National High Magnetic Field Laboratory as a graduate assistant. Since my parents had agreed to pay my tuition, I needed only
enough money to make my car and insurance payments, so I decided to give up my full-time job and work part-time.

*My First Teaching Experience*

While enrolled as a full-time graduate student, I was on the science-education e-mail list. One afternoon in July, I saw a job advertisement for Harrison High School and decided to apply. I lived at home with my parents at the time and I figured that it might be a great opportunity to work, have an income, insurance and get the classroom teaching experience for which I had prepared.

And so the journey began.

Late nights, early mornings, 45-minute commutes one-way, a boyfriend who later became my husband living in another town, living at home, being the cheerleading sponsor, frustration, anger, sadness, tenacity, confrontation with angry parents, apathetic students and the most celebrated day of the year; the last day of school. Absolutely nothing in my past experiences could have or did prepare me for what I experienced this year.

I was paired with a kind, albeit hands-off mentor of sorts. He told me about crowd control and how to have a darn good bluff. Everything was in some sort of sports analogy, and I quickly learned from my principal that “If you can get them [the students] to come in on time, sit down and not kill each other, you will be doing great. If they learn a little science on the side, that’s just a bonus.” Does this sound like a shock for a young, idealistic, intelligent new teacher who has great ideas, but no way of implementing them because the students are in no way prepared to accept or learn what I have to offer? Yes.

After my first year thankfully over, I decided to return for the second year at the same school with the hopes that I would be better prepared. I did find that my
experiences of the previous year did give me somewhat of an inside advantage into how things run, but still, new challenges are always just one day away. With the help of my mentor and another close friendship that I made with another first-year teacher, I returned with the same enthusiasm I had begun with my first year.

*My Second Teaching Experience*

In a twist that I would have never expected, I received a telephone call from another principal only six weeks into the school year. He was interested to know if I would be available to come for an interview for a science teaching position that had gone unfilled at his school. I responded that I would come for an interview and thought that this might be a great possibility to move into Laguna county schools because I would soon be moving there myself. I had become engaged over the summer and my fiancé was living in the town where we would live once we were married.

I was offered the job and took it. My decision to leave my first teaching position was a difficult one to make, however, in the interest of my new circumstances; I decided that it might be the best opportunity I would get to make a move into the county. After all, the next summer, I was planning to get married and I did not anticipate having time to find a new teaching position then.

My teaching experiences at Statesville School were very different from the public school in Pohatan County. Everything from the administrative style, the school layout, the schedule, the student population and demographics, and the size of the school was completely different. I had to change gears, jump in mid-quarter and take over. I thought that the adjustment went as smoothly as could be expected, but it is also my belief that
the atmosphere in this particular school is one of continuous dynamic fluctuation, and
many students are used to nothing remaining the same for long. I did not, and do not plan
to address the issue of teacher turnover at this school, but I know that it was an area of
concern to many staff members with whom I spoke when I worked there. By the end of
the year there, I had struggled to adjust to all of the changes, but all in all, I felt as if I had
completed the year with more successes than failures.

One student in particular still stands out in my mind; to my knowledge, she is
currently a student in Physics and had the opportunity to work at the National High
Magnetic Field Laboratory because I introduced her to Dr. Jim Brooks. She is one of the
students that I reached. As her Physics teacher, I had a very positive influence on her. She
and her mother both expressed to me that she had never felt so empowered as a female in
a science class as she did when she was in my class. This is why I felt compelled to stay
in teaching. Those little reassurances that you are making a difference are enough; or are
they?

My Third Teaching Experience

My third teaching experience came in the form of teaching in the International
Baccalaureate Program at Cedarville High School. Since I was not asked to return to the
Statesville school, I found myself looking again for another teaching position over the
summer. I was interviewed and went to the job the next day. I was just beginning to
realize that someone with my experiences and my background was valuable and very
employable in education because good, qualified science teachers were hard to find. This
fact would come into play later as I decided to leave this school as well.
In order to teach in the IB program as it is called, instructors are to have been trained at a special conference over the summer. Since I had been hired too late in the summer to attend, I was give the crash course on how to “do IB” by the director of the program.

Basically, the International Baccalaureate curriculum is designed to meet the needs of diplomats’ children who would be traveling around the world, yet still wanted to receive the uniform education that they would have received had they stayed in their home country. The curriculum is designed to be taught around the world and be evaluated using a team of evaluators instead of a single test to determine if a student has passed or not. The number of points that a student earns on a given set of subjects and tasks determines whether or not they will receive the IB Diploma. In many cases, IB diploma recipients are given college credits, allowed to skip certain introductory college classes and a certain amount of prestige is granted to the award itself. Cedarville had extremely high pass rates for the first graduating classes and still continues to do well by international standards with regards to this program.

I considered it to be an honor to be asked to teach in this program and I intended to uphold the highest standards and expectations for my students. In talking with other IB teachers (a very select group) we all agreed that our students should be expected to be held to the highest standards of academic performance and honesty due to the rigors of our program and the basis for which they would be judged internationally.
It was during my second year teaching at Cedarville that there was an experience that changed my entire view of teaching and consequently led to my resignation from the Cedarville High School in December of 1999.

The incident involved the academic integrity of the work of two students in my junior IB biology class. My policy has always been that each student must turn in his or her own work and that any plagiarized or borrowed work be given a zero. Two girls turned in identical laboratory reports and were given zeros for the assignment. One student and I met with her father and he understood that his daughter had been negligent in her regard to the policy and that she deserved the grade that she received. She agreed that she should take the penalty and agreed to do what she could to pull her grade up for the nine-weeks. It was settled.

The other student however, had her parents schedule a meeting in the IB office after failed attempts to get an adequate explanation on the telephone did not please them. I agreed to meet with them and on the afternoon that we met, the guidance counselor and the director of the IB program were present.

The meeting started off with introductions and I mispronounced the parents’ names. I had just been introduced and apologized for my mistake. As the meeting continued, I can say nothing more than I was attacked both verbally, mentally, spiritually and professionally. At one point, I attempted to leave the meeting and was told by the parents that I was “refusing to meet with them.” Throughout the entire exchange, my professional credentials were called into question, I was called a white racist, I was told
that I could “Manipulate their daughter’s grade any way that I wanted to because I was a white woman in America.”

 Needless to say, the conference ended with the student appearing wounded yet smug, the parents incensed, and me horrified at the entire exchange. I was completely shocked that I was treated this way and if I were going to be accused of things that were not true and not be supported by two colleagues, what was next?

 What ensued was just short of legal action on the parts of both myself and the parents of the student. There was a long letter sent to the superintendent regarding my level of professionalism, my comments and my judgment of their daughter’s grade. I was called into the principal’s office on three separate occasions and admonished to change the student’s grade so that she could earn a “C” because the parents were very influential in the community and it might make the school look bad. My defense was that I did not believe in changing the grade to suit the parents and I refused. Most of these incidents took place in October and I had decided the night that it happened that I did not care what I had to do, I would not be returning after the Christmas break.

 I discussed it with my husband and we decided that we would be able to survive financially, so I turned in my letter of resignation three days before Christmas break was to begin.

 I have never questioned whether or not I did the right thing in leaving that position under those circumstances. I believe very strongly that teachers are asked to be role models, exemplars and mentors to their students. I do not believe that I would have been serving that particular student or any others that year had I submitted to the suggestion of
the principal that I change the grade in order to please one set of parents. I know that the integrity of each and every grade I had ever given would have been called into question and I would have lost respect for myself, so I left.

Some might think that I ran and allowed myself to be beaten by the experience, but I see the message as clearly the opposite. I maintained my professional ethics, stood my ground, and made my point. I know that I am a better person, a better teacher and a more respected professional for making the decision that I did.

Oprah Winfrey has shown a story that I felt related exactly to this particular dilemma. As I watched the show, I was extremely pleased to hear of a middle school teacher who resigned for the same reasons that I did. She taught science and gave an assignment on which many students copied information directly from the Internet. The grades that the students received were in accordance with her academic honesty policy that each and every parent and student signed. When the parents found out that their students would fail because of the zeros that they had been given, they attacked the teacher and she encountered much the same response that I did. To this day, she has been hailed as a hero by some, a villain by others, but she did what she felt was right. She has said if she had it all to do over again, she would not change the way she handled it at all. Her story parallels mine so closely that I feel a sincere kinship with her by virtue of what we have been through as science teachers. This is where my thesis began.
CHAPTER 5

What I Learned From Talking To Other Teachers

I began my thesis intending to interview other science teachers and find out what they had experienced during their teaching careers and why they were considering leaving. I was open-minded and ready to hear what each of them had to say. What I learned surprised me at times, comforted me at others, but always made me reflect more on my own experiences and guided me ultimately to the self awareness that I now hope that I have about my own teaching.

In conducting my study, I interviewed five other high school science teachers who were dissatisfied with teaching, considering leaving the teaching profession or who were already moving toward another career choice. Though my discussions and correspondence with each of them varied, some were terse, while others quite verbose, I was able to discern many interesting answers. I was specifically looking for common patterns of behaviors, satisfaction indicators, as well as significant reasons regarding their decisions not only to go into teaching but also their subsequent consideration to leave. I was also very interested in relating my experiences to theirs and deciding what I could learn from each.

Mary

The first interview for this thesis took place with Mary. She was working at a laboratory and was pursuing an alternative career as a curriculum developer and writer. At the time of our initial interview, she stated that she was enjoying her job, but that she
missed teaching. I started our discussion by asking her why she felt compelled to go into
teaching as a profession and she told me that she had great teachers who inspired her.
Since Mary is the most experienced teacher that I interviewed, I was interested to hear
that she felt her career choices were limited. She said that she had felt like a natural teacher
all of her life and it just seemed natural to choose teaching as a profession. The year that
she left was her 29th year in teaching. Her certification areas are in middle grades science
and high school Biology. She has taught in five schools throughout Florida and Georgia.

In her teaching career, she has won three teacher-of-the-year awards and considers
herself an effective and well-liked teacher. After my finding out that she had been
formally recognized for her teaching abilities, naturally, the discussion turned toward
what she feels makes her a good teacher; she told me several things.

The first thing that she said was that she is enthusiastic about science and what
she is teaching. She said that she hopes that her enthusiasm is infectious and that the kids
see how much fun she is having. She also said that the kids seem to respond well to her
and that she does not have a lot of problems with discipline because they know that she
cares about them.

As I spoke to her about her students, her caring attitude is obvious, but equally
how seriously she takes her responsibility to teach her students well. She related stories
about going to slaughter houses to retrieve joints and bones for her students, asking local
merchants for basic supplies for her laboratories and relying on parental involvement and
donations for classroom necessities. Without a doubt, it is fair to say that she is mentally
and physically prepared to do interesting, hands-on lessons that she feels her students really enjoy. It seems no wonder to me that she is a successful teacher.

When we began discussing the real reasons that she left teaching, she began with the fact that her husband’s job changed and she was forced to move to another state. She also told me that she found her current job served to “provide a salary for me while making up my mind to return to the classroom.” In essence, she never really chose to leave, but was forced to leave due to circumstances beyond her control.

We discussed at length why she felt as if she was an effective teacher and why she felt drawn to teaching. She elaborated two reasons that she initially chose teaching as a profession in the first place. One was that she always liked students, and the second was she had teachers in school that she admired and liked. She detailed a typical school day for me and her dedication became obvious as she described getting up at 4:30 a.m. and beginning to get ready for her lessons hours before other people arrived at school. She also told how she felt that teaching was an ideal profession as she raised her own two children because of the time off when they were off and flexibility in the summers.

Even though at times it was not necessarily easy to do, she talked about how she fit her life around her teaching and sometimes her teaching around her life. Never once did she say that she has ever regretted the time that she spent grading papers and preparing for her classes. The assumption is that working outside of the classroom, on weekends and during the breaks is normal, if not necessary. Mary mentioned that her husband
would ask “why do you have to bring it all home,” to which her response was “I am just recording grades, they already graded them.”

Other than being forced to leave her teaching position because of her husband’s job transfer, there was no mention of any other reasons that she would have ever considered leaving.

As she planned to return to teaching in the fall of 2000, she wrote me and said that the funding had expired for her current job and that she was returning to a small town high school in rural Georgia. She is still currently teaching Biology and Physical Science and is doing great.

Tim

My second interview took place with a teacher named Tim. A fellow teacher who had heard that my thesis was about science teachers who were leaving the profession gave Tim’s name to me. He was a friend of her son’s and was very anxious to talk to me about his experience as a high school instructor. As it turns out, he was the second person to fill a position that I had left vacant at a rural high school in an adjoining county. Needless to say, I felt that we would have lots in common and lots of stories to share; I was right.

As we began our discussion, Tim told me about his background as an instructor in the Navy. My understanding from our discussion is that attending instructor school is a privilege offered to those sailors who express a desire to teach and are notably proficient in their field of expertise. Tim had served as an instructor in the Navy for three years. His primary responsibility was to teach 18-20 year olds about electronics. In addition to his
Navy experience he has degrees from Florida State University in history, anthropology, and world religions. His background in nuclear engineering qualified him to teach science. Tim decided to give teaching high school a try because he had enjoyed it in the Navy and was lured to Harrison High School with the promise of “magnet money” as he called it. This particular school had been awarded an $850,000 magnet school grant in order to attract more students and bolster low graduation and enrollment rates. Upon arriving at the school and beginning to teach, Tim quickly became upset and frustrated with the lack of support from the administration concerning issues like getting the necessary supplies to do laboratories, discipline and student apathy.

One of the major problems that Tim mentioned repeatedly was the insistence of the students on not learning “white man’s knowledge.” We talked about what he perceived this to be and what the students had to say. He said that the students felt that he was a white man oppressing them with what was important to learn in the white man’s world and that they did not need to learn it. All that was seemingly important to them was anything relating to Africa or African culture. Even though I never heard such complaints, there were several times during the interview where he mentioned instances that I could identify with regarding the issues that continue to plague this school. When asked what he believed could provide the best solution to this school’s problems, he said that the whole school needed to be overhauled. To be fair, he did not blame the administration or his fellow teachers, he mostly blamed the parents for the issues that the
students brought into the classroom and the entire community for the lack of value put on education.

Tim lasted only six months at Harrison and left after students assaulted him by throwing books. It was no surprise that he related to me that he never felt comfortable there. When I asked him for specific reasons why he left, he said that it was a combination of factors—student apathy, feelings of hopelessness, and lack of structure and discipline at the school level.

At our last communication, he was teaching classes to certify students to become Microsoft Certified Systems Engineers (MSCE) in North Florida.

Hannah

Hannah was my third interview and probably the participant with whom I felt I could identify the most at that point. Dr. Nancy Davis referred Hannah to me because Hannah had begun to express some dissatisfaction with teaching and had indicated that she might not teach the following year.

I quickly learned that Hannah and I both had pursued other careers through college and came to teaching as a back-up profession. Originally, she had never intended to teach and worked in a research setting at a university. After graduating and taking a semester off, her boss suggested that she continue teaching a few Biology laboratories and to apply to get her Master’s degree in Science Education. She consented and when she finished her Master’s, she found her first teaching job. At the time of our initial interview, she taught Environmental Science and Biology at a large high school in central Florida.
We began talking about some of her initial experiences during her first year of teaching; it was remarkable how similar I found our trials to be. She expressed concern about student discipline, student preparedness, as well as student apathy. Her major areas of concern were that she felt like no matter how much time or effort she put into getting fun, interesting things to do for her students, they just did not care. As with all of the interviewees with whom I spoke, she developed her own coping strategies for dealing with the “normal” stresses of being a first year teacher. She spoke with her fiancé and fellow department members about what was going on with her students, and fortunately, she did not have the same concerns expressed by other interviewees regarding the lack of support from her administration.

Hannah was the only participant to mention that she felt that the pay that she could earn in another area would be undoubtedly higher than if she were teaching. She mentioned that her advanced degree did not ensure a higher salary and compared her salary to that of her fiancé who was a lawyer and said that he made at least twice what she did. Arguably so, she said that if she were a single person trying to make it on her own financially, it would be more of a struggle than she would like to face to make it on a teacher’s salary.

In summary, Hannah was considering leaving to pursue a higher degree in Biology and perhaps teach at the collegiate level where she felt that she could have the recognition, respect and compensation that she felt she has earned.
John

My fourth interviewee, John, is a fellow Science Education student and I learned through the Science Education department that he was considering leaving, so I contacted him to find out why.

John started out teaching environmental classes in a camp situation and progressed to classroom teaching out of necessity. John ended up in a middle school in north Florida teaching middle school science and mathematics in a team teaching environment.

John has a different view of his teaching, not just as relaying the material, but he also feels a real responsibility to engage the students and see them do true inquiry. I noticed that this is not as readily apparent with three of the other four interviewees and I wonder if this has to do with the fact that he is teaching in a totally different environment. Undoubtedly, the differences in teaching middle school and high school are pronounced.

As with the other participants, John felt that the rewards of teaching far outweighed the negatives. The rewards included the praise of his students, recognition of his colleagues and a feeling of satisfaction in the job he is doing. Not surprisingly, the negatives included discipline issues, paperwork and compensation. He enjoys the interactions between himself as the teacher with his students. His philosophy seems to be one of co-learnership, not of “knower vs. learner” as he puts it. John saw himself facilitating the learning and in talking to him, it is obvious that he thinks deeply and considers fully the impact of what he is teaching. In short, he focused his energy
throughout our initial conversation on the more philosophical aspects of teaching and what he really hoped to accomplish.

By the end of the interview, I had a better idea about how he felt he could make a difference, but also how deeply he was affected personally by his job. He confessed to me that he was not actually leaving science education as a whole, but merely switching to a more regular schedule with a higher salary. Shortly before our first interview for this thesis, he had become a father for the first time.

Undoubtedly his decision to leave the traditional classroom setting was difficult and he did not relish the idea of leaving, but he made his decision based on what would be best for himself, his wife (also a teacher) and his new daughter. In his final comments, he said that he was going to buy a yearbook and ask all of his kids to sign it. Really, he just wanted to see what they would say to him. My understanding is that he had shared with them his decision not to return and several were terribly disappointed. I know that this made him feel good and bad at the same time about his decision to leave. Conflict over his choice did not seem to affect his decision.

After leaving at the end of the year, John has gone on to work on the development of environmental curriculum for teachers to help them help students have more authentic science experiences. He is presumably working fewer hours and has more time to be with his family. To date, as far as I know, he is still working in this capacity at the university level.
Jeremy

Hannah referred Jeremy to me because they taught in the same school’s science department. Unlike Hannah’s seemingly “normal” teaching year with its everyday ups and downs, Jeremy’s story was very different.

Jeremy was a small-town son who went to Florida State University and studied Biochemistry with the intention of being a doctor some day. He did not initially get accepted to medical school; he only made the waiting list. After receiving notification that he did not get in, he needed to find a job. His first teaching job was as a chemistry teacher at his old high school in north Florida. At the time of our interview he was teaching at the same high school in urban central Florida as Hannah. His certifications are in Biology, Chemistry and Physics; the same as mine.

Initially, Jeremy commented on how he structured his classroom and what he hoped to achieve as a teacher. He wanted to share his enthusiasm about Chemistry with his students. He claimed that he had success with smaller groups of students and that was the most gratifying part of his entire teaching experience. Each of the teachers interviewed has mentioned positive experiences with a small number of students and that focusing on those students that can be reached is an encouragement to continue teaching.

His concerns, however, echoed every other participant in that he felt that students were not well disciplined, they lacked focus and they were not interested in academics. He gave me several examples of how students treated him poorly and with disrespect. One student physically assaulted him after he refused to write her a pass out to get out of
class and others were verbally abusive. Others simply refused to do any work and complained when their grades reflected their lack of effort.

Of the many issues that he faced, including disrespect, Jeremy pointed to the lack of support from the administration as another major factor in his decision to leave teaching. At this particular school, he mentioned scenarios where, in front of students, his authority and judgments were called into question. Certainly the most outrageous in his mind was the situation that he encountered in a six-week period before the end of the school year. During the afternoon announcements, Jeremy and four other teachers were summoned to the office over the intercom to be informed that they were not being re-hired for the next year. Although it was not expressly stated in the announcement, the students put two and two together and figured out what the intention of the announcement had been. Jeremy said for the remaining time in school, the students did nothing but harass him about not being rehired and refused to work as a result. His first (and only) year at this particular high school jaded him and forced him to believe that taking a job as a retail store manager would be better for him. With this type of job, he felt that he could go in, work a 40-hour week and go home. This would mean that he would be under less stress and would be able to make more money without worrying about his job after he went home.

Jeremy finished the school year, took the summer off and found another teaching job in the same county in central Florida. Amazingly and thankfully, he is still teaching Chemistry in an International Baccalaureate program and is pursuing his Master’s degree
in Chemistry at the University of Central Florida. We have communicated as recently as January of 2003 and he is doing great.
CHAPTER 6
What I Learned Through the Process of Writing and Researching My Research Questions

In the seven years that it has taken me to formulate, gather, interpret and report on the data that I collected for this thesis, I undoubtedly learned many important life lessons. Throughout the writing of this thesis, I underwent many major changes in my life including marriage, separation, divorce, job change, home buying, and most importantly sincere personal growth and understanding about how teaching will always be a part of my life because teaching is part of who I am.

The initial motivation to begin writing my thesis on why science teachers left the profession was prompted by a very challenging situation at the school where I was teaching at the time. I experienced a plethora of emotions that ranged from anger and distrust to fear and pain. I left teaching with a really bad taste in my mouth so-to-speak. Although I told myself at the time that I would “Never go back to teaching. Not ever, I promise if I have to work three jobs to make ends meet, I will not go back to those horrible teaching conditions,” I have returned to teaching.

In the interim after I resigned in December of 1999, I taught at a local community college and worked on the beginning of this thesis. I began interviewing and researching the background information and spend the majority of the spring interviewing and typing transcripts from my participants. I spent about eight months working part-time to help pay our bills and then in August of 2000, I accepted a job as a recruiter for a nation-wide technical institute. As I mentioned, I enjoyed the income that I earned from this job, but
the satisfactions of seeing students learn and daily interactions were missing. In December of 2001, I began to focus on my return to teaching.

I knew that the thesis and what I had learned was very important and so I began to re-read and re-evaluate what my participants had said in their interviews. I began to try to get back in touch with them and solicit their feedback after almost three and a half years. I was very curious about where they were teaching, if they were still teaching and how they liked their current job. I re-formulated a series of questions to ask them about what they were doing and I unfortunately received a response from only one of the five participants.

Here is what I feel I have learned from each of them and I am sincerely grateful for these lessons.

Figure 5 is a comparison of what I felt that my participants and I had in common.

<table>
<thead>
<tr>
<th>Participants</th>
<th>Mary</th>
<th>Tim</th>
<th>Hannah</th>
<th>John</th>
<th>Jeremy</th>
<th>Self</th>
</tr>
</thead>
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<td>Teaching was a second career choice</td>
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<td>Yes</td>
<td>Yes</td>
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<td>Teaching adversely affected personal/family life</td>
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<td>Yes</td>
<td>No</td>
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<td>Yes</td>
<td>No</td>
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<tr>
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<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
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<tr>
<td>Returned to teaching</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Figure 5: Comparison of experiences between the author and all participants
What I Learned from Mary

When I first met Mary, I immediately was at ease with her friendly demeanor and willingness to answer my questions. As we began talking and I got more comfortable with her, my first impression was that she missed teaching. She was working in an office setting in a laboratory and she seemed cheerful, but not completely happy. Since she is older than I am, I expected to hear some war stories about how things had really changed in the teaching profession since she started teaching.

The first experiences that she related to me were those of her most recent teaching position, the one she had to leave because of her husband’s job move. She really did not relate to me how things went her during her first couple of years teaching since that had been teaching for 27 years. I was interested in finding out from her what she felt made her a successful teacher. I did not expect her to relate to me on the same level as my other participants would because of our obvious differences in age and years of experience teaching.

She described her typical day starting at around 4:30 in the morning and I immediately thought that there would be no way in the world am I getting up that early to do anything much less prepare for classes. I have found that in my teaching experiences, I preferred to get up just in enough time to get dressed and get to school right on time. I would rather have stayed up late the night before to finish work than to get up early and complete anything.
She described how she had to become very resourceful in finding supplies for her classes and since she was in a small town, the task became easier because she seemed to know everyone in the community. I did start teaching in a small school in a rural community, but I was not a long-time resident of the community, so introducing myself to new resources was something that I started doing quickly. She mentioned that she went to slaughterhouses to collect bones for her anatomy units, and she went to local hardware stores to ask for supplies for laboratories. I thought that this was terribly resourceful, but then I questioned when would I have the time to cultivate these new avenues? Who should have or would have shared with me these types of resources? Certainly no one, including my mentor teacher during my first teaching experience told me that I would need to cultivate these outside sources on my own. To complicate things, the town where my first teaching assignment was located had a reputation for being extremely poor and particularly unfriendly to outsiders. I found this out when I began asking local businesses for their help with supplies and was greeted with more than a little reluctance to help.

I figured that Mary had a definite advantage in that she was an established member of her community and that she had learned how to cultivate help from her local resources. Any first year or beginning teacher is going to have difficulty doing this. Undoubtedly, this is where an older, more experienced teacher would have an advantage. It also makes sense to me that in creating a sense of community within a school, more experienced teachers would be willing to share these types of information with newcomers. Another useful piece of advice she offered was not to rely on catalogs for supplies since money is
often in short supply to buy materials and most of what they offer, you can substitute or find the supplies you need if you looked hard enough.

Besides having to be resourceful in finding her supplies, Mary shared with how she felt as if it was important to allow her students to know that she cared about them. This was a major eye-opener for me. To this day, I have taken a different approach to how I treat my students because she had said this to me and it clicked. There is a phrase that I have seen and cannot remember where I first saw, but it says something like “They won’t care how much you know until they know how much you care.” This statement applies to Mary’s philosophy of teaching and I have adopted it into my own. Mary told me of several instances in which she had to intervene in a family situation, advocate on the part of the student or just offer a little encouragement for a student who was struggling. She made me realize that academics are the last thing on a student’s mind when there is something not right outside of school. I always felt like they should be able to just forget about everything except what they were there to learn, but most often, that is unrealistic to expect from an adolescent. I remember feeling many times that I did not want to be in school, but I was there because I had to be. Adolescents often do not have the maturity to handle stressful situations in the same ways that adults do, so why should I have expected them to?

During my first year teaching and probably in each subsequent year until this one, I have prided myself on not allowing my students to get close to me emotionally. That is, I was able and willing to keep them at arm’s-distance because I thought that if they got
too close, it would adversely affect my teaching ability. This has been proven over and over to be not the case. I have students now who have confided in me, joked with me and shared with me as an adult who they feel they can reach out to. This is probably one of the greatest rewards in my teaching and I have Mary to thank for allowing me to see that my attitude needed to change in order to let my students in and become a better teacher because of it. Even thought I do not have children of my own, I treat my students like important people, I let them know that I care and I truly feel that I am a better teacher because of this. After talking with Mary, I realize that she would have made a great mentor and I have a feeling that she does take new teachers under her wing to teach them the ropes.

The last things that she impressed upon me is that if you are a natural teacher and feel drawn to teaching, then you should not shy away from the privilege. She has integrated her teaching into her life and I hope that I have had the courage to do the same.

*What I Learned from Tim*

Tim and I immediately had a common experience and I was very curious for him to share his comments about a particular school in which we had both taught. I will admit that nothing really surprised me about what he had to say, but what I initially gleaned from him was that my initial feelings about the school, the community and the attitudes of the administration at this particular school were not necessarily unfair.
He told me about his attitude regarding the students that he attempted to teach. I say attempted because I felt the same way as I went into the classroom in his same school every day. I felt, as Tim did, that the vast majority of the students were incredibly unprepared to do junior or senior-level work. We both entered the school with the expectation that our students would be capable of doing more than merely completing worksheets, attending classes sporadically and rebelling against any figure in authority. We were both wrong.

Tim’s first story was about how he was told that there would be money for the magnet program that included the entire school and that he would be able to purchase supplies for his science laboratories. He soon found out that the magnet money was designated for art and theater classes since that is what the grant said would draw students to this particular school. Upon learning that he would be teaching five different subjects, Tim had submitted an order for supplies that totaled around $15,000. When the rejection came in late January, the principal laughed at him. He was disappointed when he was told that science, a core subject, would not receive any funding or support from the grant. Tim summed it up by saying, “I don’t want to use the word lied, that might be too strong a word, but I thought there was some deception involved there.”

I can honestly say that I had no delusions about teaching in this school because I was familiar with the county and the view of this school within the community. Tim stated that that had he “…felt like I was babysitting. I felt I wasn’t getting through to the
kids…” I felt the same way after a very short time teaching in the same school and the feeling did not change with more time spent at Harrison High School.

What I learned from Tim was that sometimes, we as teachers are expected to just lower our standards and expectations to meet the students at their level or get out. Initially, he said that he refused to lower his standards, but in the end, we both chose to get out after feeling like lowering our expectations was not what we felt comfortable doing.

At the same time that we were struggling with apathetic students, it became clear that the attitudes of the parents were very similar to those of their children. Of the parents that both Tim and I encountered, most were uneducated themselves. In the instances in which Tim and I had tried to have positive parental involvement and contact, we were greeted with mistrust and suspicion. In their minds, we were both white outsiders who were coming in and treating their children unfairly because they were minorities. Both Tim and I perceived this attitude from parents and students on an almost daily basis. We agreed that it made teaching those students that much harder because it was another barrier to overcome before they would listen to what we had to say.

I feel that as a direct result of their apathy, the last important issue that we had both experienced was a lack of student discipline. Since we had two of the three head administrators in common, we addressed the fact that we felt unsupported when it came to issues dealing with student discipline, respect and punishment. This became evident as we talked and discovered that at one point or another during our time at Harrison High
School, students had physically threatened us both. In both instances, we had told our administrators and essentially nothing was done. I feel compelled to add that if this had happened where I currently teach, not only would the student have been escorted out in handcuffs, but also that student would be punished by a long-term suspension or expulsion from school. At Harrison, Tim and I were both shocked that nothing was done. We supposed that since administrators saw this as a fairly common offense, it was treated more lightly than it should have been. He described the incident in which he was threatened in these words:

I had one kid earlier in the year act like he was going to shove a pencil into my chest and I was like ‘Take your best shot, but I’m not gonna.’ He didn’t do it of course and then I had another class, the same class [that had] like a couple of months earlier thrown textbooks and then I found out that they’d thrown textbooks at another teacher and she had left too. But she had left before Christmas.

Overall, Tim and I both felt as if we were thrown into situations in our first teaching assignments that were less than ideal and we each had developed means of coping with the circumstances. We both left feeling worse about teaching and teenagers than when we started and we both sought to continue teaching even though we had experienced negative circumstances. Tim and I have both subsequently found places where we fit in better and where we feel that our expertise is appreciated.

*What I Learned from Hannah*

Hannah and I met in her classroom one day after school sometime in the early spring of her first year teaching. As with the other participants, I sought to find come
common ground and was immediately pleased to find out that both Hannah and I had not originally intended to be science teachers. We both commented that we fell into teaching because we found that we liked teaching in a laboratory setting.

I quickly discerned that Hannah seemed to have higher aspirations and that teaching at the high school level was merely a stepping-stone for her until she was able to go back to school and possibly get into a research position.

Hannah was married to a lawyer and felt that at some point, his job would provide the primary income and she would be able to stay home with children or go back to get her doctorate degree in another natural science field.

It struck me that we both had aspirations to continue our educations and that when we did, we did not see that we would continue teaching at the high school science level. After thinking about this for a while, I realize that I found myself thinking of what I would do after I stopped teaching to comfort myself when things were particularly difficult. I do not feel that Hannah was doing this for the same reasons. I felt as if she were serious about continuing her career outside of teaching science. She mentioned that there were so many possibilities for someone who likes science and that she knew it would not be hard to find a teaching job if she ever really needed one. I felt the same way. Given my certifications and qualifications, I have not ever had trouble finding a job in the teaching field. In other words, our view of teaching science is that it can be a comfortable fallback position, if necessary. We both felt like teaching was a secondary calling and not something that we planned to do. Her initial aspirations included working in some sort of
research capacity and mine involved becoming a veterinarian. Since we found ourselves in teaching positions, I felt like we both tried to make the best of the situation, but I found that it is easier to find fault with teaching if it was never your first love.

In addition to making me aware that we felt the same way about our credentials and future possibilities, I felt as if Hannah really addressed the issue of compensation for all teachers. She admitted,

If I were a single person, not living in a household with two incomes, I couldn’t live…I’d be lucky if I had a car to bring me to work because I’d be paying everything in rent or in a mortgage. It’s just not worth it when I know that with my degrees and expertise, I can go somewhere else and make a lot more money.

Since returning to teaching, I have encountered more financial struggles than when I was living in a two-person household. I have often become discouraged that I work very hard and I am unable to live with any extra allowance for emergencies, vacations or spending. I pay my own mortgage, my car payment and other expenses and have to budget nearly to the dollar to make ends meet. Since accepting a $12,000 a year pay cut to return to teaching, I have worked as an adjunct at a local community college to supplement my income. This not only made me more tired, more stressed and more overworked, but I feel that working a second teaching job distracted me from my primary job teaching at the high school. Because of the time I needed to spend traveling to and from my second job, working, and planning, this in turn, gave me less time to plan, grade and concentrate on my high school students.

Working a second job is an alternative that many single and a few married teachers utilize to supplement their salaries. I can think of five other teachers out of my
department of 13, who have taken jobs in retail, food service or hotel management to pay bills. All told, I feel like working a second job should not be a necessity for a professional teacher. In my case, it has been.

**What I Learned from John**

In talking with John, I did not feel as if I could relate on as many points. He was a middle school teacher, and since I have never taught middle school, I felt that our experiences would be very different. I thought that having taught high school would be different from middle school in that the students are at a different age and have different issues that they are facing. As it turned out, I was only partially correct. John and I faced many of the same challenges as teachers.

John’s interview started off with his philosophy of teaching. He got interested in teaching much the same way all of my participants had. Originally, he taught outdoor education programs in a camp-like setting and discovered that he enjoyed doing it. He realized that he might like to do this for a living and pursued a formal education that would allow him to do so.

In my opinion, John’s transition from an outdoor setting to a traditional classroom was initially a difficult one and was further complicated by rigorous administrative duties. John wanted to teach and share his experiences in a way that he wanted to reach every student. He shared with me that this task often seemed unrealistic, but that never stopped
him from trying. No matter how discouraged John got with trying to reach out to students, he kept trying.

This is one of the lessons that I learned from John. He impressed upon me that it is not possible to give up trying to teach students if that is your true calling. I have felt this so many times and often I think of John and his dedication to his students. I find myself looking out at a room of students who seemingly could care less about learning Chemistry, and then I think about what I am doing to be here. Just when I seem to think that it is just not worth my effort, I remember to appreciate the few that really are interested and that I will influence them in a positive way. Mary and John both taught me a similar lesson about how I needed to keep my feelings in perspective when it came to the rewards of teaching.

John mentioned numerous times about the rewards of seeing a student really get into something that he was doing and it seemed to make it all worthwhile. In his interview, he addressed this by saying “I believe in the experience, that the students are having, I spend so much time trying to develop it…there are windows that occur that tell me it’s really working.” By it working, I believe that he means that he has provided what some educators refer to as a “teachable moment.” For me, those moments are treasured because when I have them, I know I have gotten through to some student and I know that they have learned something. Even though it may be a small step, I have found that those small steps and small accomplishments are what make the day, the year and the time with my students worth it. I believe that John felt the same way.
In addition to sharing with me what he felt when his students were getting into what he was teaching, we discussed the effect that John’s teaching had on his personal life. At the time of our interview, John and his wife had just had a baby.

John typically planned at the end of his day and he said:

By the time I’ve gone through the whole day, my planning period is usually taken up by calling parents on the phone about issues I’ve had with kids….which is constant. I’ve tried real hard to make good stuff happen all day and it doesn’t take too many kids to subvert that.

He mentioned that he does not ordinarily have time to plan during his planning period, so he does his planning after school and after getting home at night. I could readily identify that planning time at school rarely is. Since we are at maximum capacity plus this year, another chemistry teacher must use my room during my planning period. As a result I must move out of my room and go to a common planning area. Not only does this take time, but I also have to carry everything back and forth with me.

Despite the inconveniences, my time spent after school did affect my family, my husband at the time and my friends. John and I both agreed that teaching is a very hard job to leave at school when the final bell rings and it is time to go home. When we got home, we both felt compelled to plan more, grade more and do more than was feasible. What John and I found us doing was spending 12 or 14 hours on what is supposed to be an 8-hour a day job. Just as many teachers have always done and will continue to do, we found it hard to separate ourselves from our jobs.

This is where John and I both had to make important decisions with regards to our teaching paths. John understandably felt that with a new baby and a wife to care for, he
needed to spend less time working and more time with them. I felt like my marriage was suffering because I felt compelled to do everything for school and everything in the household and there was very little time left for a partnership with my husband. This was not the only aspect of my life affected, but it was certainly an important consideration at the time.

John mentioned that he often found himself thinking of school outside of school. I found myself doing the same thing. I always took papers on any trip, vacation, or outing if I knew that there would be time in the car to grade them. I left every Sunday afternoon vacant or felt rushed to come home so that I could prepare for the upcoming week. I know of countless times where I thought to myself, “Why do I have to work at a job that I can never leave?” On more than one occasion, I expressed my despair that I could never get away from teaching. The personal toll proved to be too much for both John and me.

John left the traditional teaching classroom for several reasons: higher pay, fewer hours and better working conditions. I felt that John left for the right reasons and made his decision based on very real, personal beliefs rather than discouragement or anger. I cannot honestly say that I did the same. I left teaching because I was mad at the students, mad at the system, mad that I was asked to do things that I did not agree with. I just wanted out. I got out and was happy for a time with my choice. As evidenced by the fact that I have returned to teaching, I felt that I needed to come to terms with why I left. Since leaving teaching, almost every aspect of my life has changed dramatically. I have come back around to teaching because I just cannot deny that I am the most satisfied
when I get positive feedback from teaching what I love. As I have acknowledged my original anger and frustration, I have matured and worked through other issues in my live that were contributing factors to this frustration as well. Teaching was not truly the problem, but merely the symptom and it took me a few years to work through the other issues that affected my teaching, but as I did, I realized that teaching is truly part of who I am. Finding where I am supposed to be has been an important lesson learned. Now that I am at a school where I feel supported and appreciated, I know that I am in my niche. John is too I believe.

What I Learned from Jeremy

After meeting Jeremy, I felt that we had the most teaching experiences in common. At the time of our first interview, he was teaching Chemistry at the same high school in central Florida as Hannah.

We began talking about our initial career aspirations and Jeremy shared with me that he had wanted to become a physician and return to his hometown to practice wanted to do and when he did not get into medical school, he was left scrambling for a job. What is the first thing he thought he could do with his background? Teach. In much the same way that Hannah and I did, Jeremy fell into teaching as an alternative to his first career choice.

His first teaching job was in a rather large urban high school in central Florida. We talked about the challenges that he faced, and many were the same ones that I had
discussed with the other participants. Unruly students, unsupportive administrators, lack of materials, etc. were all things that Jeremy agreed were drawbacks of the teaching profession.

I became particularly interested in Jeremy’s story when he began to describe the types of students that he felt he was most able to reach. In his experiences, he felt as if he was able to really connect to bright, high-achieving students who were college bound and in smaller, college-preparatory classes. We agreed that we both were in those types of classes when we were in high school. What struck me as amazing was that I had never realized before that I also felt more effective with kids who were much like I was in high school. I think that a large part of this is attributable to human nature, but I also realized that it makes sense that Jeremy and I had both done better teaching with this type of student.

When I left teaching, I was teaching in an International Baccalaureate program in Florida and I was enjoying the students very much. The students that I taught in the International Baccalaureate program typically were talented, motivated and academically inclined enough to grasp things easily. This made my job not only more enjoyable, but easier too. I did not experience major discipline problems and overall had very supportive and involved parents. Jeremy and I both remarked that these conditions make teaching enjoyable and worth staying in the teaching profession. We both felt that the values of a rigorous academic program suited our interests and talents in a very positive way.
In contrast to these students, Jeremy and I had both encountered our share of problems with students being disrespectful, rude and apathetic. It is not to say that I did not expect this and learn to deal with these situations, but I felt as if I had more to offer students who were ready to learn.

This brings up a point that I would like to make about who should be teaching where. I do not believe that I am being elitist or racist when I say that I found it easier to work with kids who were more like myself. What I am saying is that teaching seemed to be less difficult when I felt that I had found my niche.

A niche is where a particular organism fits into the world. That means that a particular organism is unique and different enough so that it has very specific place that it belongs in relation to all other organisms that make up the community and ultimately the surrounding ecosystem. After speaking with Jeremy, I believe that we have both found our niches in the teaching profession. I have spoken with him and he is literally happy as a clam teaching Chemistry in an International Baccalaureate program at another school in central Florida. I know that he has found where he feels he is supposed to be and is enjoying his teaching immensely.

The discovery of this environment for me was almost an accident.

*My Return to Teaching*

When I finally decided to return to teaching, I applied to be a substitute teacher in the county where I reside. I called the school board office to confirm receipt of all of the
pertinent paperwork and related to the secretary what my credentials were. After a brief placement on hold, she returned to tell me that the director of personnel wanted to talk to me; twenty minutes and a quick clothes change later, I was sitting in his office. His first question after the introductions was “What is your philosophy of teaching?” I was astounded that he did not ask me about my experiences, my current job status, my interests, only what I believed about teaching. Then he asked about my background and my qualifications and made me feel as if I was a treasure he had just unearthed all by himself. Before I left his office, we had chatted about my experiences, my positive attitude and my sincere desire to return to a profession that he said I clearly was meant to do. He suggested that I interview with two different schools to see where I felt the most comfortable and before the week was over, I had my current position. I clearly remember leaving his office feeling redeemed and joyous that I had found where I fit and I have been right ever since.

My suggestions for future teachers would be for them to find their own voice by finding their own niche and their own values. By discovering what value each prospective teacher places on certain factors of teaching, each new teacher should be able to find a school and circumstances under which they feel that they can be the most successful. I have worked in four different schools and in each, I have come to learn more about myself and what type of value system that I have. I have found that I work best and feel the most positive about my job when I have known what is important to me meshes very well with the philosophy of the school and the decision-makers. I feel that everyone
should have this type of teaching environment and would be well advised to actively seek the most advantageous environment for him or herself.

Summary of What I Have Learned from All of My Participants

Throughout the entire process of writing this thesis, I learned that I needed to vent, I needed to hear what other teachers had to say, but in the end, I know that teaching is my true calling. I learned that I would continue to teach until I feel like moving on, if that ever happens. I have learned to cope, balance and deal with every situation in life or in my teaching as it comes. I have learned not to worry about what I cannot control, what I can control, do something about and to let the rest go. I have learned that a supportive network of colleagues, administrators, friends and family are vital and essential to my teaching success. I have learned that no matter how much I struggle, there is always another teacher who has been through, is going through or will go through the same things so it is just best if we all just help each other through.

Finally, I have learned that my maturity and desire to stay in teaching has come through age and experience and cannot be replaced by any training, induction, lecture or textbook. My appreciation was earned and can only be appreciated when every individual obtains it like I did. I am thankful for the opportunity to have shared about my life and about my teaching with everyone involved and I sincerely hope that I can make a difference to this world, even if it is with just one student at a time.
APPENDIX A

Questions Used During Initial Interviews

General Interview Questions

1. Why or how did you choose to become a teacher?

2. What are your certification areas? How long have you held a teaching certificate?

3. How many schools have you taught in? How many years of overall teaching experience do you currently have?

4. What has been or is your greatest joy in teaching?

5. Describe your typical day.

6. Describe your ideal science learning environment and classroom.

7. Do you feel you have a satisfactory working environment? What would you like to change?

8. How do you deal with the everyday issues involved in being a teacher?

9. What has been your best and worst encounter with a student? Parent? Administrator?

10. How many years into your teaching did you feel “comfortable,” if ever? What I mean is when did you feel good consistently about what you were doing?

11. Do you consider yourself a good teacher? What do past students have to say about you if asked?

Questions for Teachers Who Have Left the Profession

1. Why did you leave the teaching profession?

2. Who or what would have influenced you to stay in teaching if anything?

3. What have you chosen to do since leaving science teaching?

4. If you have left or were to leave, what would make you return to teaching?
Questions for Teachers Who Are Considering Leaving the Profession

1. Why have you stayed in the science teaching profession?

2. If you were to leave, what would you do for subsequent employment, if anything?

3. Why are you considering leaving the science teaching profession?
APPENDIX B

Letter from Human Subjects Committee
Informed Consent Letter Submitted to Each Participant

Informed Consent Letter


Researcher: Sherri J. Hood

I agree to participate in a tape-recorded interview to be conducted privately with Sherri Hood. I understand that she has asked me to participate in a research project that she intends to include as part of her Masters thesis for the College of Education at Florida State University. I understand that Mrs. Hood is interested in investigating the reasons behind why science teachers stay in the profession or why they leave. Mrs. Hood will be evaluating my responses as a science teacher regarding why I have chosen to either stay in or leave the teaching profession. I understand that my name will not be given during any publication of her findings and that I will remain anonymous throughout the interview process.

I understand that I will be asked to respond verbally to a series of questions that follow an emergent design format and that I may be asked questions regarding my feelings about teaching science, my experiences teaching science, and my background in science.

I understand that I may refuse to answer any question or terminate the interview process at any time without penalty, prejudice or pressure to continue. I agree to be interviewed without monetary compensation. I accept that there are minimal if any risks involved in answering the questions. I understand that if I wish to make written remarks I may do so also and that they will be submitted into the record for interpretation. I reserve the right to ask Mrs. Hood for clarification of any question at any time.

Lastly, I understand that Mrs. Hood agrees to keep the cassette tapes of my interview in a locked cabinet and that they will be destroyed by May 1, 2005. I understand that she and her major professor, Dr. Penny J. Gilmer, will be the only people to have access to these recordings.

I understand that I may contact either Mrs. Sherri J. Hood, Florida State University, at (850) 681-2411 or at tally57@hotmail.com. Dr. Penny J. Gilmer, her major professor at Florida State University, may also be reached at (850) 644-4026, or gilmer@sb.fsu.edu. I understand that they may be contacted if I have any questions concerning my participation and my rights at any time. I will have access to the published thesis and any additional papers submitted for publication when they become available.

I have read and understand this consent form.

Please sign and date this form to indicate your consent to participate.

Subject: ______________________________
Date: ______________________________
Witness: ______________________________
APPENDIX D

Second Set of Questions Used in Follow-Up Contact With Participants

Re-formulated Questions Posed to Each Participant After 4-Year Time Period

1. How long have you been at your current position?

2. What is your title?

3. List your primary responsibilities. (Top 5)

4. Would you consider yourself “happy” and or “satisfied” in your current job?

5. If the answer is yes, please elaborate. If the answer to the question is no, please tell me why not?

6. Are you planning to stay in your current job for at least 12 more months? If not why?

7. Compare this job to your last teaching job(s) and is it better, worse, or the same? Why? How much so?

8. (Even though it has been a while…) What did you or have you learned from participating in the interview process with me? Did it cause you to reflect and think more about your direction or the importance of teaching in your life?

9. What is the one (or maybe two) factor or factors that you enjoy most about your current position?
REFERENCES


Shaw, B. (2000, March 19). Where have the teachers gone? Tallahassee Democrat (pp. 3A).


BIOGRAPHICAL SKETCH

I currently teach high school Biology and Chemistry in Stafford, Virginia. Since moving to Virginia and returning to the classroom, I have become certified in Physics, Chemistry and Biology in the Commonwealth of Virginia. I plan to continue teaching at my current school, and I hope to become nationally board certified next year. I have aspirations to teach at the community college level in the future and I may do so while pursuing my Ph.D. I have applied to George Mason University in the Environmental Science and Public Policy program and am currently waiting to hear if I have been accepted into the program.

In my spare time, I enjoy visiting the many historical sites around Fredericksburg, visiting my parents in California, traveling with friends and enjoying the company of the greatest cat in the world, Jynx.