

2015

## **A journey of joy- a biography of an excellent mathematics teacher : exploring what influenced her retention in teaching**

Patricia S. Mannion Rowe

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## ABSTRACT

### A JOURNEY OF JOY--A BIOGRAPHY OF AN EXCELLENT MATHEMATICS TEACHER: EXPLORING WHAT INFLUENCED HER RETENTION IN TEACHING

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Northern Illinois University, 2015  
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The purpose of the study was to examine a retired teacher's reflections on career, professional, and personal influences which contributed to her retention in teaching. This study was guided by the research question: How have career, professional, and personal influences contributed to one teacher's retention?

This was explored through a biography of her teaching career and an analysis of the revealed factors using Herzberg's Motivator-Hygiene Theory. Motivators/satisfiers are factors intrinsic to the job itself. The following satisfiers emerged: the work itself (including creativity, classroom management, curriculum, challenge, intellectual stimulation, interpersonal relationships, joy, a sense of purpose, altruism), achievement, growth (including teacher preparation, support and mentoring, and the opportunity to learn), responsibility (including change agent, professional development of others, and committees), and recognition. For a 37-year retired veteran, satisfaction of these factors fulfilled personal needs and may have contributed to her own self-actualization and retention in teaching to retirement.

Hygiene/dissatisfying factors are extrinsic to the job itself and included administration and policy, working conditions (including school facilities, safety, time and workload, facilities available for doing the work, and support for professional development), and factors in personal

life (including demographics, family, and health). For the award-winning teacher in this biography, these factors represented various degrees of dissatisfaction, but did not appreciably contribute to her decision to remain in teaching to retirement.

Suggestions for teachers, administrators and future research were provided. An emphasis was placed on nurturing intrinsic factors to encourage excellent teachers to stay, while recognizing that more research is needed to fully understand the relationships between motivators, hygiene factors, student achievement, and excellence in teaching.

NORTHERN ILLINOIS UNIVERSITY  
DE KALB, ILLINOIS

DECEMBER 2015

A JOURNEY OF JOY-- A BIOGRAPHY OF AN EXCELLENT MATHEMATICS  
TEACHER: EXPLORING WHAT INFLUENCED  
HER RETENTION IN TEACHING

BY

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A DISSERTATION SUBMITTED TO THE GRADUATE SCHOOL  
IN PARTIAL FULFILLMENT OF THE REQUIREMENTS  
FOR THE DEGREE  
DOCTOR OF EDUCATION

DEPARTMENT OF LEADERSHIP, EDUCATIONAL  
PSYCHOLOGY AND FOUNDATIONS

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## ACKNOWLEDGEMENTS

I wish to acknowledge some of those who made this dissertation possible. First, and foremost, I owe gratitude to Virginia Highstone, the subject of this biography. Our fascinating conversations offered not only extensive data, but also afforded me the opportunity to reflect on my own teaching and learn from her. I also have many thanks for my committee members, each of whom contributed to my growth as a researcher and writer and influenced my choice of topic: Dr. Mary Beth Henning, who offered valuable feedback and encouragement on drafts; Dr. Elizabeth Wilkins, who helped me to refine my writing in her excellent classes; and Dr. William Pitney, who opened my eyes to the richness of qualitative research and encouraged me to write a qualitative dissertation. I also must thank my family: my husband, James Rowe, and my sons, Garrett Rowe and Graeme Rowe, who took on many responsibilities at home so I could pursue this goal. The foundation for this doctorate was laid down by my first teachers: my parents, Louis and Trudy Mannion, who treasured our educations to the point of personal sacrifice; and my siblings, June, Randy, Ryan and Laura, who fostered a community of scholastic inquiry and reflection. Finally, I owe much to Dr. Brian Couri, whose expertise in guiding my recovery after an auto accident made possible the completion of this dissertation.

## DEDICATION

In memory of Louis J. Mannion (Father, 1932-2012) and

Randolph L. Mannion (Brother, 1962-2015)

With love and appreciation

## TABLE OF CONTENTS

	Page
LIST OF TABLES.....	v
LIST OF APPENDICES.....	vi
Chapter	
1. INTRODUCTION TO THE STUDY.....	1
2. LITERATURE REVIEW.....	10
3. METHODOLOGY.....	37
4. VIRGINIA’S STORY.....	60
5. DISCUSSION AND CONCLUSIONS.....	120
REFERENCES.....	172
APPENDICES.....	186

## LIST OF TABLES

Table	Page
1. Herzberg's Motivators and Hygiene Factors.....	32
2. Characteristics of Three Qualitative Approaches.....	44
3. Key Persons and Relationship to Virginia.....	53
4. Types of Documents and Number of Each Type.....	55



## LIST OF APPENDICES

Appendix	Page
A. VIRGINIA HIGHSTONE’S CURRICULUM VITAE.....	186
B. E-MAIL EXCHANGE WITH SUBJECT INDICATING AGREEMENT TO PARTICIPATE.....	194
C. INFORMED CONSENT, CONSENT TO AUDIO RECORD, AND PERMISSION TO PHOTOCOPY, STORE, AND USE DOCUMENTS FORMS .....	197
D. INTERVIEWS 1-3.....	200
E. INTERVIEWS 4-6.....	204
F. INTERVIEWS 7-9.....	207
G. INTERVIEWS 10-11.....	211
H. INTERVIEWS 12-13.....	213
I. INTERVIEWS 14-15.....	216
J. INTERVIEW WITH OTHERS RECOMMENDED BY BIOGRAPHICAL SUBJECT.....	220
K. EXAMPLES OF NOTES WRITTEN BY STUDENTS TO VIRGINIA.....	222
L. EXAMPLES OF LETTERS WRITTEN ON VIRGINIA’S BEHALF FOR A TEACHING AWARD NOMINATION.....	229
M. PICTURE OF VIRGINIA HIGHSTONE.....	233

## CHAPTER 1

### INTRODUCTION TO THE STUDY

A 2012 telephone survey of 1000 teachers revealed that job satisfaction among teachers was at a 25-year low, declining from 62% in 2008 to 39% in 2012 (Metropolitan Life Insurance Company, 2012). Parker Palmer (2002) suggested, “if schools are to be places that promote academic, social, and personal development for students, everything hinges on the presence of intelligent, passionate, caring teachers working day after day in our nation’s classrooms” (p. xxviii). Further, to attract and retain such teachers, “we had better figure out what will sustain their vitality and faith in teaching” (p. xxviii).

Research in teacher attrition and retention has focused mainly on surveys of teachers, both practicing and leaving, with varying numbers of years teaching (Haberman, 2004; Hanushek, Kain, & Rivkin, 2004a, 2004b; Ingersoll, 2001, 2003a; 2003b; Ingersoll & Rossi, 1995; Loeb, Darling-Hammond, & Luczak, 2005). However, the voices of retired teachers are inadequately represented in the literature. Missing are insights of those who retired from the teaching profession after many years of teaching. This biography of a single excellent teacher explored the phenomenon of teacher retention.

#### Problem Statement

The average length of a teaching career in the United States is 11 years (Haberman, 2004). About 15% of teachers leave the profession after the first year of teaching, about one-

third within three years, and over 50% leave within six years (Brewster & Railsback, 2001; Dillon, 2007; Ingersoll, 2003a; Thomas & Kiley, 1994). About 13% either move or leave the profession each year (Alliance for Excellent Education, 2014). The costs of attrition are high, with states spending an estimated \$1 billion to \$2.2 billion each year (Alliance for Excellent Education, 2014). In fields such as mathematics and science, the rate of attrition due to turnover and retirement is greater than the supply of available new teachers (Ingersoll, 2011).

Mathematics and science teachers have other career opportunities and are not as likely to stay in teaching as those teachers in other fields (Borman & Dowling, 2008; Ingersoll, 2001; Theobald & Michael, 2001).

Teacher effectiveness increases with experience in the early part of a teacher's career (Alliance for Excellent Education, 2014; Rivkin, Hanushek, & Kain, 2005). Unfortunately, at about the time teachers become more effective and can better affect student achievement, over half of them leave the profession, and students are continually faced with inexperienced and possibly underprepared or uncertified teachers (Brewster & Railsback, 2001; Ingersoll, 2003a; National Commission on Teaching and America's Future, 2007; Thomas & Kiley, 1994).

The Alliance for Excellent Education (2011) studied several international effective school systems and reported that their educational success was attributable to their efforts to not only recruit, prepare, and develop strong educators, but also to retain them. Research involving veteran teachers has yielded information for retaining novice and veteran teachers (Borman & Dowling, 2008; Darling-Hammond, 2007; Edwards, 2003; Pospichal, 2011). Ingersoll (2011) discovered factors which reduce departures of math and science teachers, especially. However, retired teachers are likely to reflect deeply on their career experiences (Lynn, 2002) and are an

untapped resource. Retired teachers may reveal information about their personal growth and development, as well as factors of the work environment, which enabled them to remain in the teaching profession to retirement. Their revelations may inform professional development to help teachers build resilience and longevity.

### Purpose of the Study and Research Question

The purpose of the study was to examine a retired teacher's reflections on career, professional, and personal influences which contributed to her retention in teaching. This study was guided by the research question: How have career, professional, and personal influences contributed to one teacher's retention?

### Significance of the Study

Much of the research literature focuses on reasons that teachers leave the profession after a few years of teaching (Billingsley, 1993; Boe, Bobbitt, Cook, Whitener, & Weber, 1997; Brill & McCartney, 2008; Chen & Miller, 1997; Haberman, 2004; Loeb et al., 2005; Ploegstra, 2008; Weiss & Boyd, 1990). Ingersoll (2011) and Ingersoll and May (2010) studied turnover and attrition of mathematics and science teachers. Several authors noted the importance of retention efforts aimed at novice teachers (Cohen, 2005; Ingersoll & Smith, 2004; NCTAF, 2007; Portner, 2005; Rippon & Martin, 2006; Smith & Ingersoll, 2004). However, retaining veteran teachers is also important (Alliance for Excellent Education, 2014; Alvy, 2005).

Darling-Hammond (2003) observed that veteran teachers “constitute a valuable human resource for schools—one that needs to be treasured and supported” (p. 7). Alvy (2005)

suggested that retaining veteran teachers allows schools to benefit from the “wisdom of age” (p. 765). Carroll (2006) noted that retaining veteran teachers allows for recouping of public investments and for teachers to become more proficient educators.

Retaining veteran teachers is necessary, but compared to the issue of teacher attrition, there is relatively less literature concerning the retention of veteran teachers, and I found no biographical research literature focusing on retired teachers’ perceptions of their own retentions. It has been suggested that the key to solving the attrition problem is to identify the causes and then develop strategies to ameliorate the problems that prompt teachers to leave teaching prior to retirement (Boe, Cook, & Sunderland, 2008; Brill & McCartney, 2008). Discovering the factors that influenced one excellent teacher to remain in the profession until retirement may reveal information to support that strategy development. The results of this study will become part of the literature on teacher retention. Schools may use this information to shape professional development to foster retention of excellent teachers.

### Conceptual Framework

The data were analyzed using Herzberg’s (1966) Motivator-Hygiene Theory. The theory is briefly described here and more fully explained in Chapter 2. Herzberg, Mausner, and Snyderman (1959) and Herzberg (1966) studied motivational factors in the workplace and developed the Motivator-Hygiene Theory. This two-factor theory of motivational and hygiene factors explained how such factors contribute to job satisfaction and dissatisfaction.

Motivators lead to positive job attitudes and include challenge, achievement, esteem, recognition, the work itself, responsibility, advancement, the opportunity to learn, and growth

(Herzberg et al., 1959). Dissatisfying experiences, or hygiene factors, often resulted from extrinsic, environmental, non-work related factors such as poor physical working conditions, policies, salaries, status, personal life, supervisory styles, relationships with coworkers, and negative conditions of health, comfort, security, and safety (Herzberg et al., 1959).

### Methodology

To understand how a retired female teacher grew and remained in the teaching profession for 37 years, a biography informed by elements of case study and narrative inquiry was written. Denzin (1989) wrote that a “biography is an account of a life, written by a third person” (p. 34). Biography is the study of a single individual and his or her life experiences, as revealed to the researcher via interviews, stories, accounts, personal-life documents, and archival materials (Creswell, 2007; Denzin, 1989). The methodology is briefly described here, and further discussion will be found in Chapter 3.

Two data collection strategies were used: a series of semi-structured interviews and document analysis. Fifteen interviews were conducted with the subject over a period of one year in order to allow for sufficient time to collect, transcribe, initially code data, and to ask the participant to check my interpretations of previously-collected data. The first three interviews focused on her teaching history. The next three interviews focused on details of her experiences, including stories of her relationships with students and other teachers. The remaining interviews asked her to reflect on her teaching, professional growth experiences, and factors which contributed to her retention in teaching. Documents, including the teacher’s National Board Teacher Certification portfolio, were collected and photocopied for analysis.

Methods described by Merriam (1998) and informed by Mertens (2010), Saldana (2009), and Seidman (2006) were used to analyze transcripts of the interview data and the documents. Data were analyzed inductively using a constant comparative method. Initial, or open, coding was followed by focused, or axial, coding (Mertens, 2010; Saldana, 2009). Meaningful units of data were identified and assigned conceptual labels describing their meanings. Coded concepts were grouped together according to similarities to other coded concepts.

Documents were analyzed and coded similarly. Categories were developed and compared to those obtained through interviews. A master list of categories reflecting recurring concepts were developed and subsequent data were placed into one of the categories. If a new category of data was created to accommodate subsequent data, it was added to the master list. Once the categories were created, interviews and documents were analyzed again to see if there were more pieces of data which fit the categories.

To increase trustworthiness, several processes were employed: triangulation among Virginia's interviews through the use of iterative questioning, interviews with others, and documents; rich descriptions; clarifying personal biases; and including discrepant information (Creswell, 2003). Sample coded transcripts with tentative interpretations were shown to the teacher to verify that results were plausible (Merriam, 1998). Confirmability was established by triangulation among the subject's interviews, interviews with others, and documents and by determining that the data and the results were in agreement (Merriam, 1998).

### Delimitations

This biography was limited to a retired teacher in one school district in the western suburbs of Chicago. It is a unit school district serving students from early childhood through grade 12, and one award-winning, retired high school teacher was selected for this biography. The sample size was small to allow for in-depth data collection and analysis. I interpreted the data, and it is unlikely that another researcher could duplicate the study.

### Assumptions

I assumed that the teacher answered the questions honestly, recalled important events accurately, and reflected on her career rather than providing answers she believed were “correct.” In addition, I assumed that personal documents accurately conveyed the reflections and thought processes of this individual teacher. I also assumed that all documents were complete, inclusive, and accurate copies of the original documents.

### Definitions of Terms

Achievement: The need to excel, to strive to achieve in relation to standards, to want to successfully complete a job, and to actually accomplish the tasks of the job, such as successful student, personal, and district goal outcomes (Egan, 2001; Herzberg et al., 1959; Keating, 2000; McClelland, 1961).

Attrition: Teachers leaving their teaching careers (Wiegand, 2003).



Excellent teacher: A teacher who possesses characteristics of excellence is well-trained, has content mastery, is passionate about their work, has productive collegial relationships, has effective classroom management skills, develops genuine care and concern for students, continues professional development, has consistent and respectable character, analyzes himself/herself through reflection, gives back to the school and community (Zarra, 2003), and is distinguished in aspects of planning and preparation, the classroom environment, instruction, and professional responsibilities (Danielson, 1996, 2011).

Personal life factors: concepts or situations associated with a teacher's personal life which affects responsibilities and perceptions of her job (Egan, 2001).

Policy and administration: The approaches used by a school or district to achieve its objectives (Keating, 2000).

Professional Growth: An increase in knowledge because an individual's skills have been shaped during the course of practicing one's profession (Keating, 2000).

Professional life factors: concepts or situations associated with a teacher's personal life which affects responsibilities and perceptions of her job (Egan, 2001).

Recognition: Verbal or written acts of praise, notice, or blame directed toward the teacher by another person (Egan, 2001).

Reflection: A process by which an individual attempts to clarify the essential meaning of experiences (Van Manen, 1990).

Responsibility: The duties associated with the teaching position (Egan, 2001).

Retention: Teachers remaining in their teaching career (Wiegand, 2003).

Retired teacher: A teacher who left the profession at the end of a career (NCTAF, 2007).

For the purposes of this study, it includes teachers who remained in the profession for at least 20 years.

Satisfaction: The perception of having one's needs met by certain events or situations (Egan, 2001).

Teacher: A person employed as an instructor in an elementary or secondary school who does not serve as an administrator (Egan, 2001).

## Conclusion

This study is organized into five chapters. In Chapter 1, an overview of the study was provided. Chapter 2 includes an overview of the literature related to teacher retention and attrition and an explanation of the conceptual framework. Chapter 3 explains the methodology used to complete the study. Chapter 4 is the biography of the participating teacher. Finally, the reader will find the discussion and conclusions in Chapter 5.

## CHAPTER 2

### LITERATURE REVIEW

The research literature explains why teachers are leaving, but comparatively little work has been done to determine why teachers stay until retirement after a long career. More obviously absent from the literature are insights of those retired teachers who embody the characteristics of excellent teachers as defined in the literature (Danielson, 1996; 2011; Zarra, 2003). This is unfortunate, as teachers such as Virginia Highstone may be able to shed light on the phenomenon of teacher retention to retirement after a long and successful teaching career. Such revelations may reveal characteristics which may be nurtured through such things as professional development and employee programs. Would an in-depth exploration of Virginia's teaching career reveal factors that contribute to her longevity? Perhaps, but first, I considered the existing literature on teacher retention and the lens through which I would examine her experiences.

This chapter includes an overview of teacher development, a discussion of teacher excellence, and a review of the literature on teacher retention. It also explains the conceptual framework of the study, Herzberg's (1966) Motivator-Hygiene Theory.

#### Teacher Development

Leithwood (1992) suggested that teachers pass through stages as they develop professionally, and proposed a model of teacher development. The model included three inter-related dimensions of teacher development: development of professional expertise, psychological

development, and career-cycle development, with psychological development and career-cycle development influencing the development of professional expertise. There are six stages of the development of professional expertise, with each stage reflecting a higher level of proficiency. The first four stages are concerned with teachers' classroom responsibilities, while the last two stages address the roles of the teacher outside the classroom (Leithwood, 1992). Skills and expertise acquired in each stage are cumulative, and skills acquired in one stage may not be directly utilized again until a later stage, so "this conception of growth does not imply restricting teacher experiences only to those that will prepare them for their next stage of development" (Leithwood, 1992, p. 87). For example, a teacher may acquire expertise in the first stage that will not be utilized until the last stage.

Leithwood's (1992) model outlines increasing expertise in multiple skill areas. For example, teachers advance from having a limited repertoire and skills in teaching models in Stage 1 to applying a broad variety of teaching models in Stage 4. Leithwood pointed out that "deciding which model or technique to apply in a particular situation is central to instructional expertise," and the choice of models is increasingly based on factors such as student needs (Leithwood, 1992, p. 90). Stages 5 and 6 acknowledge that teachers play roles in school improvement and educational decisions beyond the classroom and school (Leithwood, 1992). They may serve as mentors for younger teachers or serve in formal and informal leadership roles.

The model also describes "teachers' growing capacity for reflection" (Acheson & Gall, 2003, p. 31), as teachers move from no reflection on choice of teaching model in Stage 1 to reflection about competence, choices, and fundamental beliefs and values in Stage 5. Further, teachers develop the ability to reflect *in* action, as well as *on* action, so that they are better able to

respond to unique, unanticipated situations in the classroom (Leithwood, 1992). Other authors have discussed the importance of reflection in teacher development.

Intrator and Kunzman (2006) argued that individual teachers must develop an understanding of their own thinking as they “probe their sense of purpose and invite deliberation about what matters most in teaching” (p. 39). To become better teachers, they must consciously reflect on experiences, readings, events, and training in order to learn and grow as individuals (Clark, 1986; Osterman, 1990; Senge, 2000). Schon (1987) suggested that reflection is a defining characteristic of professional practice and can take place throughout the teaching practice. Teachers may improve as they develop, but what is an excellent teacher?

### Teacher Excellence

Zarra (2003) reported that a teacher is “excellent” when she is well-trained, has content mastery, is passionate about her work, has productive collegial relationships, can skillfully manage a classroom, genuinely cares for and is concerned for students, engages in professional development, is respectable and reflective, and gives back to the school and community. While Zarra (2003) suggested that teachers pass through stages, he does not delineate those stages. Further, he provides a framework toward excellence, with the development of excellence focusing on mentoring and supervision, classroom management, interpersonal relationships with colleagues, personal portfolio, introspective reflection, effective discipline strategies, and professional development (Zarra, 2003). However, his framework lacks specificity for directing a teacher to improve toward excellence.

Danielson (1996, 2011) developed a more directive framework for enhancing professional practice in teaching. The framework includes four domains: Planning and Preparation, The Classroom Environment, Instruction, and Professional Responsibilities. Each of these domains is divided into components which define an aspect of the domain. Teacher proficiency is divided into unsatisfactory, basic, proficient, and distinguished levels, with specific descriptors of the way each of these is measured in the domains. For example, the domain of The Classroom Environment has a component describing the establishment of a culture for learning, and the distinguished teacher fosters an intellectual environment in which members believe in the importance of learning. The model was developed to provide a road map for both novices and experienced teachers; to give a structure for focusing improvement efforts through supervision, induction, mentoring, peer coaching, goal setting, and evaluation processes; to facilitate reflection and self-assessment; and to provide a framework for defining excellence. Having briefly explored teacher excellence, I now turn to a review of the literature on teacher retention.

### Review of the Literature on Teacher Retention

Researchers (Billingsley, 1993; Boe, et al., 1997; Brill & McCartney, 2008; Chen & Miller, 1997; Cochran-Smith, 2004; Haberman, 2004; Hanushek et al., 2004a, 2004b; Ingersoll, 2001, 2003a; Ingersoll, 2011; Ingersoll & May, 2010; Ingersoll & Rossi, 1995; Loeb et al., 2005; Ploegstra, 2008; Weiss & Boyd, 1990) have explored why teachers leave the profession, but comparatively few have sought information concerning why and how teachers stay. This literature review explores aspects of teacher retention, including empowerment and intellectual

factors; colleagues, parents, and students; professional growth; recognition; system factors; school context; and other factors.

The search for relevant literature included peer-reviewed, full text articles from ERIC, social, and economic databases. I used terminology such as teacher, teachers, retirement, retiring, retire, retired, retention, attrition, professional development, persistence, endurance, perceptions, veteran, reflection, and life cycle. Different combinations of these terms yielded several dozen matches. Searches containing the word “retirement” or its variations yielded only two matches, and these articles discussed teachers’ early retirement decisions. Several dissertations were found through Proquest Digital Dissertations using combinations of the aforementioned search terms. One study of the transition experiences of recently retired teachers was found. Some of the studies were biographies or portraits of long-time teachers.

### Teacher Retention

Several authors noted the importance of retention efforts aimed at novice teachers (Cohen, 2005; Ingersoll & Smith, 2004; NCTAF, 2007; Portner, 2005; Protheroe, 2006; Rippon & Martin, 2006; Smith & Ingersoll, 2004). Retaining veteran teachers is also important (Alvy, 2005; Carroll, 2006; Darling-Hammond, 2003), but there is less empirical literature concerning the retention of veteran teachers. Several teacher retention factors are discussed in the following sections.

### Empowerment and Intellectual Factors

Empowerment and intellectual factors include decision-making, efficacy, and autonomy. These factors may be particularly important in teacher retention, but the voices of retired teachers are lacking in the literature.

#### Decision-making

Teachers with more decision-making power were more likely to stay in teaching (Hughes, 2012; Ingersoll, 2001; 2003b; Slye, 2000). Smith and Rawley (2005) observed an increase in professional development participation when decision-making increased. Leithwood (2002) found that increased decision making was associated with increased professional learning, increased responsibility and accountability from decision makers, and collective problem solving. Curtis (2012) surveyed 1,571 middle and high school mathematics teachers and interviewed 32 randomly-selected surveyed teachers. Teachers' abilities to make decisions about textbooks, course topics, and teaching techniques significantly impacted their decisions to remain in teaching.

#### Efficacy

A strong sense of self-efficacy helps people accomplish difficult tasks and influences their motivation to be productive (Bandura, 1997). There was a strong connection between efficacy and a desire to remain in the classroom (Perriochione, Rosser, & Peterson, 2008). Teachers certified in mathematics correlated with high student achievement in the 1990s (Goldhaber & Brewer, 1996). Teachers who had increased student performance stayed in



teaching longer (Goldhaber, Gross, & Player, 2007). In a survey of 201 Missouri public elementary school teachers, Perriochione et al., (2008) found that personal teaching efficacy increased job satisfaction and the likelihood that teachers would remain in teaching. However, this limited predictive study did not include retrospective data from retired teachers.

Edwards (2003) interviewed nine veteran Tennessee teachers who had been teaching for 10 to 20 years and 12 veteran teachers who had 21 or more years teaching experience. Edwards (2003) examined how schools met the personal and professional needs of teachers and ascertained teachers' perceptions of administration. This small, non-generalizable, qualitative study employed semi-structured interviews to determine veteran teacher needs, stressors, and job satisfaction. Teachers reported that they had mastered time budgeting, physical energy output, controlling emotions, keeping positive attitudes, knowing how students learn, and controlling a class (Edwards, 2003). Interestingly, veteran teachers were more stressed than they had been at the start of their careers because of testing, accountability, economic issues, and family obligations (Edwards, 2003). While long-time teachers gave personal, specific accounts, missing were interviews of retired teachers who may have worked through some of these difficulties.

### Autonomy

Higher levels of autonomy were associated with greater job satisfaction and retention (Allen, 2005; Guarino, Santibanez, & Daley, 2006; Hughes, 2012; Ingersoll, 2003b). In a qualitative study of urban teachers, teachers cited a desire for more autonomy (Olsen & Anderson, 2007). Hargreaves (2003) suggested that teachers became dissatisfied as autonomy declined and creativity and flexibility were constrained. Teachers felt that they could not

exercise their professional judgment (Hargreaves, 2003). In a study of teachers considering offers of early retirement, teachers reported that autonomy in curriculum decisions was a major factor in their decision-making process (Trisler, 1996). In a small study, six Illinois teachers cited lack of autonomy as one of their primary reasons for taking an early retirement option (Becker, 1994).

### Colleagues, Parents, and Students

The environment in which teachers work and the people by which they are surrounded may be important factors in teacher retention, but the voices of retired teachers are lacking in the literature. Included here are learning environment and colleague interactions, parent support and student characteristics, and emotional connections.

#### Learning environment and colleague interactions

The National Commission on Teaching and America's Future (2007) suggested that teachers should be inducted into school communities in which members help each other to grow and succeed, and share responsibility for student success. Schools with learning communities create a culture in which novice and experienced teachers work together to improve student achievement through professional development, instructional collaboration, and rewards for teachers for improving student achievement (NCTAF, 2007).

The learning environment was found to be an important factor in teacher job satisfaction (Alt & Henke, 2007; Brill & McCartney, 2008). Ingersoll and Smith (2004) stated that high teacher turnover rates can inhibit the development and maintenance of a learning community.

Hargreaves (2003) noted the importance of long-term collaborative groups working together in a professional learning community. Hargreaves (2003) further noted that professional learning communities do not flourish “in a workforce of transient teachers who are only in it for the short-term” (p. 170). Vroom (1995) observed that in order to function effectively, a social system must attract qualified people. A shortage of people who are both competent and willing to work in an occupation restricts the degree to which the system can reach its goals. Smith and Rawley (2005) found that collegial collaboration increased professional development and retention. Collegial relationships seemed to be more important to elementary teachers than to high school teachers (Marston, Brunetti, & Courtney, 2004), however.

Robbins-LaVicka (2007) found that 17 Arkansas math and science teachers remained in teaching because of a positive relationship with other teachers and mentors, and because they worked in a positive professional atmosphere. The author of this small study employed surveys and interviews among teachers with five or more years of experience, but ages and retirement status were missing.

#### Parent support and student characteristics

Lack of parent support “unsettled” teachers (Johnson & Birkeland, 2003, p. 589). In a small, qualitative study of nine Arizona teachers, Harper (2009) found that mid-career teachers were particularly concerned about parent involvement. Teachers who were satisfied with parent and student cooperation were more likely to remain in teaching (Hughes, 2012). Poor student achievement, lack of student motivation, and student discipline problems were cited as reasons for leaving the teaching profession (Brill & McCartney, 2008; Johnson & Birkeland, 2003;

Killian & Baker, 2006). Mathematics teachers cited teacher blame as a factor in their decision to leave teaching (Curtis, 2012).

Ingersoll (2001) noted that good student discipline reduced teacher attrition. Trisler (1996) interviewed teachers considering an early retirement option, and some chose to leave teaching rather than cope with changes in student attitudes and behaviors. However, for six Illinois teachers participating in Becker's (1994) small qualitative study, student discipline was not a significant factor in their decision to retire early.

Veteran teachers cited colleague, parent and student factors as important in their retention; however, the voices of retired teachers are missing from these studies. Retired teachers may reveal insights into the role of school context factors in their survival to retirement. Related to these factors are emotional connections, which are discussed in the following section.

### Emotional connections

Emotional connections relate to teacher passion for working with students. Teachers expressed that they remained in teaching because of their passion for teaching students, their desire to help students learn and grow academically and socially, and their care for students (Cochran-Smith, 2004; Feistritzer & Haar, 2005; Guarino et al., 2006; Sergiovanni, 2005; Veldman, van Tartwijk, Brekelmans, & Wubbels, 2013). Battle and Looney (2012) found in a study of 46 teachers that they stayed "primarily because they enjoy teaching and feel it is important" (p. 376). Curtis (2012) found that satisfaction with being a teacher greatly affected the retention of mathematics teachers at the middle and high school levels.

Marston, Courtney, and Brunetti (2006) conducted a mixed-methods study of 100 elementary school teachers serving 33 school districts in California and Pennsylvania to discover how professional, practical, and social factors affected teacher retention. Each teacher had 15 years or more experience, and teachers ranged in age from under 40 to over 60 years old. Marston et al. (2006) found that fulfilling professional commitments and working with students were the highest retention factors. Again, retired teachers were not identified, so it is unknown whether and how they responded.

Miller (2002) used a self-created Likert-type scale to explore retention factors among 675 certified K-12 novice, intermediate, and veteran teachers in a Midwestern public school district. The factors were social status, personal experience, economic, time compatibility, and service-orientation (Miller, 2002). All three groups of teachers ranked the service-oriented factor first, followed by personal experience (Miller, 2002). Retired teachers were not identified, so it is unknown how retired teachers would have ranked these retention factors.

Commitment may be an important emotional factor involved in teacher retention. Commitment is part of teachers' emotional connections or reactions to experiences as teachers and a contributor to the level of personal investment that teachers make in their students and schools (Ebmeier & Nicklaus, 1999). The emotional bond formed through commitment can lead to a motivation to work (Mart, 2013). To further explain commitment, Cohen (2007) defines organizational commitment as including an employee's loyalty, willingness to exert effort, congruency with values of the organization, and a desire to remain a member of the organization.

Meyer and Allen (1991) identified three components of organizational commitment: affective commitment, continuance commitment, and normative commitment. Affective

commitment is the emotional attachment and identification with the organization, acceptance of the organization's goals and values, and a willingness to work toward those goals and values (Medallion, 2013; Weiner, 1982). Kaptijn (2009) found that personal characteristics positively influenced affective commitment. Continuance commitment is the willingness to stay in an organization because of investments such as salary, rank, and retirement benefits (Medallion, 2013; Obeng & Ugboro, 2003). The benefits of staying outweigh the costs of leaving (Medallion, 2013). Normative commitment is a feeling of obligation to the organization (Meyer & Allen (1997).

Teachers who have invested at least ten years in teaching are more likely than newer teachers to stay to retirement (Hughes, 2012), indicating that continuance commitment plays a role in retention of teachers. Hughes (2012) also found that teachers of low SES students were more likely to remain in teaching because of their commitment to teaching, indicating that affective commitment may play a role in retention. Absent, however, in these studies, is mention of retired teachers' perceptions of commitment.

### Professional Growth

Professional growth includes include initial desire, education, initial support and mentoring, professional development, and career advancement. These factors are important in teacher retention, but it is unclear whether they remain important factors until the end of a long teaching career. Retired teachers may reveal the long-term effects of these factors.

### Initial desire

Teachers who entered the field very certain about their career choice were more likely to stay in teaching (Alt & Henke, 2007; Feistritzer & Haar, 2005). Teachers who were education majors were also more likely to stay in teaching (Alt & Henke, 2007; Feistritzer & Haar, 2005). Curtis's (2012) study revealed that mathematics teachers enter teaching because they want to work with young people, love math, and want to make a difference.

### Education

Those who have earned a Master's or other graduate degree are generally more likely to remain in teaching (Alt & Henke, 2007). However, the literature is mixed on this aspect. In his extensive study, Ploegstra (2008) utilized surveys, teaching observations, and interviews to identify factors that played a role in science teachers' decisions to stay or leave teaching. Appropriate statistical analyses, such as MANOVA, correlation, and Chi-square, were utilized in analyzing quantitative data. Interviews and other data were triangulated as themes were developed from qualitative data (Ploegstra, 2008). Ploegstra (2008) found that science teachers who were dissatisfied with their teacher preparation program were more likely to leave teaching. A 2005 study revealed that teachers with strong academic backgrounds were more likely to leave teaching (Boyd, Grossman, Lankford, Loeb, and Wyckoff, 2005). Borman and Dowling's (2008) work revealed that teachers with graduate degrees were more likely to leave teaching, as were teachers in mathematics and science. Retired teachers were not identified in the studies, so it is unknown whether this factor remained important for the duration of a teacher's career.

### Initial support and mentoring

Teachers, including middle and high school mathematics teachers, experiencing positive induction support such as mentoring were more likely to remain in teaching (Allen, 2005; Curtis, 2012; Guarino et al., 2006; O'Connor, Malow, & Bisland, 2011). Teachers cited lack of adequate mentoring as a reason to leave teaching (Brill & McCartney, 2008). The attrition rate among teachers without mentoring and induction programs was 41% (Ingersoll & Smith, 2004; Smith & Ingersoll, 2004). Moir (2006) found that veteran teachers benefited from mentoring new teachers.

Service induction factors play a role in teacher retention, but it is not known whether these factors continue to be important until the terminus of a long teaching career. Retired teachers may provide information to determine long-term effects of these factors. While initial placement and induction are retention factors, it is possible that school context factors play an important role beyond the early years of a teacher's career.

### Professional development

Professional development increased teacher quality and retention (Smith & Rawley, 2005). Hargreaves (2003) found that professional development was important in teacher retention. Teacher self-monitoring and self-choice were important in professional learning and development (Hargreaves, 2003).

Empowerment and intellectual factors are important in teacher retention. Veteran teachers have offered their insights, but missing are the voices of retired teachers. Their



reflections may inform the professional development of teachers to meet their needs in these areas.

### Career advancement

Teachers reported a desire for career advancement (Alt & Henke, 2007). Many teachers wanted to pursue personal professional goals such as education, sabbaticals, mentoring new teachers, and sharing teaching duties in order to take on part-time administrative work (Olsen & Anderson, 2007). Science teachers reported feeling held back as professionals (Ploegstra, 2008).

### Recognition

It is important that teachers receive some recognition from colleagues, administration, department chairs, and district personnel. Alvy (2005) stated, “Administrators, department chairs, grade-level leaders, and teaching colleagues need to support values, traditions, and norms that honor veteran teachers” (Alvy, p. 765). Ploegstra (2008) reported that science teachers were more likely to leave teaching because of lack of recognition.

### System Factors

System factors include policies, accountability, and financial compensation. These factors play roles in teacher retention, but retired teachers’ reflections are missing from published reports.

## Policies

Policies instituted at the school, district, state, and federal levels affected teacher retention, especially if there were too many new policies instituted at the same time (Hargreaves, 2003). Valli and Buese (2007) stated that teachers' work had "increased, intensified, and expanded in response to federal, state, and local policies aimed at raising student achievement... The summative effect of too many policy demands coming too fast often resulted in teacher discouragement, role ambiguity, and superficial responses to administrative goals" (p. 520). Hargreaves (2003) noted that when policies conflicted with what teachers felt were good teaching practices, dissatisfaction increased. However, it is unclear whether the level of dissatisfaction from this factor resulted in a decision to leave teaching. Trisler (1996) studied a group of California teachers making a decision on an early retirement offer. They cited, as one reason to choose retirement, their dissatisfaction with a new mandated curriculum that conflicted with their long-successful teaching methods (Trisler, 1996).

Haberman (2004) observed that idealists, deeply committed to serving children, reported leaving teaching because they grew frustrated by dysfunctional school bureaucracies. Student achievement tests were a source of dissatisfaction for 44% of the nation's teachers (Feistritzer & Haar, 2005), but it is not clear that their dissatisfaction would have led to a decision to leave teaching. For some teachers, however, the related accountability factor may play a larger role.

## Accountability

Teachers in at-risk schools took on more responsibilities because they were in at-risk schools, and the demands that came from "high-stakes accountability disproportionately

affect[ed] teachers in at-risk schools, typically those with higher rates of poor, minority, and ELL students” (Valli & Buese, 2007, p. 553). Hargreaves (2003) noted that bureaucratic burdens caused teachers to experience more work, more regulation of their work, and more distractions from their work. Edwards (2003) found that veteran teachers felt more stress than they did at the start of their careers because of testing accountability issues.

### Financial compensation

The higher the salary, the more likely teachers remained in teaching (Allen, 2005; Alt & Henke, 2007; Boe et al., 1997; Guarino et al., 2006). Harper (2009) found that beginning teachers were very concerned about salary, in part because they associated inadequate compensation with a lack of respect. Curtis (2012) found that mathematics teachers left the profession in part due to low salaries. However, the importance of salary in the attrition decision declined over time, until by the eighth year of teaching, the factor disappeared entirely (Boe et al., 1997; Murnane & Olsen, 1990). Harper (2009) found that late-stage teachers were motivated by retirement benefits. Among Illinois teachers considering early retirement, salary was not an important consideration (Becker, 1994).

Weiss and Boyd (1990) indicated that a substantial increase in salary would not have influenced leaving teachers to stay in the profession. Service-oriented teachers were not motivated primarily by money, but by the intrinsic reward of their roles in successful student achievement (Berry, 2008; Rosenholtz & Simpson, 1990). Raising salaries would not have changed other conditions that influenced teachers to leave the profession (McLaughlin, Pfiefer, Swanson-Owens, & Yee, 1986).

System factors are important teacher retention factors, but the reflections of retired teachers, those who may have experienced many changes in system factors, are missing. Their information may reveal how such factors play a role in survival to retirement. System factors may affect personal factors, which are now discussed.

### School context

School context factors include facilities and materials, administrative support, and time and workload factors. The importance of school context factors and the need for attention to working conditions were mentioned by several authors (Allen, 2005; Brill & McCartney, 2008; Buchanan, 2012; Carroll, 2006; Hammerness, 2006; Killian & Baker, 2006; Shaw & Newton, 2014).

### Facilities and materials

Positive working conditions, including good school facilities, were found to be important retention factors in several studies (Allen, 2005; Brill & McCartney, 2008; Hanushek et al., 2004a, 2004b; Hughes, 2012; Schneider, 2003). Johnson and Birkeland (2003) studied new teachers' career decisions, and they found that adequate material resources were important retention factors.

Loeb et al. (2005) conducted a quantitative telephone survey of 1071 California teachers to examine teacher, student, and organizational factors of teacher turnover and attrition. Although an effort was made to have a representative sample, less experienced teachers were underrepresented, and retired teachers were not delineated. Loeb et al. (2005) found that

difficult working conditions and organizational factors such as physical facilities, textbooks, and class sizes outweighed demographic factors such as race and poverty in teacher retention (Loeb et al., 2005).

### Administrative support

Researchers cited inadequate administrative support as a reason for teachers to leave the profession (Brewster & Railsback, 2001; Brill & McCartney, 2008; Prather-Jones, 2011). Nearly one-third of teachers who leave within the first five years cited dissatisfaction with school leadership as a reason for leaving (Shaw & Newton, 2014). Curtis (2012) reported that mathematics teachers cited lack of administrative support as one reason for leaving the field of teaching. Several studies indicated that administrators and administrative bureaucracy were sources of teacher stress (Brill & McCartney, 2008; Chen & Miller, 1997; Marlow, 1996). Positive administrative support was found to be an important retention factor by several authors (Allen, 2005; Guarino et al., 2006; Hughes, 2012; Johnson & Birkeland, 2003; Marston et al., 2004; O'Connor et al., 2011). Positive administrative support was rated as very important by elementary school teachers (Marston et al., 2004).

Boyd et al. (2009) surveyed practicing New York teachers and New York teachers who had recently left the profession. They found that with regard to teachers' decisions to leave teaching, teachers' perceptions of school administration had a greater impact than teachers' perceptions of their influence over school policy, staff relations, student behavior, safety, and facilities (Boyd et al., 2009). Teachers in South Carolina identified positive and supportive leadership as a crucial condition when deciding whether to stay in a school (Hirsch, 2005). The

Charlotte-Mecklenburg District (Charlotte Advocates for Education, 2004) surveyed teachers and found that strong principal leadership was a key factor in teacher retention. Brown and Wynn (2009) found that principals retained teachers when principals proactively supported new teachers and were committed to professional growth and excellence for themselves, their teachers, and students.

### Time and workload

Time issues were cited by teachers as a factor in levels of teacher satisfaction (Marston et al., 2004), and mentioned by leavers as a reason to depart the teaching profession (Olsen & Anderson, 2007). Haberman (2004) cited unreasonable time demands as problematic, and observed that teachers felt that having adequate time was a necessary part of their job. Chen and Miller (1997) stated that teacher stress was increased by time factors and workloads. Curriculum initiatives, such as multidisciplinary units and new teaching approaches, increased teacher stress if adequate support and time were not provided (Farber & Ascher, 1991). Ploegstra (2008) found that all of the science teachers he surveyed and interviewed felt dissatisfied with their workload, and were more likely to leave if they could not balance life and work.

### Other Factors

#### Demographic Factors

Demographic factors include things such as age, education, gender, location, race, and ethnicity. Some studies examined teacher variables such as college major, highest degree earned, family background, race, ethnicity, and bilingualism, but did not find correlations

between these variables and teacher attrition (Billingsley, 1993; Boe, et al., 1997). Age displayed a strong correlation, with most teachers leaving at the start of their careers or at retirement (Boe et al., 1997; Ingersoll, 2001). Teachers who are older when they enter teaching and older female teachers had higher retention rates (Allen, 2005; Alt & Henke, 2007). Most teachers are female and work at the elementary level (Allen, 2005; Alt & Henke, 2007; U.S. Department of Education, 2010), but have higher attrition rates than male teachers, often due to family factors (Guarino et al., 2006). Males, however, are more likely to leave for a job outside of education (Alt & Henke, 2007). Minority teachers who teach in minority schools tend to have higher retention rates, and white teachers are more likely to teach to retirement (Allen, 2005; Alt & Henke, 2007; Guarino et al., 2006). New teachers tend to find employment within 20 miles of their childhood homes (Lichtenberger & White, 2015; Reinenger, 2012). Teachers tend to stay in teaching if they are within 150 miles of where they grew up or are teaching in a community similar to the one in which they grew up (Boyd, Lankford, Loeb, & Wyckoff, 2003; Feistritzer & Harr, 2005).

### Personality

A beginning teacher mentor program at Indiana University East suggested that overly conscientious teachers were at increased risk for teacher attrition. These were teachers who were moral and dedicated, had a strong desire to help, gave more to others than self, and had high expectations of self (Trustees of Indiana University, 2002). Science teachers who had very high expectations for themselves were more likely to leave teaching (Ploegstra, 2008). Further research in this area is needed.

## Lifestyle

Teachers' lifestyle choices such as having children negatively affected retention (Allen, 2005; Alt & Henke, 2007). Teachers were also more likely to leave teaching because of factors such as family moves and personal health issues (Ingersoll, 2001).

Personal factors play an important role in teacher retention, but missing are the voices of retired teachers. It is unknown whether they have certain personal characteristics in common which may be nurtured in other practicing teachers to improve retention.

## Summary of Teacher Retention Literature

Several teacher retention factors were explored in this literature review. These included demographic, teacher preparation, service induction, school climate, system, personal, empowerment, and intellectual factors. All of these factors are important in teacher retention, but it is not known whether and how these factors contribute to the longevity of retired teachers. Retired teachers may reveal factors which explain retention, as well as aspects of personal growth and development which helped them remain in teaching until retirement. In the following sections, I examine Herzberg's (1966) theory of motivation and hygiene factors.

## Conceptual Framework

Herzberg's Motivator-Hygiene Theory may explain teacher retention to retirement. Herzberg et al. (1959) and Herzberg (1966) theorized that motivational and hygiene factors contributed to job satisfaction and dissatisfaction. The theory is presented in the following section.



### Herzberg's Motivator-Hygiene Theory

Herzberg et al. (1959) and Herzberg (1966) studied motivational factors in the workplace. Herzberg and others developed the two-factor theory of motivational and hygiene factors, and explained how these factors contribute to job satisfaction and dissatisfaction. These factors are listed in Table 1, Herzberg's Motivators and Hygiene Factors.

Table 1  
Herzberg's Motivators and Hygiene Factors

<b>Motivators/Satisfiers</b>	<b>Hygiene Factors/Dissatisfiers</b>
Challenge	Physical working conditions
Achievement	Policies
Esteem	Salary
Recognition	Status
The work itself	Personal life
Responsibility	Supervisory styles
Advancement	Relationships with coworkers
Opportunity to learn	Conditions of health, comfort, security and safety
Growth	

Note: Adapted from Herzberg (1966); Herzberg et al. (1959).

Based on the results of a survey of 200 engineers and accountants, Herzberg (1966) found that the subjects reported satisfying experiences in terms of factors intrinsic to the content of the job itself. These factors were motivators and included the following: challenge, achievement, esteem, recognition, the work itself, responsibility, advancement, the opportunity to learn, and growth. Such factors lead to positive job attitudes because they satisfy an individual's need for self-actualization (Herzberg et al., 1959). Dissatisfying experiences, or hygiene factors, often resulted from extrinsic, environmental, non-work related factors, such as:

poor physical working conditions, policies, salaries, status, personal life, supervisory styles, relationships with coworkers, and negative conditions of health, comfort, security, and safety (Herzberg et al., 1959). Importantly, the factors that lead to job satisfaction are separate from those which lead to dissatisfaction (Herzberg, 1966). Eliminating dissatisfaction through hygiene factors does not induce a state of satisfaction, but a neutral state. Satisfaction and motivation may only occur as a result of the use of motivators (Herzberg, 1966).

Motivation can be increased through job enrichment with motivators: increasing challenges, responsibilities, authority, advancement opportunities, personal growth, and recognition (Herzberg, 1968; Steers & Porter, 1983). May and Decker (1988) found that motivators led to greater effort among workers, and hygiene factors primarily prevented job dissatisfaction rather than promote job satisfaction. Smith and Shields (2013) found among social workers, a field similar to teaching, that motivational factors such as creativity and job variety were primary factors in job satisfaction. Davis (1988) suggested that the motivators of achievement and recognition were the longest-lived in increasing motivation. While Herzberg's theory focuses on satisfaction rather than commitment, Kaptijn (2009) explored the relationship between motivation and commitment and found that motivation and hygiene factors, especially higher order personal needs, correlate with affective commitment.

Herzberg has been influential in the private sector, with his recommendations influencing managerial decisions about employee motivation and productivity. However, this theory is not without its detractors. Robbins (2001) suggested several limitations. Robbins noted that Herzberg's methodology may have affected his results, as people tend to take credit when things are going well while blaming failure on outside factors. Herzberg also failed to use an overall

measure of job satisfaction to take into account people who disliked part of their jobs, but still found the work acceptable. Finally, Herzberg (1966) assumed a relationship between satisfaction and productivity which was not empirically tested, as he looked only at satisfaction, not productivity (Robbins, 2001).

Herzberg had conducted his research in the corporate world, and Sergiovanni (1967) replicated the study with teachers. He asked teachers to describe a time in their careers when they felt exceptionally positive about their job and to describe another time when they had negative feelings about their job. He found that advancement was not a factor in teacher job satisfaction. Achievement and recognition were primary factors for job satisfaction. Also, satisfiers centered on job content while dissatisfiers were found in the job environment. Job dissatisfaction did not cause teachers to leave their jobs. However, the elimination of dissatisfiers did not necessarily lead to job satisfaction. Importantly, Sergiovanni (1967) suggested that teachers can experience job satisfaction without eliminating or altering the dissatisfiers. Sergiovanni and Elliot (1975) suggested that motivation factors should be built into teachers' job positions. When the motivators were present, teachers were willing to work hard and exceed the minimum expectations of the job. Trusty and Sergiovanni (1966) suggested that esteem was the most important motivator for educators.

Other researchers have also applied Herzberg's theory to the world of education (Andrews, 1987; Battitori, 2009; Egan, 2001; Engelking, 1986; Heck, 2010; Keating, 2000). Engelking (1986) surveyed 442 teachers in two northwest states in a replication of Herzberg's study. Participants identified critical factors of job satisfaction and dissatisfaction. Significant satisfaction factors included recognition and achievement. Dissatisfaction factors included

relationships with students and parents, low student achievement, communication with administrators, and district administration and policies. Retired teachers were not identified in the study, so it is unknown whether and how they responded.

Battitori (2009) studied survey data of 500 New Jersey teachers. Administrative support, considered by Battitori (2009) an extrinsic motivator, had the most significant effect on veteran teacher job satisfaction and retention. Staff relationships, classified by Battitori (2009) as an intrinsic motivator, had the second most significant impact on veteran teacher job satisfaction and retention. Also applying Herzberg's theory, Farthing (2006) surveyed and interviewed middle school teachers in two rural North Carolina school districts to discover factors of job satisfaction that contributed to teacher retention. She found that the most important factors were the work itself (classified as a motivator by Herzberg) and relationships with co-workers (considered a hygiene factor by Herzberg).

#### Summary of Herzberg's Motivator-Hygiene Theory

Herzberg (1966) developed the two-factor theory of motivational and hygiene factors. Factors which lead to job satisfaction and dissatisfaction are separate. These factors contribute to job satisfaction and dissatisfaction in the workplace. Herzberg's theory may have application in a study related to the satisfaction and motivation of a teacher who stayed to retirement. Studies have analyzed teacher retention factors (Allen, 2005; Hammerness, 2006; Hargreaves, 2003; Valli & Buese, 2007), but those studies did not include retired teachers.

## Conclusion

Teacher retention factors include empowerment and intellectual factors; colleagues, parents, and students; professional growth; recognition; system factors; school context; and other factors. All of these factors have been found to be important to varying degrees in teacher retention, but the voices of retired teachers are consistently lacking in the literature. Herzberg's (1966) Motivator-Hygiene Theory may explain how teachers remain in the profession until retirement. The methodology is explained in the next chapter.

## CHAPTER 3

### METHODOLOGY

#### Purpose of the Study and Research Question

This investigation was a biography informed by case study and narrative inquiry. This chapter will discuss the research design, the participant, data collection procedures, data analysis, and confirmation procedures. The purpose of the study was to examine a retired teacher's reflections on career, professional, and personal influences which contributed to her retention in teaching. This study was guided by the research question: How have career, professional, and personal influences contributed to one teacher's retention?

#### Research Design

To understand how a retired teacher remained in the teaching profession for 37 years, a biography was written. Qualitative research seeks through inductive reasoning to uncover meaning from participants' perceptions (Merriam, 1998). Qualitative studies are used for exploratory or descriptive research where context, setting, and participants' frames of reference are important (Marshall & Rossman, 2006). Teachers' frames of references are embedded in school settings and contexts. I considered three methodologies to explore the phenomenon: case study, narrative inquiry, and biography. These were explored and an explanation is given for the choice of biography in the following sections.

## An Exploration of Case Study, Narrative Inquiry, and Biography as Methods of Study

This study utilized biography informed by case study and narrative inquiry. This section examines the definitions and principles of case study, narrative inquiry, and biography. While some authors (e.g. Creswell, 2002, 2003, 2007; Stake, 1995; Yin, 1994, 2006) agreed on the definition and principles of case study, others (e.g., Creswell, 2002, 2003, 2007) regarded narrative research or narrative inquiry as inclusive of, or synonymous with, narrative inquiry and biography. Others (e.g. Connelly & Clandinin, 1986, 1988, 2006) distinguished narrative inquiry and biography as related but distinct entities. At their cores, they are similar in the aspect of storytelling, but the reader will find that there are important distinctions to be made. Case study, narrative inquiry, and biography were all possible means of investigating the phenomenon of a retired teacher with regards to her retention in teaching. To determine which of these best sheds light on the phenomenon, these methods were explored. Case study was considered first.

### Case Study

Creswell (2007) provided a concise definition of a case study. A case study is

a qualitative approach in which the investigator explores a bounded system (a case) or multiple bounded systems (cases) over time, through detailed, in-depth data collection involving multiple sources of information (e.g., observations, interviews, audiovisual material, and documents and reports), and reports a case description and cased-based themes. (p. 73)

Yin (1994) posited that the case study is a comprehensive research strategy that “investigates a contemporary phenomenon within its real-life context, especially when the boundaries between phenomena are not clearly evident” (p. 13). Further, the case study relies on

multiple sources of evidence which converge with triangulation, and benefits from theoretical propositions which guide data collection and analysis.

Some authors presented case study as a method of inquiry or research strategy (Merriam, 1998; Yin, 1994). However, Stake (2005) suggested that case study research is not a methodology but a choice of what will be studied. Wolcott (2001) suggested that case study “is better regarded as a form of reporting than as a strategy for conducting research” (p. 91). For the purposes of this paper, the case study was analyzed as a method of study.

Yin (1994) suggested that a case study is appropriate to understand complex social phenomena, and “allows an investigation to retain the holistic and meaningful characteristic of real-life events—such as individual life cycles...” (p. 3). Further, a case study is appropriate when the investigator wants to focus on a phenomenon in a life context, and wants to explore operational links over time (Yin, 1994). Case study has an advantage when “a ‘how’ or ‘why’ question is being asked about a contemporary set of events over which the investigator has little or no control” (p. 9). A distinct strength of the case study is its ability to handle a wide variety of evidence, such as documents, artifacts, interviews, and observations (Yin, 1994). Historians sometimes conduct a life-history case study of an individual (Wiersma, 2000). Having defined and outlined the principles of case study, I examined narrative inquiry.

### Narrative Inquiry

Connelly and Clandinin (2006) provided a definition of narrative inquiry as both a way of thinking about experience and a methodology, as both a process and a product. Narrative inquiry relies on the assumption that human beings make sense of experiences by imposing story



structures on them (Bell, 2002). The researcher seeks to discover the underlying assumptions contained in the stories, and searches for “truths unique in their particularity, grounded in firsthand experience” (Josselson & Lieblich, 2003, p. 259). Bell (2002) observed that narrative inquiry “involves working with people’s consciously told stories, recognizing that these rest on deeper stories of which people are often unaware...[Stories] provide a window into people’s beliefs and experiences” (p. 209).

Narrative inquiry allows researchers to understand lived experiences and obtain information the subject may not consciously know themselves. This method also recognizes the temporal nature of understanding and stories of experiences, as stories often shift over time (Bell, 2002). Bell observed that participants “construct stories that support their interpretation of themselves, excluding experiences and events that undermine the identities they currently claim” (p. 209). Importantly, narrative inquiry relies on “understanding experience in its own terms rather than categorizing experience according to predetermined structures and theories” (Phillion, He, & Connelly, 2005, p. 10).

The process of collection and interpretation is a collaboration between the researcher and subject, as the researcher shares ongoing narrative constructions and interpretations. This method requires an openness and trust between the researcher and subject, full participation by both in the storytelling, retelling, and reliving of personal experiences, and permits both voices to be heard (Marshall & Rossman, 2006). While the subject has a shared voice, she “can never be quite free of the researcher’s interpretation of their lives” (Bell, 2002, p. 210). Importantly, as the researcher engages in the process of analysis, “the constructed narrative and subsequent analysis illuminates the researcher as much as the participant” (Bell, 2002, p. 210).

Zilber, Tuval-Mashiach and Lieblich (2008) indicated that “narrators embed their stories within specific contexts” (p. 1065) and researchers must consider contexts in story analysis. Narrative inquiry has been used in educational research to discover ways that teachers’ narratives shape and inform their practice (Bell, 2002). Indeed, stories “are the form in which we and other teachers and teacher educators most often represent our experiences” (Clandinin, Pushor, & Murray Orr, 2007, p. 34). The researcher must be aware, however, that subjects may not be able to tell an authentic story, either intentionally or because the story occurred so long before that they have forgotten or reconstructed parts (Creswell, 2002; Lieblich, Tuval-Mashiach, & Zilber, 1998). Studies have focused on listening to teachers as they tell their stories and reflect on their experiences (Connelly & Clandinin, 1988; Gallas, 1997; Jalongo & Isenberg, 1995). The element of reflection is a crucial feature of narrative inquiry (Connelly & Clandinin, 1988). Narrative inquiry has also been used as part of case studies (Lam, 2000; Spack, 1997). Having defined and explained case study and narrative inquiry, I explored biography.

### Biography

Denzin (1989) observed that a “biography is an account of a life, written by a third person” (p. 34). Biography is the study of a single individual and his or her life experiences, as revealed to the researcher via interviews, stories, accounts, personal-life documents, and archival materials (Creswell, 2007; Denzin, 1989). Biography may include biographies, autobiographies, life histories, and oral histories (Creswell, 2007). Biography has been used to explore the lives of teachers (e.g. Halse, 2010; Newman, 2010). John Dewey has been the subject of several biographies (e.g. Dykhuizen, 1973; Ryan, 1995; Westbrook, 1991). Anne Sullivan, Helen

Keller's teacher, was likewise the subject of biographies (e.g. Nielsen, 2009), as was Maria Montessori (e.g. Standing, 1962; Kramer, 1988).

Biography may be used when the researcher wants to understand the lived experiences of an individual (Denzin, 1989). The life of one individual is investigated, typically through interviews, conversations, and document examination (Creswell, 2007; Denzin, 1989). A picture of the individual's life is depicted through stories, epiphanies, and historical content (Creswell, 2007). The story "may attempt to cover the full sweep of a person's experiences, or it may be partial, topical, or edited, focusing only on a particular set of experiences deemed to be of importance" (Denzin, 1989, p. 29). The researcher also situates the experiences in a social context, including information about the setting or historical context (Creswell, 2007). Importantly, since the researcher guides the subject to reveal categories of life experiences, the researcher shapes the stories that are told (Denzin, 1989), and the researcher reconstructs the subject's experiences (Creswell, 2007).

The process of conducting a biography is similar to the interview and interpretation process employed in other qualitative methods. Researchers begin with problems to be answered and tentatively operationalize key concepts, then select a subject and research site (Denzin, 1989). Researchers record an objective set of the subject's experiences related to the research problem, which are often connected to life-course stages and experiences (Denzin, 1989). A narrative interviewing strategy is used to elicit responses to questions, and then the subject is asked to further expand on her stories and experiences. Subjects are then asked to theorize about their lives (Denzin, 1989). The stories and responses are analyzed to develop categories and patterns of meaning. A person's biography is reconstructed and the "structural-objective factors"

that have shaped the subject's life are identified (Denzin, 1989, p. 56). The researcher constructs an analysis that includes the subject's structural processes, theories that relate to the life experiences, and general and unique features of the subject's life (Denzin, 1989).

Reconstructions and interpretations can be triangulated by point of view and other sources of information, while validity can be enhanced by submitting the results to the subject for review (Denzin, 1989).

Biographies are structured by a "set of literary, sociological, and interpretive conventions (i.e. openings, closings, linearity, objective voices, objective markers, and turning points)" (Denzin, 1989, p. 34). As with narrative inquiry, the researcher must be cognizant that the story relayed by the subject may not be authentic, either by intention or forgetting elements (Creswell, 2002; Lieblich et al., 1998). I then considered case study, narrative inquiry, and biography as methods of study.

### Consideration of the Three Methods

Having explored case study, narrative inquiry, and biography, I compared the three methods. Table 2, Characteristics of Three Qualitative Approaches, summarizes aspects of each method. Characteristics of case study, narrative inquiry, and biography are summarized for focus, problem suited for design, unit of analysis, forms of data collection, strategies of data analysis, and report.

Table 2  
Characteristics of Three Qualitative Approaches

<b>Characteristic</b>	<b>Case Study</b>	<b>Narrative Inquiry</b>	<b>Biography</b>
<b>Focus</b>	Describe and analyze in-depth a single or multiple cases over time; identity of subject not revealed	Explore life of an individual by constructing truths from stories, usually contemporary in time	Explore life experiences of an individual, usually retrospective in time; identity revealed
<b>Problem suited for design</b>	The need to create an in-depth understanding of case(s)	The need to tell someone's stories to uncover truths and philosophies, and foster growth	The need to record the experiences of another person's life to shed light on a research problem
<b>Unit of analysis</b>	Studying event, program, activity, one or more individuals	Studying one individual (unusually more than one due to time involved)	Studying one or more individuals
<b>Forms of data collection</b>	Multiple sources, such as interviews, observations, documents, artifacts	Primarily interviews	Primarily interviews and documents
<b>Strategies of data analysis</b>	Describing case, context, and themes of the case; use categorical aggregation to establish themes and patterns; direct interpretation, naturalistic generalizations	Analyzing stories in collaboration with subject; retelling the stories with interpretation; interpret larger meaning of stories; develop themes; often chronological; inquirer often becomes insider	Analyzing data for stories, retelling the stories with interpretation and finding larger meanings, locate epiphanies, identify contextual materials, develop themes, often chronological; relate theories to these life experiences
<b>Report</b>	Detailed analysis of one or more cases using narrative, tables, and figures	A narrative about the stories of individual's life, including interpretation that reveals personal philosophies	A biography about the experiences of a person's life focusing on processes, theories, and unique and general features of the life

Note: Table compiled from information found in Bell, 2002; Connelly & Clandinin, 1986, 2006; Creswell, 2007; Denzin, 1989; Stake, 1995; and Yin, 2007

Yin suggested that a case study is appropriate when the investigation seeks answers to “how” and “why,” does not require control over behavioral events, and wants to explore operational links over time (Yin, 1994). Using these criteria, a bounded case study was considered to examine a retired teacher’s reflections on career, professional, and personal factors which contributed to her growth and retention in the teaching profession. I sought answers to “how” a teacher grew in the teaching profession and “why” a teacher stayed in teaching until retirement. The aspect of “time” in this case is retrospective rather than contemporary, however, which is the usual temporal aspect in case study. While case study has strength in that the case and context are thoroughly described, context is also an important aspect of narrative studies. Case studies usually have multiple sources of data, such as interviews, observations, documents, and artifacts. In the case of this retired teacher, interviews and documents were the primary sources of data. This represents a significant weakness for the use of case study. While the interviews and document data were expected to be very rich in data, it remained primarily two sources of information.

Creswell (2007) considered narrative research to include both narrative inquiry and biography. Creswell (2007) suggested that if an individual is to be studied, a narrative study may be seen as “more scholarly because narrative studies tend to focus on single individuals; whereas case studies often involve more than one case” (p.77). This was an important consideration in the proposed study. A single, in-depth case study of one teacher’s growth and retention experiences may not have been considered as strong compared to narrative methods of researching the phenomenon.

Narrative inquiry shares many characteristics with biography. They are both concerned with events in an individual's life, and create an interpretive reconstruction of parts of that person's life (Connelly & Clandinin, 1986). These studies are historical, personal, factual, and causal in an interpretive sense, and "reveal what is meaningful in a person's history" for purposes of understanding their actions (Connelly & Clandinin, 1986, p. 10). Biography is useful for accounting and interpreting turning points in historical studies, and is primarily used for personal reflection of life experiences (Connelly and Clandinin, 1986). Narrative inquiry can capture and describe experiences as they occur in the midst of other lived experiences and is well-suited for contemporary studies (Clandinin and Connelly, 2000). Narrative inquiry offers the opportunity for very deep reflection and revelation of personal truths and philosophies for both the subject and the researcher; however, I was primarily interested in the growth and retention experiences of a retired teacher. Reflection may also be included in biography as life experiences are interpreted.

Importantly, the narrative inquirer typically does not pre-determine theories through which data will be interpreted (Josselson & Lieblich, 2003), while the biographer often does so, and may intentionally direct questioning to illuminate experiences of the subject's life to enlighten the research problem (Denzin, 1989). Narrative inquiry relies mainly on interviews, while biography lends itself to the interpretation of interviews and documents. Since I used a pre-determined conceptual framework and interpreted interviews and documents, biography was a more appropriate framework for the study.

After consideration of each of the three methods of qualitative study, case study, narrative inquiry, and biography, I concluded that biography was the most appropriate method to

examine a recently-retired teacher's reflections on factors which contributed to her retention. The organizational aspects of case study, including a thorough description of the subject and context, strengthened the biography, while the methods of the narrative inquirer to elicit reflections on lived experiences strengthened my interpretations.

A biography was appropriate to examine a retired teacher's reflections on career, professional, and personal factors which contributed to her growth and retention in the teaching profession. Using Herzberg's Motivator-Hygiene Theory (1966), I explored how one excellent teacher stayed in the teaching profession until retirement. I collected data on her teacher preparation; early teaching career; working conditions; professional development; her relationships with students, parents, administrators, and other school personnel; factors which affected her satisfaction and retention, and her responses to them.

### Context of Virginia's Teaching Locations

Chicago Elite School (pseudonym) is a private, co-educational high school in Chicago, Illinois which served primarily white, wealthy, and upper middle class students when Virginia taught there. The school provided a rigorous college preparatory education and was a pipeline to prestigious colleges and universities such as Harvard and Princeton.

Sunnyside High School (pseudonym) is part of Community Unit School District 1082. It is a suburban Chicago public high school with a population of approximately 2,628 students. According to the 2010 (the year of her retirement) Illinois School Report Card, 79.6% of students were White, 3.5% were Black, 9.4% were Hispanic, 5.5% were Asian/Pacific Islander, and 2.1% were Multiracial/Ethnic. Low income students comprised 11.1% of the student



population, the Limited English Proficient Rate was 1.0%, and 13.4% of students had IEPs. The high school dropout rate was 0.8%, the chronic truancy rate was 1.0%, the mobility rate was 3.1%, and the attendance rate was 94.0%. Average class size was 23.4. Average composite ACT score was 24.1 (Illinois State Board of Education, 2010).

### Virginia: A Study in Excellence

This biography focused on one excellent retired teacher in order to explore what contributed to her remaining in teaching until retirement. An excellent teacher is well-trained, passionate, has content mastery, has productive collegial relationships, has effective classroom management skills, develops genuine care and concern for students, continues professional development, has consistent and respectable character, analyzes themselves through reflection, gives back to the school and community, and is distinguished in aspects of planning and preparation, the classroom environment, instruction, and professional responsibilities (Danielson, 1996, 2011; Zarra, 2003).

Virginia Highstone was 71 years old when she retired from teaching math in 2010. She was known as an excellent teacher by students, staff, and parents, holds an Illinois Master Teacher Certificate in Mathematics, is Nationally Board Certified, has co-authored three books, served on school committees, and acted as a teacher leader in her department. In 1998, just nine years after re-entering formal teaching, she won a State Presidential Award for Excellence in Mathematics and Science teaching. In 2002, she was a Finalist for Illinois Teacher of the Year, and in 2010, she was awarded the T.E. Rine Award for Excellence in Secondary Mathematics Teaching, Illinois Council of Teachers of Mathematics. She began teaching in 1962, and taught

at the Chicago Elite School in Chicago for three years before having children. While raising her children, she tutored up to 12 students, some individually, some in groups, each week in math. She taught math at Sunnyside High School from 1991 to 2010. She taught a total of 23 years within the formal classroom setting. A copy of her curriculum vitae is included (Appendix A).

My final reason for identifying her for this study is that she returned to teaching after career interruptions. She had left formal teaching to raise her family, became immersed in teaching again as a tutor, and returned to formal teaching later in life. Most impressively, she survived pancreatic cancer, and rather than leave teaching, she chose to return to teaching after a brief leave for treatment. I believed this was a woman who was beyond an excellent teacher, a woman who loved and enjoyed teaching so much that she wanted to teach as much as she wanted to live. I contacted her via e-mail 10/18/2010 (Appendix B), and she agreed to participate and allow a review of her writings and any other available documents. She agreed to multiple interviews and to provide personal documents, such as her National Board Certification portfolio, notes from students, and letters written on her behalf.

### My Relevant Experience

As a teacher, I have looked at our group of retirees each year and wondered about their careers and the paths they walked to retirement. I have seen many teachers leave the profession after one, two, or a few years of teaching. I have seen others retire after decades of teaching. When announced at a faculty meeting, they each expressed their joy in working with students over the years, sometimes mentioning challenges, and often scattering pearls of wisdom to the

audience. I have wondered about their teaching experiences over the courses of their long careers and how they remained in teaching with ever-increasing demands and expectations.

As part of the requirements for a qualitative methods class, I interviewed several long-time and retired teachers about how they managed stress. In other classes, I found myself drawn to ways to improve professional development, the ways that adults learn, and the role that reflection plays in human learning and growth. I became more curious about how teachers develop in their careers and in factors that foster retention. While I believe that the results of this study may serve to inform professional development or spur more studies, perhaps my curiosity stems partly from my own desire to know how I may continue to grow and develop professionally as a teacher, and also to discover how I may remain in teaching until retirement as an effective teacher.

Analyses are necessarily filtered through the researcher's own perspectives and values as she constructs a reality of the research situation (Merriam, 1998), so my potential personal stake in this study is acknowledged here. I must be aware that personal factors may have played a role in my data collection, analysis, interpretation and reporting. In addition, my personal respect for this teacher and my perspective that she is an excellent teacher may also have influenced my interpretation of the data.

I know her in a professional capacity, as we had worked together to meet the needs of math students on my special education caseload and on the School Improvement Team. While she was not a mentor to me, she was one of several teachers whose work with students I admired, and she outshined others in her creativity, willingness to accommodate student needs, and relationships with students. Her contributions to discussions on the School Improvement Team

were extraordinarily perceptive and articulate. It was obvious to me and to others that she was an exceptional member of the school community. To control for this personal viewpoint, I increased confirmability by using member checks and triangulation (Merriam, 1998).

### Data Collection

The method of biography informed by elements of case study and narrative inquiry was utilized in data collection. Data were collected from two sources: interviews and documents.

#### Interviews

Interviews are useful when participants cannot be directly observed, when historical information is needed, and when the researcher must exercise control over the questioning (Creswell, 2003). Events could not be directly observed in this study, and must have been reported historically by the teacher. Interviews also allow a researcher to fully understand the subject's experiences, and have the advantage of relationship development, full range and depth of information, and flexibility (Mertens, 2010). According to Van Manen (1990), a person can reflect on an experience only after they have lived through it, and "a true reflection on lived experience is a thoughtful, reflective grasping of what it is that renders this or that particular experience its special significance" (Van Manen, 1990, p. 32). The teacher was asked to reflect on factors which contributed to her retention.

Based on the research questions, semi-structured interviews were constructed. Seidman's (2006) three interview method guided the structure of the interviews. Seidman suggests collecting data through three interviews each focusing on one aspect: Focused Life History, The

Details of Experience, and Reflection on the Meaning (Seidman, 2006). I wanted to gather context, details and reflection data, however, when I compiled the list of questions based on the information I was seeking, I determined that more than three interviews would be necessary to gather the data and study the phenomenon. I anticipated the interviews to be completed in six sessions; however, conversations with Virginia yielded extensive data. As we both had restrictive schedules, we both preferred to further split the interview sessions.

Before the first interview, I explained the Informed Consent, Consent to Audio Record, and Permission to Photocopy, Store, and Use Documents Form (Appendix C), and obtained written permission to conduct the study. I explained time and participation expectations, including interviews, checking transcripts, and time for member checks. She had already given permission to use her name and did not want a pseudonym, but she understood that she could request a pseudonym at any point during the study. I conducted the interviews with others in a similar fashion.

I collected data from Virginia during fifteen interviews conducted over one year at her home. The time for each interview ranged from one to three hours, for a total of thirty hours. The first three interviews focused on her teaching history as part of the context of her life history (Appendix D). The next three interviews focused on the details of her experiences, including stories that stood out in her memory (Appendix E). The following three interviews focused on her relationships with students and other teachers (Appendix F). The tenth and eleventh interviews asked Virginia to reflect on the meaning of her experiences (Appendix G). The next two interviews explored her professional growth (Appendix H). The remaining two interviews asked her to discuss work and life factors that contributed to her staying in teaching (Appendix

I). Interviews with ten others (Appendix J) were conducted via e-mail or phone for out-of-town participants or at Sunnyside for others. Interviews with these key people ranged from ten to 44 minutes each. These participants are listed in Table 3, Key Persons and Relationship to Virginia.

Table 3  
Key Persons and Relationship to Virginia

<b>Name of Key Person</b>	<b>Relationship to Virginia</b>	<b>Form of Interview</b>
Dave	Colleague and friend at Sunnyside who was present for Virginia's entire period of service at Sunnyside	In person
Jennifer	Department secretary at Sunnyside and parent of a former student	In person
Sue	Department Chair, colleague, and friend at Sunnyside	In person
John, former mentee	Mentored by Virginia, colleague at Sunnyside	In person
John, former student	Former student at Chicago Elite	Via e-mail
Barbara "Bobbie"	Colleague and friend at Chicago Elite	Via e-mail
Jeff	Administrator at Sunnyside	In person
P.J.	Professional colleague from another school whom she mentored through National Board Teacher Certification	Via speaker phone to allow recording. Also provided one document via e-mail attachment.
Sam	Former student at Sunnyside	Via e-mail
Amy	Sam's guidance counselor at Sunnyside	In person

Oral interviews were digitally recorded using either an iPhone or iPad, directly into one of two dictation recording applications. I jotted notes, reflections and possible follow-up questions during the interviews. Interviews were then transcribed by Dictate2U (d2U), based in the United Kingdom, or Rev.com, based in the United States (the second service was sought and chosen because of cost and transcription accuracy concerns with the first: some American phrasings and words were not correctly transcribed). Both companies employed independent transcriptionists, and all transcripts were checked for accuracy by a second person at the company.

### Documents

Yin (1994) suggested that collecting data from multiple sources is a preferred technique in case studies, and that technique was employed to strengthen this biography. He stated, “The most important use of documents is to corroborate and augment evidence from other sources” (Yin, 1994, p. 81). The teacher provided historical documents such as her National Board Teacher Certification portfolio, her curriculum vita, letters of recommendation written by others on her behalf, and included notes of appreciation from students and parents. Her types of documents and the number of each type are listed in Table 4, Types of Documents and Number of Each Type. P.J., in addition to a phone interview, provided for analysis one document via e-mail attachment for analysis. Documents were photocopied twice. Originals were returned to the subject. One copy was placed in a locked file cabinet, and one copy served as a working copy.

Table 4  
Types of Documents and Number of Each Type

<b>Type of Document</b>	<b>Number of each type</b>
Curriculum vitae	1
Application for employment to District 1082	1
Teacher evaluations	3
National Board Teacher Certification portfolio	1
Examples of lessons, worksheets	2
Chapter, written by Virginia, on equations that model growth and decay for inclusion in NCTM publication	1
Algebra Unit Chapter co-authored by Virginia for publication in textbook	1
Student notes, cards, letters, posters, e-mails of appreciation	47
Copy of student college application essay describing learning experience with Virginia	1
Parent notes, cards, letters, e-mails of appreciation	4
Administrator notes, e-mails of appreciation or praise	4
Colleague notes of appreciation or praise	1
National Board Teacher notes, cards of appreciation	1
Nomination form for Illinois Teacher of the Year application	1
Background statement for Illinois Teacher of the Year applications	1
Program for 2002-03 Illinois Teacher of the Year ceremony	1
Letters of recommendation for Rine Teaching Award	2
Acceptance speech for Rine Teaching Award	1

### Data Analysis Techniques

Data analysis involves consolidating, reducing, and interpreting what people have said and what the researcher has seen and read—it is the process of making meaning (Merriam, 1998). Qualitative research seeks through inductive reasoning to uncover meaning from participants' perceptions (Merriam, 1998).



### Analysis of Interview Data

All interviews were transcribed. Data were analyzed as interviews were conducted. Data analysis is best done in conjunction with data collection, as a meaningful analysis of the data will not be possible if analysis is delayed until all data are collected (Merriam, 1998). Methods described by Merriam (1998) and informed by Mertens (2010), Saldana (2009), and Seidman (2006) were used in analyzing the data.

According to Merriam, “data preparation involves typing notes, transcribing interviews, and otherwise entering the data from which the researcher will be working” (1998, p. 167). The interviews yielded a total of over 2,500 pages of transcripts, which were downloaded after transcription of each interview as Microsoft Word documents, proofread by me, formatted to three-column format, and printed landscape (horizontally) to allow for coding in the margins. Portions of some of the transcripts were checked by the subject for accuracy. The transcripts were hole-punched and contained in a series of seven labeled three-ring binders. Documents and artifacts were hole-punched and stored in a separate binder. All binders were stored in a locked file cabinet.

Coding proceeded in the manner prescribed by Merriam (1998) and Saldana (2009). Meaningful units of data were identified and assigned conceptual labels describing their meanings. “Coding involves labeling passages of text according to content...deciding on categories (codes) involves decisions about what concepts and ideas are being developed and explored” (Merriam, 1998, pp. 167-168). A copy of the research questions was in front of me to help in focusing the coding (Saldana, 2009). The middle column of the text contained the

transcribed words. Coding, notes and reflections were written in the left and right columns. Open coding was followed by axial coding using Merriam's (1998) method.

Some of the interpretations were checked with the subject prior to the start of a subsequent interview session. Prior to grouping concepts, a draft chronological biography was written based on the transcripts because the natural progression of the conversations was chronological.

After a draft biography was written, all transcript pages were photocopied and separated into file folders labeled by concept. Interview data were analyzed inductively using a constant comparative method (Merriam, 1998). Coded concepts were grouped together by comparing each coded concept with other coded concepts and placing them into groups, or themes, according to similarities. Where more than one concept was listed on one page, another copy was made as needed for a second, third, fourth or fifth file folder and the individual concepts circled to denote placement in separate folders. All folders were placed into labeled hanging file folders and into plastic file boxes.

The contents of file folders were continuously reviewed and checked against the contents of other folders in order to assure discrete categories. These categories were assigned names following Merriam's (1998) suggestions that categories reflect the purpose of the research and answer the research questions, are exhaustive, are mutually exclusive, are sensitizing to what is in the data, and are conceptually congruent in level of abstraction.

The concept labels from each folder were then written on file cards with an "I" followed by a number to indicate the interview from which the concept label arose. The cards were stored

with crossed rubber bands in a locked file cabinet. Data in the hanging file folders was reviewed to assure that all data were coded and considered, and additional cards were made as necessary.

### Analysis of Documents

Documents included my interview notes and interpretive commentary, as well as documents provided by the subject. Documents were analyzed according to Merriam's (1998) constant comparative procedures in a manner similar to that of the interview data. My notes were treated similarly to the interview transcripts.

Documents provided by the subject were numbered. They were not reformatted into three columns, but the initial, or open, coding was done in margins on photocopies, and the pieces of coding were written on file cards. These cards were coded with a "D" and a number to indicate a document and number. Categories were developed in a manner similar to that for the interviews, and the cards were labeled, bundled and stored in the same fashion. These categories were compared to those obtained through interviews. A master list of categories reflecting recurring concepts were developed and subsequent data were placed into one of the categories (Merriam, 1998). If a new category of data was created to accommodate subsequent data, it was added to the master list. Once the categories were created, interview and document data were analyzed again to see if there are more pieces of data which fit the categories (Merriam, 1998).

All sets of cards were combined by category. They were analyzed again to verify that all cards in the stack fit the category. They were stored with crossed rubber bands by labeled category in a file box in a locked file cabinet. Using Saldana's (2009) tabletop technique, piles of cards were clustered according to common theme or concept. Saldana observed that

“physically moving categories on a tabletop in multiple arrangements helps [students] better discover and understand such organizational concepts as hierarchy, process, interrelationship, themeing, and structure” (Saldana, 2009, p. 189). I reviewed and rearranged the cards several times over the course of two weeks. Data were added, as needed, to the biography, which follows in Chapter 4 of this document. The hanging file folders and their contents were rearranged to reflect the arrangement of the file cards.

### Credibility

#### Trustworthiness

Trustworthiness was enhanced through several methods. To verify that the results were plausible, member checks were conducted with the teacher: selected coded transcripts with tentative interpretations were shown to and discussed with the subject at the beginning of the following interview session (Merriam, 1998). Corrections were noted. I also engaged in iterative questioning (Shenton, 2004), as sometimes the same story was told, and I took the opportunity to ask questions similar to those I had previously asked. Occasionally, if context allowed, I purposely referenced an earlier situation to verify prior answers. The use of interviews with other subjects and document analysis increased trustworthiness through triangulation (Creswell, 2003; Krefting, 1991). I also included rich descriptions and presented discrepant information (Creswell, 2003). The time involved in the interviews may also have increased my credibility and her comfort level with sharing information, resulting in increased trustworthiness (Krefting, 1991).

### Confirmability

Confirmability was established by triangulating data among other interviews, documents, and the subject's interviews and by determining that the results were consistent with the data. While efforts were made to explain how I collected and interpreted the data, it is unlikely that another researcher would be able to duplicate this study with the same subject and obtain the exact same results. By nature of qualitative research, my research was contextual, and my interactions and conversations with her, her familiarity and ease with me, my responses to her recollections, and my interpretation of the data, were unique to this study. This approach allowed the data to emerge as a process of the exploration of her unique experiences, rather than fixed quantitative questions that controlled her responses.

### Summary

Chapter 3 presented the questions that guided this biography of one excellent teacher to explore what contributed to her longevity in the teaching profession. A discussion of possible research methods and the choice of biography informed by elements of case study and narrative inquiry were discussed. Data collection, data analysis, and credibility procedures were detailed. Chapter 4 will be Virginia's biography. Chapter 5 will discuss the results of the study.

## CHAPTER 4

### VIRGINIA'S STORY

I arrived at Virginia's home for our first interview on a cold January day. She welcomed me into her warm, modest home. The décor was neutral and simple. She was dressed in denim pants, a white scoop-neck T-shirt and a light blue cardigan sweater. Her nails were neatly trimmed and perfectly painted a cranberry color, attractive on her delicate, pale hands. Her salt and pepper hair was cropped at jaw length, and her hair was pulled back behind her right ear. We settled at her large, oak kitchen table for the interview. The windows looked out on a small deck and a snow-covered park next door. She graciously offered a cup of water, and I accepted.

We made small talk about Sunnyside High School as I set up my recording device and retrieved my papers. As she began, I became engrossed in her story. Her ease with sharing her story revealed a glimpse of the teacher she was in her classroom. She was very articulate and described events with colorful descriptions and humor. Her gestures and facial expressions complimented her recollections and reflections. This was the first of many interviews, and her story was fascinating. I knew immediately that I would enjoy my conversations with Virginia, and I looked forward to learning about her teaching experiences and exploring how she remained in teaching.

## The Early Years

### Virginia's teaching career begins

Virginia Highstone nervously stepped into her classroom at Chicago Elite School in Chicago. It was 1962, and the nation was leaving the Eisenhower era of relatively peaceful optimism and moving to the Kennedy/Johnson era of civil unrest and the deepening of the Cold War with the Cuban Missile Crisis. She had ridden a series of three buses to work that day, as she would for that entire first year, carrying all of her books, papers, and materials in a satchel. She wore the requisite suit, hose, and three-inch heels. Her dark hair was combed neatly in place. She was often told she looked like Jackie Kennedy. She never saw the resemblance, but she heard the comment repeatedly.

She had not slept a wink through the month of August. She was scared to death. She had no intention of becoming a teacher when she was earning her degree at Wellesley. She had majored in history, but loved math and had taken enough math to qualify as a math teacher. She had taken additional math courses at Northwestern University to prepare for this job, but she was uncertified. She had no training in education. Now, she was walking into her first class. Later, she would have to learn how to lower a fire escape in those three-inch heels, and she worried about that. What brought her to this room and this profession which would become her lifelong passion?

Newly married, she and her husband, Ward, lived in a small apartment in a three story house on South Parkway (now called South Martin Luther King Drive). They resided near Michael Reese Hospital, and there was a small shopping center nearby. They had a living room,

a bedroom, and a wall kitchen. The apartment was sparsely furnished, but she recalls that most people had little furniture then: “people typically had what they needed and little more.” Ward was in banking and a member of the National Guard. They had settled into a typical young couple’s city life, quiet and simple, seeing their families and socializing with friends. They went to movies and for coffee afterwards. Her father owned a house in Wisconsin, so they went there occasionally for inexpensive vacations.

Her father and grandmother lived in the apartment building next door, and Ward and Virginia also visited them. Her grandmother, who had raised Virginia since her mother died when she was 11 years old, had developed heart problems, necessitating the move to the apartment near Ward and Virginia. Ward and Virginia visited her grandmother when her father was out of town, and she sometimes made for them chicken and dumplings or pot roast. Her father and grandmother’s apartment was significantly larger and had air conditioning, a rarity then, and sometimes Virginia and Ward stayed there in the guest room. The newlyweds enjoyed their new life together, but Virginia was unhappy in her current job.

Virginia had been working at a bank since graduation. She “hated every minute of it.” Uncertain about the sort of job she should seek, she expressed her unhappiness to her husband. He said, “Well, it seems to me you should be a teacher. I always thought you were a teacher.” Her father echoed, “I always thought you’d go out teaching. You’re a natural teacher. Don’t forget that.” Her initial response was, “Really?” but she also recognized that “sometimes we don’t see ourselves for what we are.”

Without certification, she was limited to private schools, and applied to several in Chicago. Private high schools preferred teachers who had majored in their subjects over those



who were education majors with a concentration in a subject. She was offered teaching positions in math at Francis Parker, her K-12 alma mater, and at Chicago Elite School. She could not imagine going back to the tiny Francis Parker and sitting in the faculty lounge with her former teachers, so she accepted the position at Chicago Elite School.

Chicago Elite School was a private school for the wealthy and upper middle class. There were two buildings, a former mansion that housed the upper school, and the former coach house that housed the middle school. The coach house had concrete floors and overlooked the parking lot. The upper floor had two classrooms and the middle school administrator's office, while the lower floor held the shop, an art room, and a science lab. Virginia taught in both a coach house classroom and in rooms in the main building, necessitating that she move between buildings outside, even in the cold snowiness of a Chicago winter. She quickly adjusted to the routine of her day and settled into teaching.

Looking back, she felt she was "an absolutely awful teacher" and "terrified" when she started. "In many ways I did not know what I was doing and," she reflected, "I hadn't had any preparation, anything about theory." However, "once I got over my nervousness, I loved doing it. I was made to do it. I liked every second of it. I liked preparing. I liked the students. I liked the discipline. I liked the collegiality with other teachers. It was something I really wanted to do." She eventually felt that teaching was "easy," but clarified, "I don't actually think teaching is easy...I think it's difficult...I tend to over work, over think, over plan, over extend myself. I don't mean that it's not hard work, but it was an easy experience for me." Virginia taught seventh-grade math, eighth-grade algebra, freshman advanced algebra, and sophomore geometry. She also managed a supervisory assignment, such as a study hall. Lucy, the grey-haired, prim,

very stern head of the upper school, told her soon after the start of the school year, “I’ve observed you, and you really do have a way with your class.” In later years, when Virginia hosted student teachers, she realized that teachers cannot be taught certain skills—they just naturally have them, and Virginia was a natural teacher, just as her husband and father had predicted.

### Virginia’s Students

Students likewise recognized her teaching skills, and repeatedly came to her for help. She tutored some students, sometimes after school at Chicago Elite and sometimes in their homes. One young man lived at the top of the new Marina Towers, and she tutored him there. She found herself supporting students not just academically, but socially and emotionally, as well. She formed relationships with some students that continue today. John, former student, was the “self-appointed class clown” in 1964. She remembers being very tough on him, yet trying to encourage him. She had expectations for him beyond those he had for himself.

In an e-mail interview, John shared that he thought he may have had undiagnosed ADHD that affected him in school, and credits Virginia Highstone with his success in math class and on the SATs. Virginia reflected, “Yes, he probably did have ADHD. He was always moving. We did not know about ADD or ADHD, though. No one was trained. Every learner was supposed to be normal and okay, and if you were paying money for Chicago Elite, you were more than normal and more than okay.” In a private school like Chicago Elite, “you get quickly slotted: the athlete, the smart one, the writer.” John “did not have much of anything to be slotted into,” and so he became the class clown. Class clowns “basically are looking for attention in all the wrong

ways because they're just asking for some kind of attention. I spent a lot of time trying to turn the attention to something good, which I saw was really possible with him." John found her to be a calming influence as she spoke with him, and he thought she was more patient with him than other teachers. He wanted to do well for her, and for the first time in his life he double-checked his answers on his work.

She got to know him on a personal level, talking to him "as if I was one of her own kids, giving me motherly advice." He continued, "She told me stories about what life was like when she was growing up...she personalized our relationship and because of that I grew to admire and respect her." Sometimes she humorously compared John to the brother that drove her crazy. This sense of humor served her well in class, as John recalls the entire class was a difficult one, with challenging students. He remembered, "Virginia had me in the dumb class. We had the worst grades within our class and had proven ourselves to be hard to manage as well as hard to teach. In class, Virginia was nimble. She surfed the distractions and found ways to get through the work without demeaning us. I think my whole class admired her because she was one of the few who respected us despite the fact that our actions often disrespected her."

John's own experience is an example of how Virginia managed her classroom. John often unintentionally disrupted the class, as he could not help himself. Instead of sending him into the hallway, throwing erasers at him, or yelling, tactics commonly employed by his other teachers, she managed the behavior immediately or privately after class, depending on the infraction, and she redirected him to the task at hand.

She felt that the Chicago Elite practice of sending students out into the hall was "just awful." She had another student who would be called autistic today. Larry was very bright, but

was mercilessly teased. He bent his head down, put his watch up to his eye, and rocked. From junior kindergarten through eighth grade, teachers had sent him into the hall. His mother told Virginia that she was the only teacher at Chicago Elite that did not send him to spend the entire day in the hall. The hallway was small, and Virginia thought it was “nightmarish to send a child into the hall,” so she never sent Larry into the hall. She ignored Larry’s odd behavior and kept him in class, and she dealt directly with John’s behavior to keep him in class, as well.

John remembers, “She had a gentle, but firm way of, at least, stopping my distracting behavior.” John often lost track of discussions and was embarrassed to be called on in other classes because he “hadn’t done the homework and didn’t care,” but he “could do plane geometry in [his] head.” He reflected, “Asking me to dive into a math discussion never embarrassed me as it did in other classes. I loved it. I could easily jump in. It was my chance to show that I wasn’t a total goof-off.”

Reflecting further on his experience, John shared, “I guess Virginia had a gift for teaching. She connected with her students and rather than lecture them, she taught them individually as much as that was possible in classroom settings...She kept moving through the material and shepherding us along to make sure that we were caught up...Virginia was aware of who got it and who didn’t and she made the extra effort to work with those who didn’t get it.” He observed that this was in contrast to most other teachers, who “lectured and often left the whole class lost, but continued on unaware.” He summarized, “I guess it’s the difference between teaching from the inside out [and] lecturing. She connected with me and made me want to do my best work. She encouraged me to do my best. I suspect other students felt the same

way.” While Virginia was able to succeed with John, she also had other students with whom she was less successful in supporting them in areas other than academics.

### Elite Parents

Virginia also had a sophomore women’s advisory, and she learned that “many 15-year old girls hate their mothers.” Some young ladies, however, seemed to need more from their mothers than they were getting, and Virginia felt sorry for them. One young woman was teased because her uniform skirts were too long and she had the wrong kind of shoes. The other girls were wearing loafers, and she was wearing tie shoes. The tie shoes were expensive, imported from Switzerland, but they were the *wrong* shoes, and she was being teased. Her mother was active in the Republican Party and was often away. When Virginia and another teacher contacted the mother, the mother’s response was “Why are you bothering me about this? The housekeeper takes care of that sort of thing.”

Later in a parent-teacher conference with another young woman’s parents, Virginia was speaking very positively, and the mother countered that “there’s nothing special about her...she’s not really beautiful....she’s not smart enough for much of anything...she’s not exceptional.” At that moment, Virginia realized that the girl could have all the money in the world and not have love at home. This particular young woman was “lovely,” and her mother could not recognize or acknowledge it. Virginia also remembers that, unfortunately, a parent’s views of their children may be skewed in the opposite direction.

One young woman was very rude, and Virginia had noted it on the lengthy comments that she produced for every report card for every student. When her mother called and Virginia

explained further, the mother's response was, "I simply don't understand. She's so pleasant to the servants at home." Not only did the mother diminish the report of rudeness on the part of her daughter, but Virginia realized that perhaps she, too, was regarded as a servant by some parents. Barbara ("Bobbye"), Virginia's friend, during an e-mail interview, recalled that "teaching at Chicago Elite School was a serious business. Our salaries were paid by parents, who held us to a very high standard...small class sizes meant that we got to know kids (and their parents) very well." In fact, one of the more difficult aspects of Virginia's job was the expectation by parents that teachers would accept an invitation for dinner.

Virginia remembers, "It's a good thing I had gone to private school and I was able to manage that. My husband is also naturally extraordinarily gracious and people like him immediately. His manners are impeccable. So, we would have command performances of dinner with parents where they would invite you, and you were expected to go." She had no idea this was expected when she had started at Chicago Elite. The invitations just started showing up, and another teacher told her that she and her husband were expected to attend. There were also fundraising events, plays, games, concerts, and gatherings at the headmaster's home that they needed to attend, but it was the parents' expectations that were sometimes difficult to manage.

Sometimes, parents could be challenging at Chicago Elite School. The eighth, ninth and tenth grade math curricula were standard, but for seventh grade, she used the new Yale-developed School Mathematics Study Group curriculum for which she had just been trained at Northwestern University. She reflected, "It was theoretical which is, what we know now, exactly what does not hit 12 and 13-year old kids." She explained, "So, I was teaching seventh graders, different bases, I remember. So, I have to tell you it was kind of an abstruse topic. We

had base ten, right? So, we have ten digits. In computers, it's base two: zero and one – on/off switches. But you can also have base seven, with seven symbols. We even have base 12: make up two symbols and have a base 12 system. While I was teaching this, I had the average seventh graders. We had two sections, average and bright [and the average students] couldn't get this at all because it's complete theory, right? I remember studying it myself, thinking, 'Wow, this is hard.' I'd never heard of it." As frustrated as Virginia was by the curriculum, the parents were "furious because [their children] couldn't get it." She continued, "These were the movers and shakers of Chicago. I had the McCormicks, the Regensteins, the Harveys, big Chicago names. And they were mad. They were paying money and their kids didn't *get* seventh grade math. So I had these furious parents."

She was fortunate that the headmaster who had hired her, John, backed up his teachers when confronted by parents. The father of one young man met with Virginia, the headmaster, and Virginia's friend, Bobbye. Bobbye was about the same age as Virginia, and Virginia remembers, "She and I were able to hit it off right away." They went out with their husbands together in the evening. They taught the same students, so had common experiences to share in the faculty lounge. Bobbye was confident in her teaching, having taught on the East coast before coming to Chicago Elite. She gave Virginia a lot of practical teaching tips and taught Virginia about keeping her files and grade book. Bobbye remembers that Chicago Elite students loved Virginia. "They often mentioned how fair she was; how she always explained difficult concepts clearly, and kept her 'cool' even with the occasionally disruptive student."

So they sat together in the headmaster's office, stunned at the words of the parent before them. Virginia recalls, "The father just raked us over the coals. We were being unfair to his

brilliant child.” Virginia and Bobbye each had a grade book full of his zeros and half-completed work. The headmaster interrupted, “We’re going to stop right there. These are two of our best teachers. I’ve seen their grade books. I’ve seen their work. This discussion is over. Let’s talk about what your son is going to do to improve his grades.” So, Virginia learned the importance of going to the administration with issues, “because if you put them in the know, they will back you,” a practice she carried through her career. During her later years at Sunnyside, for example, if there was an unusual situation, such as cheating, she shared her concerns with her administrator prior to contacting parents. When the parents inevitably contacted the chair or principal, the administrator was already aware of the situation, making discussion and resolution easier.

### Virginia’s colleagues

While the support of the headmaster was important, she also found support among her colleagues. They did not have a formal mentoring system, but Dick, the head of the eighth grade, was a sort of mentor to her. He was one of the most interesting men Virginia had ever met. He had left Chicago Elite to become a Jesuit priest and returned. He was very wise about teaching and discipline. There was no formal observation requirement, but Dick would drop in to observe Virginia’s class and later compliment her teaching or give nuggets of advice. He also found creative ways to discipline disruptive students.

One day, three 12-year old boys were shooting rubber bands in Virginia’s class. One was the son of the Chairman of the Board of Trustees, another the son of a prolific fundraiser, and the third from a prominent family. Virginia brought them to Dick and asked him for advice. He



placed each boy in separate rooms on Friday after school with a box of rubber bands. When each shot his box of rubber bands, he picked them up and shot them again, and again, and again, for over an hour. The punishment “fit the crime,” and none of the boys wanted anything to do with shooting rubber bands when they were done.

Eighth grade was easier. She had the higher-level class and was teaching Boulean Algebra, which is where students prove things like “a number times zero is zero.” Ninth grade Advanced Algebra was similarly enjoyable. Geometry was a bit more challenging because of the long and tedious proofs involved. Virginia enjoyed the abstract challenge of it, but the students and parents complained about Geometry.

The department chair was little help. Robert (pseudonym) was an “unusual” man. He was an avowed socialist in the bastion of Republicanism that was Chicago Elite School, and the first thing one noticed about him was that he had one arm. He was about sixty years old, and had been at Chicago Elite for a long time. He took the higher-level classes for himself and had his own classroom, and left Virginia and another new math teacher, Julia, the more difficult students and multiple classrooms in two different buildings.

Astonishingly, he occasionally made comments to young female teachers in the teachers’ lounge and in private meetings about things like sexual performance and penis size. When he was alone with one or two women, these statements spilled from his mouth. Virginia was young and this was a chairman. She had never heard anything like it, and because he sensed she was uncomfortable he talked even more. She was “a married woman,” but that did not make her less uncomfortable with it. She reflected, “I’m a 22 year old girl, right?” No one talked about it, either. She remembered, “A lot of women of my generation had this happen and they did not

have a context for it.” Virginia remembered asking herself, “Is this the way people act, or is this just him?” She tried to avoid him, but two of her classes were in his classroom, so she had to see him daily. She tried otherwise to avoid being alone with him, and dreaded preparation meetings with him. There was not yet a name for it, but she felt uncomfortable. Years later, in the 1970s, she heard about something similar on the radio and realized that what he had been doing had a name: sexual harassment.

Virginia remembers, “In many ways it was a difficult teaching situation...but I also knew I liked the classroom.” Virginia could manage lessons and facilitate learning, and students had a wonderful feeling of success. She enjoyed working with the students. She supported and encouraged them, and they liked her. She found the intellectual camaraderie with the rest of the faculty rewarding, as well.

The faculty room was on the second floor of the main building, the former mansion. Smoke hung heavily in the room, as smoking was so common at the time. Some of the women brought in cookies and cakes to share. Some faculty ate their lunches there, chatting with colleagues. The faculty members were highly educated, coming from prestigious eastern schools because they became a conduit for admission from Chicago Elite School. The faculty lounge was really the only place where teachers could go between classes, as they typically neither had their own classrooms nor working spaces. People sometimes stood in line to use the purple mimeograph machine for tests and quizzes that could not be written on the chalkboard for students to copy.

Bobbye shared in our e-mail interview that the lounge had a “delightful atmosphere” with “lively discussion about all kinds of things, not just academic. One of our colleagues was getting

his Ph.D. in Flemish History; another was emotionally involved in the conflict between Israel and Palestine.” Virginia remembered, “My boss was a Marxist who was active in union movements, yet we had another teacher, Jim, telling everybody to read *God and Man at Yale* by William F. Buckley. People had these big political arguments and also these interesting discussions about history, and history and literature impacting one another, and religion coming into it.” The same sort of political divides seen among the faculty could be seen in the student population, as well.

Sometimes the faculty lounge was like a lunch seminar on teaching. Dick and Humphrey often engaged in “wonderful discourses about teaching and what it meant and how to manage things.” Virginia continued, “They were natural teachers, very bright people.” Dick and Humphrey were also among several jokesters on the faculty. Bobbye conveyed in her e-mail interview that notes and gag gifts could appear in a colleague’s mailbox at any time: “Could this bottle of Grand Marnier be from your current boyfriend? Or was it an empty bottle that Humphrey and Dick had refilled with tea and carefully sealed again?” Amidst the fun and camaraderie of the faculty and the learning that went on in their classrooms, an outside tragedy would shake their world and the nation.

#### November 22, 1963

One of the more difficult days she experienced at Chicago Elite was the day that President John F. Kennedy was assassinated. Many students disliked President Kennedy because their parents disliked him. They were conservative Republicans, and he was a liberal, Catholic

Democrat. “There was a lot of anti-JFK feeling, but it was a political feeling...we should have had Nixon...Kennedy was not revered as he was after his assassination.”

In those days, the seniors had a smoking lounge. No one was allowed in without knocking, except perhaps the headmaster. The students had a radio and heard the news that the President had been shot. A young man, Sammy, saw Virginia in the hall and told her, “Mrs. H., we’ve just heard on the radio the President’s been shot.” At first, Virginia could not believe it, because Sammy was known to joke around, and she replied “What’s the punch line?” and entered the faculty lounge. Other teachers in the lounge had overheard the exchange and the teachers wondered if it was true. Sammy frequently hung around outside the teachers’ lounge to exchange jokes with faculty, but surely this was not one of his jokes?

She proceeded to her lunchtime detention study hall. “If [students] were doing well at Chicago Elite, [they] had half the lunch hour to go out to the yard between the buildings or elsewhere on campus... this study hall was for students who were not doing well...some of them were defiant.” It was a big room on the third floor, with desks spread apart, and Virginia’s task was to keep students quiet and working without cheating.

A female student came to her room and told Virginia that there would be an assembly in a few minutes, there may be an early dismissal, and the news was that President Kennedy had been shot, but nothing else was known. Virginia was to briefly tell her students. She remembers thinking, “How am I supposed to tell these kids? I don’t know anything about anybody being shot.” She explained, “I was 24 years old. In my lifetime, there hadn’t been anything like that.”

In this study hall were two young men who had been suspected of defacing library books with swastikas and Nazi propaganda. Virginia made the announcement, “We’re going to be

going for an assembly, and I need to tell you that President Kennedy has been shot.” The two students started to cheer and others followed suit. Virginia was shocked and admonished them to be quiet and respectful. Some of the kids started to cry because they were scared. It was very stressful and upsetting. Another runner came by and offered her coffee, as they were offering all the teachers coffee, as if that would help calm them.

The entire school went to the assembly, and sat by their grades as they routinely did for assemblies. Virginia sat with her sophomore girls and many were crying and asking, “What do you think this means? What do you think this means? Did a Communist shoot him?” Virginia knew no answers, as the only radios in the building were in the office and in the senior lounge. The headmaster came in, and they started the assembly with a prayer for our country, even though it was a secular school. He announced that the President had been shot and killed, and it was likely that Governor Connolly had also been shot, but he really knew very little.

It was very unusual for Chicago Elite School to dismiss early, but the parent phone tree was activated for notification, and school was dismissed. She remembers, “The faculty was in shock, and we were hearing rumors...we were listening to the radio and trying to glean information, and the truth of the matter was that there was no new information coming, and all the radio stations went to classical music.” Virginia was driving back and forth to school at that time, and she gave some people a ride home so they would not have to ride the bus. It was a Friday, so there was no school the next day, and then there was no school on the day of the funeral. She was neither a Kennedy-hater, nor a Kennedy-lover, but she remembers being “terribly affected” by it, thinking as she watched the news that night, “What the hell is happening to this country that somebody would shoot the President?”

She remembers her husband having to work at the bank on the day of the funeral, as it was feared that if banks closed, a panic would ensue. Her grandmother came over and watched the funeral with Virginia. Her grandmother was very upset, as seeing the film of the motorcade reminded her of the hit and run death of her own husband on a family road trip in 1927. Her grandmother kept saying of Jackie Kennedy, “That poor girl, that poor girl. She sat with her husband’s head in her lap the way I did, and watched him die.” Virginia’s grandmother had never before spoken of the moments of her own husband’s death, only of the fact that he had been killed and how difficult it was for her. Virginia’s father, who had never spoken of his father’s death, also relived that trauma with Kennedy’s death. Virginia wondered what she would say at school the next day.

There was no protocol for tragedy. There were no social workers as we would have in schools in later years. Virginia had no idea what she would say to the students, and she asked herself, “Okay, what do I do? Do we talk about it? Do we not talk about it?” She recalls that they did talk about it in advisory for about two weeks, but “in retrospect, there wasn’t sensitivity to kids’ feelings. There was no thought to bringing in social workers and offering one-one counseling as we would today...Everybody was supposed to buck up and carry on. It seems strange, but that’s what it was.” Students really did not seem bothered by it long-term; at least they did not mention it. Just as students carried on with their lives, Virginia moved forward in hers.

### Motherhood Changes Things

Virginia taught at Chicago Elite School for three years, until she left to start her family. While pregnancy was the primary reason for leaving, several other factors “made the decision to leave teaching easier.” Her last year was more difficult. Lucy, the supportive chair of the upper school, had left for another job, and Courtney, a tall, young man with a very different administrative style, came in. On the rare occasions that she had sent students to Lucy with discipline issues, Lucy had always supported Virginia and other teachers. Chicago Elite was very strict on discipline, and behaviors that would be considered very minor today were dealt with swiftly under Lucy’s administration. Courtney, however, always took the side of the students. When Virginia sent a disrespectful and disruptive girl to him, as required by their discipline code, the student “batted her eyes and talked sweetly,” and Courtney reported back to Virginia, “I don’t know why you have a problem with her. She is such a sweet girl.” This happened repeatedly with other girls, as well, and it started to wear on Virginia. Also, at this time, her doctor told her that she was getting older (mid-20s was considered old and women were discouraged from having children in their riskier 30s) and needed to leave the stress of teaching in order to have a successful pregnancy.

While things had changed at Chicago Elite, had she not become pregnant, Virginia believes she would have stayed at Chicago Elite. It was very easy as a young teacher to get caught up in things that did not matter in her own classroom, but she was “learning to ignore fussing, gossiping, and other things” she could not control. She was maturing as a teacher. She loved her job. She loved her students. She loved the intellectual atmosphere of the school. She loved the creativity of teaching. She loved problem-solving on her feet. She loved the altruism

of teaching. She did not realize it at that time, but looking back, she now realizes that “teaching filled many personal needs.”

Pregnancy changed everything. The choice to stay was no longer hers. She shared in incredulous amusement, “In those days, you weren’t even allowed to teach when you showed.” In fact, when Virginia and Ward had moved to a larger, two-bedroom apartment two years before, word spread through the school, and the headmaster called her into his office and asked her if she was pregnant. He made her promise that he would be the “third person to know she was pregnant.” This was partly due to the difficulty of replacing a teacher, but also because he worried that “something in the building had caused a miscarriage for another teacher.” Virginia felt a genuine sense of caring among the small faculty at Chicago Elite.

Her first daughter was born in 1965. Twice Chicago Elite School asked her to return, the second time offering a department chair position and an increase in salary. Twice she declined, as she and her husband could not figure out a childcare arrangement. She explained, “Day care did not exist in those days. My mother was long dead, and my grandmother died when I was pregnant, so I did what most women did at that time, which was to stay home with her kids.”

If she had stayed at Chicago Elite, it would have assured access to private school for their children as a benefit of teaching there. However, she preferred a public school education for her own children, but not in the Chicago Public Schools. Her father “had been failed by the Chicago Public School system. He was exceedingly bright and was double-promoted so that he graduated just as he turned 16, woefully unprepared and immature for the rigors of the University of Chicago.” His children attended only private schools, but Virginia and her husband wanted more than the closed social system of a private school, and she wanted honest assessments of her



children by teachers who were not colleagues in a close community. When she had written an honest assessment of the headmaster's son, he called her in and thanked her. He had long suspected his son was not working to his highest potential, and Virginia "was the first teacher brave enough to tell him." Virginia did not want that for her children.

They could not afford to stay in the city, anyway, on just Ward's salary, or even if they could have worked out child care and Virginia had returned as department chair at a higher salary. Virginia and Ward Highstone moved to the suburb of Glenhaven. She had another daughter in 1969 and a third in 1973. She enjoyed being a full-time mother in the suburbs, and returning to teaching was far from her mind.

### The Middle Years (Tutoring)

Immersed in motherhood with three young daughters, Virginia Highstone was far away from teaching. One evening in 1975, the phone rang, and the neighbor girl asked, "I can't do my math and you used to teach math. Can I come over for help?" Her tutoring business was born, and she continues to be "the tutor to have in Glenhaven." She tutors students who are having serious learning difficulties, but also those who are highly motivated to earn high grades. She credits tutoring with helping her develop several teaching skills crucial to her later success: the ability to diagnose students' difficulties, clarity in teaching, familiarity with a wide range of texts and teaching styles, and the importance of believing in students.

She believes that analyzing and remediating student difficulties helped her develop an unusual clarity in teaching. She had to figure out why the student was struggling and find ways to make the difficult concepts clear to the student. She "learned where the hard parts are" in

contrast to most math teachers who “were not paying a lot of attention...who don’t know where the hard parts are.” She could sympathize with a struggling student, saying, “You know, this really is difficult,” and then help them learn the concept or skill. She tutored students from Wheatland and Glenhaven. She discovered she could teach from a wide range of unfamiliar textbooks. She also learned of the wide range of teaching methods utilized by the many teachers represented among her students, and thought some much better than others.

As she helped students prepare for tests, she realized the importance of expressing to them that they would do well, even when she was not convinced they would do so. She gave them confidence by saying, “I think you’re going to do really well on the quiz tomorrow. If you go home and do the same as we’ve talked about, and call me tonight if you have problems, I think you’re going to do better.” Because the student can say, “Somebody believes I can do this,” they feel confident and do better than they did before. Virginia later gave students the same confidence in her classrooms, helping students to believe that “they can do this even though it’s hard.”

Virginia summed up her tutoring experience: “Now, you can tutor and learn nothing, but I learned huge amounts from it.” She learned to identify areas of difficulty, developed clarity of teaching, taught a wide range of textbook approaches, and recognized the importance of imparting confidence to students. While Virginia was not formally employed as a teacher during this time, she was teaching students math and learning many skills that a teacher develops through experience. Virginia’s tutoring experiences “made [her] the teacher [she] was at Sunnyside.”

## The Later Years

### Returning to Teaching

In the late 1980s, she attended Northwestern University to update her credentials with a Master's in Education and Social Policy. The decision to return to teaching was spur of the moment. While she tutored, she felt that she would never be able to tolerate incompetent colleagues, yet she knew she could teach better than the teachers of those she tutored. She had thought many times about returning to teaching, but was uncertain.

Out of crisis grew her decision to return to the classroom. Her daughter had had emotional difficulties and had been hospitalized several times. A social worker at Northwestern Hospital worked with the family on ways to best support her daughter. Virginia was too involved in her daughter's difficulties: she was a nurturing mother, she "felt guilty because [she] had been ill while pregnant," and she "could fix this with enough determination and work." However, for her daughter to heal, Virginia learned that she must step back and become a model for her daughter's healing process. Virginia saw the social worker as part of family counseling, and one day the social worker assigned her to come back the following week and tell her one thing she wanted to do for herself for the next couple of years. Virginia immediately responded, "I don't think I have to wait until next week. I think I want to go back into teaching, but I don't know how." Her assignment became to find out how and return with a plan. Looking back, she feels that she might eventually have returned to teaching, regardless of the circumstance, but this situation provided the impetus.

She called people at the University of Chicago and Northwestern University. The man she spoke with at University of Chicago told her that perhaps she would not be able to keep up mathematically with the younger students, among other disappointing phrases (“ironically, [she] would later work with him on the University of Chicago math curriculum”). Undaunted, Virginia called someone at Northwestern University and they were very welcoming. They had a program for returning adults seeking teacher certification. Their students included people who had graduated from Harvard and Yale. Virginia knew she wanted a high quality degree and certification program.

Virginia remembers her husband feeling threatened by her return to school and her intention to go back to formal teaching. Their daughter’s illness had been a strain on their relationship, and they had disagreed on her treatment. Now he feared that Virginia was suddenly preparing to leave him. She had only occasionally talked about returning to teaching, and now, in the midst of crisis and discord, she abruptly decided to do so. She had no intention of leaving him, however, and pursued her program. It was not easy: two nights a week, she left a meal for Ward to reheat, drove from their home in Glenhaven to Northwestern University in Evanston, and returned to find Ward having not eaten dinner. It was a difficult time when they were heading in different directions, but she found joy in her work, and their daughter began to improve.

She had the option to waive student teaching, but felt it was important to have recent non-tutoring teaching experience and good recommendations to increase her employability in a very tight job market. She was also anxious about the details of teaching, like keeping a grade book, and wanted to be sure she was ready. She student-taught at a suburban high school, and found

that she disliked the way math was taught there. They used an old text which was simply different topics seemingly randomly put together, and involved little more than the teacher demonstrating problems for ten minutes, the students doing problems for the rest of the class period, and then students taking a test every Friday. Virginia supplemented the text with projects and discovery learning, and developed a portfolio that was particularly attractive to the woman who would hire her at Sunnyside High School.

### Starting at Sunnyside

In 1991, as she was finishing her Master's degree, she was hired part-time at Sunnyside. There were several pluses to this job: her daughter was starting college and they needed the money, it was 20 minutes from home, and she was looking forward to working with the woman who had just hired her, Sue. While screening applications, Sue found Virginia's to be the most interesting. Sue shared during our interview, "her educational background, her interests, her teaching experience, and her obvious intelligence and insight came through on that application...she seemed like someone who would be very, very interesting."

The interview was more like a conversation between the two women, and Sue observed, "You could tell she knew kids. She tutored for years, which I knew would be valuable experience for anyone in teaching, and she thought about everything she saw through those tutoring experiences." Sue continued, "She had a whole wealth of interests, history in particular, that she brought into her teaching. [Virginia] was not going to be someone who was just teaching by the textbook. She had ideas about how she was going to improve teaching. She seemed like a real spark for people and seemed like someone who could foster change in the

department.” Sue remembers Virginia talking about Vygotsky and the role of proximal development, and Sue herself “loved placing that bar just a little out of reach so that [students] are always making small steps and growing comfortably.”

Virginia could tell from the interview that their philosophies of teaching meshed. “She had hired me to help her change the department, to change the culture, to change the grading, to change the teaching, to change everything... We thought the same way. We thought about projects. We thought about not being dependent on teaching all the time.” Sue confirmed this, saying, “I knew that I could not bring about change by any kind of direct fiat... gradual growth, learning, and constructing knowledge on the part of teachers, as well as on the part of students, is more effective and certainly more appropriate in those conditions.... anything that I did to impose ideas on other people... would have met with resistance or would have been difficult for people.” Little did Virginia know when she interviewed, however, the challenges that she would initially face in this teaching position.

After Virginia was hired at almost full-time status (four classes plus a supervision such as study hall) with the promise of full-time status (five classes plus a supervision) the following year, Sue called Virginia in July and offered to take her out to lunch so that she “could explain the situation [Virginia] was stepping into.” She told Virginia her teaching assignment, and “it was the worst teaching assignment on Earth in mathematics:” three levels of geometry (junior, regular, and honors) in four different classrooms with three very different books. “The vocabulary was different, the order in which you did things was different, the way you did proofs was different... to this day I don’t know how I handled it, but I did.” The former beloved department chair, Tucker N., who was now dying of cancer, had put this schedule together, and

Sue knew it would be difficult. Sue also told Virginia that she had hired Virginia over a well-liked former teacher (a Tucker N. hire) who had wanted to return to Sunnyside. So, Virginia knew that she was heading into a difficult teaching load in a department experiencing painful changes.

Virginia recalls that the Sunnyside she walked into was a very old brick building, with a series of additions that comprised a confusing maze. Insects and rodents were common. There was no air conditioning, and it was so hot on some days, she “did not know how the students could bear it to learn.” Little relief was gained with open windows that looked onto several enclosed courtyards. A central, open courtyard provided a little respite outside for students and staff as they walked from class to class. Despite its run-down appearance and stifling heat, Sunnyside had a reputation for being a very good school.

Virginia also remembers the “maelstrom” of difficulties in the math department when she started. Sue was the new department chair appointed after the departure of their dying department chair. Sue was not the one who had been groomed for the job: her appointment by an unpopular principal over the preferred Gary was a surprise to the male-dominated department. Virginia’s new colleagues were unhappy with the choice to hire Virginia over their friend who had wanted to return to Sunnyside.

Sue remembers, “It was a ...stressful time in the department history because our former department chair had been chair for 26 years, was much loved, very important for the school and important for the community, and incredibly respected. And he was ill and died of cancer within the first few weeks of me being department chair...so it was very awkward.” The decision to hire Virginia “meant that we would not be hiring back someone who had taught here in the past

and was very popular with the department and a wonderful, wonderful person...to make that decision was very unpopular with the department and hard to do...Virginia certainly was not viewed as my protégé because she was older, but she was certainly somebody that I supported.”

Compounding her discomfort, Virginia remembers her *faux pas* upon meeting Gary, the man who should have been chair. She extended her hand in greeting, only to notice too late that his right arm ended in a hook. When things could not look any worse, Sue, the chair of a grieving department requiring leadership and the only person Virginia knew, was hospitalized on the third day of school and then out on medical leave.

Tucker N., the former chair, passed away shortly after the school year started, on the day that Sue returned from emergency surgery and hospitalization. Virginia had heard that he was the social center of the school, the one who organized events like bowling outings. People were very fond of him. Virginia recognized that the men in the math department saw their mentor die, and they were upset. “They were mad at life. They were mad at Sue. They were mad at me. They were mad at whatever.” Sue remembers that Virginia was “very aware of other peoples’ feelings and very wise in the way she dealt with the situation...she was savvy in the way that she did not spark confrontations with anybody.”

That first year was especially difficult. Shouting matches between Gary and the principal were frequent, and another teacher named Larry “often became upset about something.” And a teacher named Tony never said a single word to Virginia: it was as if she did not exist. If she said “hi” to him, he looked away. She had a designated formal mentor, but Virginia felt she “was completely useless as a mentor, a poor teacher.” When asked about what sort of situation might have driven her from teaching, she feels it could have been this situation. She remembers,



“It was really difficult to be so devalued in general by colleagues, and at that point, Sue and I barely knew each other: Sue was my boss, not yet a friend.”

Virginia was the fifth woman in the predominantly-male department: Sue was the unpopular new chair, another was a former student who was a very busy young mother, and two others were very good friends, about Virginia’s age. Two young female teachers who came later “withered” and left for other jobs, one of them telling Virginia, “I am just so tired of being put down.” Virginia understood, as she had survived her initial years. Virginia’s age and life experience served her well in the “firestorm” of her early years.

She focused on her work and did not enter the melee. She remembers, “Going back into teaching was easier than I had imagined, in every way. I was strict, but the kids knew I would go a thousand miles out of my way to help them succeed.” In an interview, Dave, a long-time colleague and friend, recalls that Virginia “was every bit the professional at the beginning as she was at the end...if she was unhappy, she never approached me about the subject.” Dave does not recall being aware that Virginia was at all unhappy. Dave recalls that the office was very small, and teachers shared desks. At any given time, few teachers were in the room, and he feels it was possible that Virginia felt it was unfriendly because there were so few people in the office at a given time. While she did not complain, Virginia found solace in the realization that, at worst, a year of experience at Sunnyside was a gateway to a new job the next year. While there were tensions, Virginia also found early success.

While Sue was absent due to her illness, the principal had asked Virginia to take Sue’s Advanced Algebra class. Virginia was very familiar with the book, having tutored it in Glenhaven for several years. Sue and Larry had developed extensive lesson plans over the

summer, and now Larry found himself working with this new hire, Virginia. Larry was a very stern man, and he and Virginia would find they disagreed on many things, but they “eventually became friends.” Their teaching styles were very different. Importantly, however, when her students’ grade distribution was comparable to Larry’s on the first test, she earned respect with Larry and her colleagues. She could teach Advanced Algebra, and she could teach it as well as Larry! It was a “lucky wedge” of acceptance into the department. Perhaps time offers new perspective, as looking back on her difficult early years, she recalls, “Even when the department was bad, the intellectual discourse was often pretty interesting.”

Virginia’s supervision was in the Math Lab, a tutoring room staffed by math teachers, and she began to notice some unusual math techniques among the students. Virginia discovered very quickly that Tucker N.’s philosophy had been to focus on the smartest students and to emphasize speed over conceptual understanding, and this permeated the department. She discovered that students in the higher-level math classes were using “patterns” to solve problems. If they saw a certain type of problem, they were supposed to employ a “trick” to solve the problem, with no conceptual understanding of the process. Virginia remembers them telling her, “We were told if we saw THIS, just do THIS,” and “they would take things away and move things around and have no idea why!” So, Virginia started to teach them why, and the students soaked up her explanations and appreciated it.

There was a tradition that the football players would ask a teacher to wear their jersey before the Homecoming game. The following year, one young man, well known for his talents on the football team, asked Virginia to wear his jersey one day because she “made math make sense” to him. While she made progress with students on increasing their understanding of

math, Virginia also noticed that there were few young women taking upper level math classes, and suspected it might be related to the way math was being taught.

Her liberal arts background and her Master's program at Northwestern University led her to question why the department was losing so many young women between their first and fourth years of high school. Virginia was then finishing her Master's degree in Education and Social Policy, and she wrote a paper on socializing freshman into Sunnyside High School which later helped to shape advisory programs still in place today. She looked at math enrollment data and discovered that very few of the girls who started in the higher track as freshmen actually stayed on that track into Calculus. "We would have at most four girls in Calculus, down from 20-25 freshmen. We were losing almost all the best girls. When you teach for speed, girls aren't really interested in speed. They are interested in how things connect and relate to other things...perhaps a liberal arts view of math."

### Virginia as Change Agent

Virginia had been hired as a potential change agent, and she started to change the way her classes were taught. She remembers, "I never thought a class was engraved on a steel plate...I looked at every lesson with fresh eyes every year, even the ones I knew had gone well, and wondered if I could tweak it." She brought new technologies, utilized project-based learning, supplemented textbooks, and continually improved her lessons. Sue wrote in a formative evaluation about an observed geometry lesson: "This lesson addressed a particularly thorny lesson topic, one with which Virginia had been dissatisfied for years. She was rightfully pleased

about finding a new approach that really worked...The result was a lovely lesson” when she turned the thinking over to students as much as possible.

Virginia shared new projects and class assignments with others. Sue watched her hunch unfold in Virginia’s actions: “Virginia was great as someone who would build on ideas, and have ideas of her own. She did things by example and tried things with other people.” Virginia was not pushy, and did not intimidate people. Sue observed, “[Virginia] was very aware of the fact that she’s a very intelligent person and very knowledgeable, but she goes to pains to not let that show through very strongly, not that other people were unaware of her abilities, but she didn’t try to flaunt it and she didn’t try to intimidate people.” Sue continued, “I think that she could easily be intimidating because she is so competent, so polished, and so articulate and insightful...but she just laid low.” While she may have been humble, she was glad when other teachers used her projects years later. She remembered, “This is cool. This has really lasted.” She felt that she “left a lasting impression on the course and this was a sense of accomplishment.”

Eventually, she was assigned to a given course to rewrite the curriculum and change the way a particular class was being taught. Sue remembered in an interview, “It became clear that she was great with all different kinds of students for different reasons...She could handle building a strong curriculum for the lowest, weakest students and could deal with them as a mentor and with their emotional needs, as well as for the very gifted kids [and their needs].” Sue observed that Virginia saw each course as “something to mold into an experience that can move students to higher levels and to more complexity.”

Every time Virginia taught a class, she took every opportunity to use her creativity. For example, she created student projects that seemed “outside the scope of what we were really

doing,” but that actually allowed the students to succeed in new ways, such as a project on angles through which a young man discovered his love of photography. He had taken “beautiful pictures” of rooflines and other structures. He later pursued a degree at an art institute. She enjoyed “putting [her] knowledge together in a way that makes sense for the kids and trying to make it meaningful, interesting, and memorable for the kids.” Virginia feels that she has “a big creative bone” and shared that “whenever I take those mind tests, I am always on the analytic side but also very high on the creative side.” She feels she needs creativity to be satisfied, and Sue also believed that creativity was “essential” to Virginia’s happiness with teaching. Virginia reflected, “Teaching is one of the most creative professions you can be in because you are constantly creating, revamping and rethinking and getting an idea and turning it into another idea, and then taking that and refining it further and making it better and better and better.”

After she developed a class, either she felt it was time to move on to improve another class or would be asked to do so. Among the courses she worked on were: Enriched Pre-calculus for gifted juniors; College Algebra; Functions, Statistics, and Trigonometry; Algebra (using the University of Chicago curriculum she had helped developed), Enriched Geometry for gifted freshmen; Advanced Algebra with Trigonometry Honors; Junior Geometry; and Geometry (she also collected data to evaluate changes to the second edition of the University of Chicago Geometry text). Importantly, she seemed to benefit from the intellectual stimulation of this aspect of the job. She strongly believes that teaching fulfilled an intellectual need, and if it had not done so, she may have sought a profession that could better fill that need. She shared, “Teaching meets a huge intellectual need...it’s complex, analytical and requires synthesis...I would be unhappy in a career that did not permit me that level of thinking.”

Virginia reflected, “You choose your profession for a variety of reasons. Teachers choose teaching [in part because] they are inherently somewhat intellectual. They like working within their discipline. I would have enjoyed teaching history but have always loved math, and working within the discipline of mathematics was interesting to me.” She continued, “Teaching is the perfect profession for me because if you do it the right way, it’s constantly stimulating intellectually, both on a day-to-day basis in terms of delivery, and a long-term basis in terms of planning, and even a longer term basis in terms of changing.”

Others noted that intellectual stimulation seemed to be crucial for Virginia’s happiness in teaching. Sue, Jeff, Jennifer, and John, former mentee, all described during our interviews Virginia’s intellect and specifically the satisfaction of her intellectual needs through her work. She enjoyed the intellectual challenges and problem-solving aspects provided by teaching, including finding creative ways to meet varied student needs.

### Teaching Students

Virginia strived to meet student needs, not only academically, but also socially and emotionally. Evidence for her teaching skills is found in her National Board Teacher Certification portfolio. She described her lessons, her movements in the classroom, and student responses to her lessons. It seemed that everything she did was for a purpose, and students responded to her teaching appropriately. When asked what Virginia’s classroom looked like on a typical day, Sue reported, “The kids were so relaxed and so friendly towards her and responsive to her as a person. They enjoyed thinking...they were not afraid of math...they seemed to feel that she was going to take care of them.” In an evaluation, Sue wrote: “Building a

positive classroom climate is something that Virginia works on vigorously. Her friendly banter helps her to make personal connections with the students. Each student knew that Virginia understood his personality and enjoyed having him in class.”

Virginia saw math as a vehicle to help students to develop on two levels: thinking skills and the courage to tackle something they did not think they could. Her desire to help students succeed seems to reflect her own need to achieve, as she reflected, “A big part of my psyche is a sense of accomplishment. I don’t feel as if I had a good day or week unless I feel that I’ve accomplished something...teaching always gave me that.” Virginia has many success stories, most of which involve students who did not believe they could “do math,” and she found ways to help them gain success and confidence. For example, one young man who performed at the C/D level took the challenge of one of Virginia’s projects and discovered his passion for art. He had taken pictures of rooflines, slopes, and differently-shaped houses, and carefully assembled an A-level project. Virginia encouraged him to take art, and he eventually went to art school. While some students suffered a lack of confidence, she found that others were overconfident in their abilities and faltered.

Those who had been in honors and gifted classes and had always done well in school even without much studying sometimes struggled when they came to her classroom. The first quiz was often challenging for students who had never had to study. When the daughter of a school board member earned a D on her first quiz, Virginia received a call from this concerned, but practical and level-headed, mother because her daughter was inconsolable. Virginia had asked students who had not done well to speak to her one-one, but this young woman had not.

After conversing with the mother, Virginia and the student talked, and the young woman expressed her fears of being unable to do math after she had excelled for so long. Virginia asked her if she had studied for the quiz: she had not. Virginia helped her realize that she must now work harder and study for quizzes and tests, and they talked about ways to prepare for the next quiz. Her mother called and thanked Virginia for helping her daughter to realize that she needed to work harder and study rather than give up, a message she had wanted her children to get. The young woman became more self-directed and “simply a star...an amazing student.” While Virginia frequently gave academic support and advice, she also found herself in the role of a sort of counselor.

Virginia later taught that young woman’s brother, who had suddenly become rude in class toward the end of the school year. Other kids noticed the change in behavior and were turning around and asking him what was wrong. His grades had also been dropping. Sensing something might be wrong, Virginia asked him to meet with her privately. As they talked, he became distressed and started to cry. He finally revealed that he loved both clarinet and running, but would not have time to do both during his senior year. Virginia told him it was a difficult choice, suggested that he make lists comparing the two, and encouraged him to speak with his parents about it. She called his mother and explained the situation and that he would be asking his parents for advice. Eventually, he settled on the clarinet, as he was interested in going to a music conservatory after high school.

While most student relationships were similar to these, one very special student stands out. Sam was an “exceptionally bright Hispanic student who had a terrible home life.” Virginia and Sam had a good relationship: he liked talking with her and she thought he was a student who



needed more support. On the day before Thanksgiving, a day most students flee school as quickly as possible, he was “hanging and hanging” in the Math Lab after school. Virginia locked up and walked out, and as they approached the doors to the outside, Sam quietly said, “I won’t be having dinner with my family tomorrow.” His mother did not want him at the family dinner with her current boyfriend, so she told him he was to go to the library for the day. The library would be closed, so he planned to stay in the nearby park. Virginia thought this the “ultimate cruelty: what mother would tell her son he was not welcome at the Thanksgiving table?”

Without hesitation, she asked, “Well, will you have dinner with us?” He quickly agreed. She later was a little concerned, as she had not checked with her husband, and they were planning a small, quiet dinner. It crossed her mind that Sam might be uncomfortable having dinner with a man he had never met. They picked him up at Sunnyside the next day, as he did not want Virginia to see where he lived, and brought him to their home for dinner. She was aware of the contrast in socio-economic status: she and her husband lived in a comfortable suburban home and Sam was a student who lived a transient existence moving from apartment to apartment with his family and sometimes sleeping on other people’s couches.

They lit a fire and played classical music. Sam and her husband comfortably conversed. “My husband can carry on a conversation with anybody on the planet. I don’t know what they talked about: it could have been the news or one of Ward’s life stories.” She did not know that Sam was a vegetarian, but he could eat the rolls, salad, and broccoli, and “he ate a LOT of broccoli! He looked so happy.” Afterwards, he said “That was wonderful. It was so quiet.” Sam conveyed in an e-mail interview that “Thanksgiving at her house was very nice. Her husband was very friendly. We talked for hours about all sorts of things: academics, my goals

and aspirations, even parts of our lives.” Virginia reflected, “I think it was because he lived in chaos, this must have been like paradise.” Sam confirmed that Virginia’s kindness was a welcome break from the many problems he had at home: “an emotionally abusive step-father and I was moving around many different apartments, and at points, homeless, for lack of a better word.”

As Virginia talked about Sam, she reflected on her battle with cancer. Virginia believes that students like Sam were one of the reasons she survived typically-fatal pancreatic cancer. She was diagnosed in 2003 and battled it for many months. She had time to reflect on her purpose in life, as well as the activities she wanted to continue and those she wanted to discontinue. “It is, essentially, a death sentence to 95% of the people who get it...the gift that cancer gives you is that you realize every day is precious...I really had to do the things I loved and brought me joy and not do the things that I hated.” As soon as she decided that, she thought, “Well, then I have to go back to the classroom because that gives me enormous amounts of joy to be in the classroom.” Indeed, Sam, in his e-mail interview, shared that Virginia “stayed in teaching because she loved it more than anything else.”

Virginia wonders what would have happened to Sam if she had not survived cancer and returned to teaching. She pondered why she survived a cancer that killed almost all of its victims. She remembered, “Well, there must be meaning to this beyond just me surviving. There must be some meaning.” She wanted to make her life “more meaningful, more Christian ...not church Christian...but in a sense of Christians are called to do unto the least of those.” She mused, “I was always pro-kid, but then I thought, “Okay, who else would have been there in the same way for certain kids since I seem to be the one they went to?” Teaching and being there

for kids like Sam was “a way for me to act out, live out, what I believe to be everyone’s, every Christian’s, every good person’s thing to do. I mean the golden rule in every religion.” While offering Thanksgiving dinner was nice, she hopes that he remembers her as the one who advocated his admission to Harvard and who had asked people to donate towards the purchase of a laptop he could use there. Amy, Sam’s guidance counselor at Sunnyside, confirmed Virginia’s role as both an important mentor and someone who facilitated Sam’s application to Harvard. Sam remembered Virginia as an advocate, a mentor, a personal friend, and someone who believed in him.

Jennifer was the department secretary who typed the letter of reference Virginia had written on Sam’s behalf for his application to Harvard. She remembers, “[It was] the most beautiful letter...I was crying typing it. She knew this child, KNEW him” (her emphasis). She continued, “This child knew Virginia cared about him enough that he would contact her even when he was not in her class anymore, come back and talk to her, and not just about math,” but also seeking book recommendations, and sharing, “I am interested in world religions now. What do you think?” Virginia would have these long conversations with him.” While Sam is one of many success stories, Virginia did encounter a few problems with students over the years.

When asked about difficult situations with students, she shared a story of a young man who had cheated on a math test in Freshman Enriched Geometry. She had returned a test with her usual red large X’s to cover spaces where students left problems blank. After they had gone over the test, he came up to her and showed her his completed work and stated that she had made a mistake in grading and he should get credit for the problem. She asked him, “Are you sure you

did not just realize how to do it in class and maybe do it while we were going over the test?” He answered, “No, I would never do that.”

She continued the conversation after class. She understood the difficulties in adjusting to this class. At their own schools, each student had been a “top dog,” but this class was filled with “top dogs” from three middle schools and several private and parochial schools. Usually, when Virginia had a conversation with a student, they admitted to making a poor choice and they worked out the situation together, but not this student. He was adamant that he did not cheat, and said, “I am going to go home and tell my parents,” to which Virginia replied, “Please do, as I will be talking to your parents, as well.” Then Virginia took the paper to Sue, the chair. They brought the paper to the science department and used a microscope to confirm that he, in fact, had written over Virginia’s red grading pen. Sue took the paper to the assistant principal and relayed the incident and confirmation.

The parents, Sue, the student, and Virginia met and discussed the situation. Virginia remembers the father perhaps being a lawyer, as he threatened legal action against Virginia and the district. The student “swore on his grandmother’s grave that he did not cheat.” The assistant principal supported Virginia, indicating that if the parents wanted to sue, the district would back Virginia. Virginia thought about the disruptions to her teaching with depositions, court time, etc., all over four points. He had earned a B instead of an A on the exam. She could have assigned a zero, but had not because it was the first exam for this proud freshman. To avoid a disruptive court battle, she gave him the four points. Thereafter, she photocopied all of his exams prior to returning them. She continued the practice the following year, when he was again in her class. She did not trust him, but maintained a good teacher-student relationship with him.

While most of her relationships with students were good, she remembers one student who frightened her.

It was the mid-1990s, and the Internet was still young. Few people knew how to access it and use it. A couple of students told her that Jacob (name changed) had posted online what seemed to be threats against Virginia. Jacob, a senior, was the star quarterback. He was counting on a football scholarship to college. He was capable of earning good grades in her math class, but did no homework or preparing for quizzes and tests. His grade was very low, and Jacob blamed it on Virginia.

The principal was away at a conference, so Virginia talked to one of the assistant principals, Jeff. He shared in an interview that there was no protocol for this situation, and the school administration and the police needed to “figure out how to properly and legally investigate” the reported online threat. He remembered, “The Internet’s really relatively new...this is uncharted territory...we had to determine what our rights were and how far [we were able] to reach beyond schools.”

Virginia was concerned at the slow pace of the investigative efforts. This was the first time that she felt that the administration was not supportive. She had always felt like a “favorite child” of the administration, but now when her safety was at stake, she felt as if they were not doing enough, quickly enough. Virginia did not know, however, that even the police “had to do some investigating themselves, because it was new to them, also.” Jeff recalls that there was a police investigation and the phone company was involved. While she perceived the administration as moving too slowly, the administration and the police were determining the best course of action for this novel situation.

Since she could not access the threat herself, Virginia was unsure if it was serious, but trusted the students who had told her of the threat. She discussed the situation with her husband, Ward. The student could drive, and her house was easy to find, so they called a locksmith to have the locks re-keyed. If the threat was real, they at least would sleep better that night. This was the only time Virginia seriously considered leaving teaching while at Sunnyside: no job, no matter much she loved it, was worth her life.

Fortunately, she did not have to make that choice. Ultimately, the administration resolved the situation, but Jacob was still in her class the next day. Virginia behaved as usual toward him, so she would not reveal that she knew of his possible threat. The principal returned from the conference, and showed up at Virginia's door, inviting her to come to her office when she was free. The threat was verified, but it was not specific enough to warrant serious discipline. The principal offered to withdraw him from Virginia's class, and his schedule was changed so that he would never be near her classroom. Jeff verified that this is a usual consequence for this type of behavior: "It's usually best to remove that student. It makes a teacher feel more comfortable. It sends a message to the student. There's a conference with the parent, and usually there are some guidelines" given to the student concerning future infractions and consequences.

Jacob's parents, who initially claimed their son would do no such thing, wanted him to apologize, but Virginia worried that a "forced apology might injure his pride and feed his anger." Virginia also asked that his website be taken down. This situation was extraordinarily unusual, and her relationships with students were generally satisfying and peaceful. Virginia, relieved that her safety was assured, remained in teaching at Sunnyside.

Notwithstanding that difficult situation, her relationships with students contributed to her remaining in teaching, and, in fact, it is the one thing she still misses about teaching. Working with students was “fun to the last day,” and she knew that working with students “would be the one thing I would miss the most” in retirement. She truly enjoyed almost every day and looked forward to being with her students. Her students returned her affection. Virginia provided copies of dozens of thank you notes from students over the years (see Appendix K for examples).

Consistently, students expressed their appreciation for her teaching, for helping them gain confidence in many aspects of their lives, and for imparting life lessons beyond the classroom. Dozens of students wrote notes of appreciation over the years, all of them expressing similar sentiments. Allison wrote, “Thank you for being such a guiding light for me through high school.” Annie expressed, “It made all the difference in the world to have a teacher who understood what I was going through... You made it easy to understand everything (even proofs) and I really enjoyed the class.” Kristen shared, “You taught me to take responsibility for my actions... I have never had a teacher as gifted as you... It seemed as though you made a special effort with me to help me succeed... Your smile always brightened my morning and your persistence drove me to success.” Many of them were signed with “Love.” More than relationships with colleagues, personal growth, and having her intellectual and creative needs met through teaching, she credits her relationship with students as the most important factor in her retention. Just as she usually had good relationships with students, so she usually had good relationships with parents.

### Parents

Except for a few difficult situations with parents, Virginia's relationships with parents were very good. Virginia was known to have high expectations, and while some parents of gifted students were initially concerned when their freshman students encountered a serious challenge for the first time in their lives, parents appreciated the academic rigor and the level of independence their students developed. Jennifer was a parent who shared during our interview: "I loved Virginia as a teacher. I think my daughter received an excellent education, not only mathematically, but also life problem-solving...sometimes students had to collaborate with people they did not get along with, but they learned to cooperate with all different people."

She continued, "She also taught them to think, and she taught them responsibility, because they were responsible for getting the work done...At the very beginning, they're not used to having that responsibility. It's overwhelming to them [to realize they] are not in elementary or middle school anymore...they grow up and they leave her classroom better students, better people than when they went in, truly."

When her own daughter failed the first test, Jennifer told her, "You have to study now. You have to do it. This is high school." Jennifer continued, "I think almost all parents stepped back and said, 'You know what, my kid needs this. They need to realize that they need to step up.'" Indeed, Virginia made the same observation. Students, especially gifted and honors students, had to adjust to a level of independence and academic rigor absent in their prior schooling, and the majority of them did so, sometimes with Virginia's help and encouragement. Jennifer felt that Virginia excelled at finding "something in that child that you can connect to, and the child will say, "'Wow! This teacher gets me.' [Students] try their best because there's a



connection.” Jennifer’s friends sometimes contacted her to ask for “tips” for their upcoming freshmen. Jennifer always responded, “You are going to be so grateful your child has her, you really will.” Later, the parents told her “You know what, you’re right.” When Jennifer’s daughter was in college, she still talked about Mrs. Highstone. Jennifer related, “Every once in awhile, she would say, ‘Thank God I had Mrs. H. because I knew to do [an assignment] ahead of time because I remember her saying this was going to come up in life, and it did.’”

During the interview, Jennifer repeatedly used the words “great” and “awesome” to describe Virginia. She summarized her perception of Virginia Highstone: “She just cared about these kids. It’s a calling. It’s not just the academic part of it. It’s the ‘I have something to contribute. I can help these kids. I can make a difference in someone’s life.’ And she did. Every day...She is really an exceptional person.” Other parents expressed appreciation via e-mails to the principal. One parent wrote in a document provided by Virginia, “what she has taught [my son] about a teacher’s willingness to be fair, honest, as well as tough is a lesson he can take with him out into adulthood. Thanks for creating an educational environment that teaches great lessons beyond the academic ‘stuff!!’ ” It is that ability to teach lessons beyond academics that helped Virginia support students through a national emergency.

### September 11, 2001

There may be few teachers who can report experiencing two national tragedies during their teaching career. Her experience 38 years earlier with John F. Kennedy’s assassination helped Virginia respond to the unique events of September 11, 2001. It was on this day that the United States was targeted in a terrorist attack that destroyed the World Trade Center in New

York City, damaged the Pentagon, and targeted a third site in Washington, DC (this plane was brought down over Pennsylvania by passengers). School was in session at the time of the attacks.

Virginia was about to give a quiz in her math class when the principal broke the silence with the announcement that two planes had struck the World Trade Center in New York. The students looked at her, expressing with their eyes their uncertainty and confusion. She considered her options: talk about something they really knew little about, turn on the television and watch the coverage, or continue with the quiz. She remembered her experience at Chicago Elite with the Kennedy assassination. She decided, “Normalcy. Make things as normal as possible, and the students will feel more secure.” She handed out the quiz, and the students focused and completed the quiz. Sometimes, however, tragedy struck closer to home, and events called for something other than normalcy.

### Coping With Loss

While September 11 was a jolting experience, it did not compare to suddenly losing a young woman to death just a few years prior to that fateful September day. Virginia remembers it as “the most traumatic experience I had as a teacher.” Sarah was a talented student: “friendly, active, healthy, brilliant at math,” who mysteriously died in her sleep. Sarah was one of the brightest students Virginia had ever taught. When she first entered Virginia’s class as a freshman, Virginia was concerned. Sarah chose to do only the most difficult math problems in the homework assignments, having assessed the easier problems as unnecessary. Virginia feared Sarah would not do well on the first test, but Sarah scored a 99%. Virginia reflected, “Sarah is

the one who taught me that not every kid had to do all the math homework.” Sarah continued to excel, and remained on the higher math track. Virginia taught Sarah again for Junior Enriched Pre-Calculus. One Saturday in May, Sarah’s mother went to wake her up for an SAT exam, but Sarah had died from an undiagnosed heart ailment.

Word spread quickly, and Virginia received five phone calls from students and one from a Sunnyside social worker. Her classmates were fond of Sarah, and her sudden death was difficult for the class. Social workers, absent when Kennedy was shot, but present on that Monday morning for this tragedy, helped Virginia to help her students recover. They planted a pink ballerina magnolia tree in her honor, chosen because it blooms the week that Sarah had passed away. Virginia and her class chose the tree themselves and hand-dug the hole. When the new school was to be constructed, Virginia also oversaw the careful relocation of the tree to a safe location. The tree still blooms every spring. Until Virginia retired, Virginia presented a scholarship each year, funded by Sarah’s parents, to a student who embodied Sarah’s spirit and abilities. Her parents wrote a note of appreciation, a copy of which was provided to me by Virginia, after the 2003 presentation: “Once again, you have made the presentation of Sarah’s scholarship a very special event for us...and we appreciate what you do to make this way of remembering Sarah so meaningful.”

While helping a classroom full of students recover after Sarah’s passing was difficult, Virginia also found herself helping a few students cope with the death of a parent. Joe had come to school early for math help, and asked Virginia, “What do you know about hospice?” Having lost her own mother to cancer at a young age, she was at ease talking with him. As they talked, it became apparent that Joe did not understand the role of hospice and was actually unaware that

his mother was dying. Between his parents, the hospice workers, and Virginia, Joe came to understand. In subsequent conversations, Virginia drew on her own experience of losing her mother. Of course, she told the social workers about Joe, but he seemed only to want to speak with Virginia.

When Joe's mother passed away, Virginia attended the funeral. When he came to her room after the funeral, she asked every day how he was doing. She remembers, "Some of the things that only kids whose parents have died know, I could say." She asked him questions about specific feelings, and reassured him that he was not crazy to want to check on his father to be sure he was alright. She shared with Joe: "I checked on my father for five years after my mother died...because I kept thinking he was going to die, too." Several years later, Joe introduced Virginia to his fiancée over coffee. They have since lost touch, but Virginia recalls, "He was very special to me. And I think I helped him through a bad time. Only kids who have lost a parent really know what it means to lose a parent as a child."

Virginia seemed to understand students in many ways. She often supported them emotionally and socially, but always, the academics were vitally important. Academically, she pushed them forward, often to achievements they could not themselves believe possible until they met Virginia. Just as Virginia helped her students move forward toward personal excellence, she also pushed herself forward professionally.

### Professional growth

Virginia is thirsty for knowledge. She is "personally most happy" when she is "learning something new, and in teaching that is constant. It could be a new course but often is a new

connection between old ideas or a new insight into something you have taught for years. It makes the job constantly interesting to someone like me who likes learning for its own sake.” While her formal mentor at Sunnyside was not helpful, Virginia remembers, “I had people I learned from. I was always looking to learn from anybody who did something better than I did.” While she helped students grow, Virginia recognized the importance of growing professionally and of helping others grow. She recognized that the job grew more complex, but so did she. She recalls, “I became more complex as a teacher...my thinking became more complex.” Her own professional growth met personal intellectual needs and fostered feelings of accomplishment.

One of her most important personal growth experiences was earning National Board Teacher Certification in 2000. A cohort class was offered and she felt ready for this process of professional reflection. She generously provided copies of her entire National Board Teacher Certification application. She described a new lesson on sinusoidal models as applied to weather data using a location where individual students would choose to live. She used this assignment to address “Senioritis,” and it was “immediately popular with students (seniors in high school fervently desire to live anywhere but home!).”

She also described a modeling assignment that required students to write a technical paper. Her description of the assignment reveals the essence of much of her philosophy of teaching: “Writing this technical paper elicits mathematical thinking and reasoning at every phase. The student must carefully choose a data set...Does the choice of a model fit the look of the data – and their common sense understanding of the real world?...Writing to analyze a messy data set opens a window onto student thinking in a way that answering short, set questions on other assessments does not.”

Similarly, her philosophy of teaching is apparent as she described a videotaped lesson: “I purposely moved from the front of the room to its side...My role in this lesson is not instructional...it is to mediate and encourage peer interaction, to help students find and hone their preferred problem-solving style, and to provide a structure onto which to hang their understanding.” Virginia constantly sought ways to improve student learning experiences and achievement.

Her quest to improve student learning led her to work on several publications. She worked with teams of authors on several University of Chicago School Mathematics Projects: *Geometry* (2<sup>nd</sup> ed.) in 1993-1994, *Functions, Statistics, and Trigonometry* (2<sup>nd</sup> ed.) in 1996-1997, and *Transition Mathematics* (3<sup>rd</sup> ed.) in 2005-2006. With two other authors, she wrote “The Algebra of Expression and Equations: Starting Freshmen off Right in High School” an article included in a book for designing high school units for gifted students. Her article, “Virginia Highstone: Equations That Model Growth and Decay,” was included in Germain-McCarthy’s (2001) *Bringing the NCTM Standards to Life: Exemplary Practices from High Schools*.

Her personal thirst for learning also led her to many workshops, conventions, and additional coursework. Outside professional development opportunities made her realize, “I can look outside of here, outside of myself, outside of the school, outside of the department, to refresh myself.” She enjoyed discovering novel ways to teach math and make it more accessible and interesting for students. She attended many workshops across the country. Notably, she cites her participation in technology workshops as important to increasing the use of technology at Sunnyside. She introduced several computer and calculator programs to her classes, and their use increased through the department. For example, in 1994, she attended the Exeter Conference

on Secondary Mathematics and Technology, and immediately implemented new technologies in her classes. Helping others grow professionally also contributed to her positive feelings toward teaching.

### Helping Other Teachers Grow

In addition to growing professionally, she helped other teachers to develop. She presented at National Council of Teachers of Mathematics conferences in San Diego, San Antonio, Orlando, Las Vegas, and Atlanta, focusing on student learning through projects and alternate assessment tools using technology. She also presented a variety of topics at Illinois Council of Teachers of Mathematics conferences. She shared her expertise on Geometry and Algebra at University of Chicago School Mathematics Projects Conferences in Chicago, Palm Beach, and Wisconsin.

Closer to home, she was a board member of the Metropolitan Mathematics Club of Chicago and helped to revive a forgotten day-long workshop for 600 math teachers to improve alignment with the National Council on Teaching Mathematics standards. She enjoyed sharing both through formal presentations and informal means her ideas and materials with others. P. J. recalled, during our phone interview, that he met Virginia “when she gave a workshop on Sketchpad. One of the best workshops I’d ever attended.” He provided to me a copy of a letter of reference he had written on her behalf for a teaching award. He stated, “She is all about sharing ideas. She is the most generous, wonderful person.” Not only did Virginia share her ideas for math teaching, she also encouraged and mentored him in seeking National Board

Certification. She had been offering cohort groups for National Board Certification, but he had two young children at home and could not commit to weekly meetings.

At one math club meeting, they talked about his difficulties in pursuing National Board Teacher Certification. He remembers her offer, “Well, look, you’re a terrific teacher. You’ve done portfolios before. This really isn’t going to be a problem for you. Why don’t you just do it, send me your stuff, and I’ll read it for you.” Those words of encouragement spurred him on, and he said of her feedback: “She gave me really good feedback, and on every question on which I took her advice, I got an excellent score. There was one question that I did not take her advice, and I did not get an excellent score.” In addition to helping individuals earn National Board status, she led cohorts to help other teachers achieve National Board Teacher Certification. While she supported advanced teachers, she also guided new teachers through formal and informal mentoring relationships.

She mentored four new teachers at Sunnyside, using cognitive coaching to help them reflect upon their teaching practices, implementation of curricula, and their relationships with students and peers. She served as cooperating teacher for eight student teachers, two of whom were hired by the department after their experiences. She mentored John, former mentee, who recalled during our interview his experiences with Virginia. Like Virginia, his undergraduate major was not math. “We often spoke about the arts and the idea of being a whole person, dealing with students as a whole person and not just with the mathematics blinders on.”

He recalls that Virginia was always available to discuss any issues and questions, and he sometimes observed her class to see her classroom environment. They had the usual sharing of materials and tips on classroom management and procedures, but he remembers the most



important message he received from her was the idea of challenging students. “Her goal...was to challenge students to not just learn something by rote and...give it back...but to assimilate the information and synthesize it and use it in a different context.” He reflected, “That’s always been a cornerstone of my teaching, in making sure these concepts can be applied outside of these specific [classroom and homework] problems.”

When asked about his overall mentoring experience, John felt that his first year was an “enriching experience,” but that he continued to learn from Virginia. He reflected, “Virginia was one that, despite everything that she’d accomplished, didn’t stop learning. She would go to seminars, she would continue to read about pedagogy and develop her understanding of teaching, and always reach out to her colleagues.” He continued, “She definitely led by that example, that even at the pinnacle of her career, she was still learning, still collaborating with other teachers.” He surmised, “I think that she was so willing to continue to change and grow throughout those years is what led to her longevity” in teaching. Her examples led others to grow, but she also “was the mom of this great big family” of a supportive department, and actively informally mentored her colleagues in a department that grew increasingly collaborative over time. In an evaluation, Sue had written, “Virginia continues to play an important role in the classroom, the Math Department, the school, and the wider community.”

Sue shared with me during an interview, “It’s not just creating new methods, but watching everything that goes on in your classroom, in the school environment, in the department, with other teachers, and hooking it back to the mathematics and thinking about how it all blends together. I think you need someone to help you think about what you witness every day.” In an interesting example of orchestrated informal collaboration, Sue and Virginia would

sometimes meet in the office and engage in a discussion about various teaching issues, philosophies, and concerns, and often invited others to join. Sue was a particularly close colleague and friend, and was essential to Virginia remaining at Sunnyside.

### Sue

Virginia's friendship with one colleague, Sue, was crucial to Virginia's retention in teaching. While Virginia and Sue had a very good working relationship, it was apparent from speaking with both of them that they genuinely liked working with each other and appreciated each other's company. Virginia reflected, "We enjoyed each other personally, but we enjoyed each other in terms of the work... We'd have these really deep, really deep and yet far-ranging discussions" about student learning and teaching. "Nobody else in the department wanted to think or talk about the things we talked about." When asked if her relationship with Sue helped her to remain in teaching, Virginia responded, "Oh, absolutely. No question." She continued, "There's no question that I probably would have left Sunnyside without her."

In our interview, Sue recalled a particularly poignant drive to a conference in Ohio in mid-September, 2001. They had been scheduled to fly, but decided to drive after the events of September 11. Sue described the experience: "The countryside looked so beautiful and driving across the farmland of central Ohio was just phenomenal. That was a special kind of experience. We share a love of history, an interest in politics, and talking about people and life and the universe and everything. We did a whole lot of talking there. We've just done so much talking over the years and I'm starting to tear up. I don't know why... these are tears of happiness... She's very much a friend, a compatriot, an inspiration, all kinds of things." As Sue

wiped away a few tears that had surprised her, it was clear that Sue's relationship with Virginia was as important to her as Virginia had described her relationship with Sue. In addition to supporting people in her department, Virginia also reached out or was invited to work with others to improve various aspects of education.

### Committees

In addition to her continued professional development and contributing to the improvement of others, Virginia also served on several committees to improve context and education within the school and district. For example, she was chair of the Sunnyside Advisory Team, a committee comprised of staff, administrators, parents, and students. Their task was to find ways to improve educational experiences for students at Sunnyside. Their initiatives included developing the Freshmen Mentoring Program, creating Freshmen and Senior Parent Nights, implementing anti-bullying interventions, and ending class rank. I worked with her on the School Improvement Team and a committee to increase collaboration at Sunnyside. I observed her to be intelligent, thoughtful, and always considering student needs during our discussions. Her passion for gifted education led her to work on the district's Gifted Committee on a district-wide plan for gifted students. She also worked on technology, communications, collaboration, and substance abuse prevention committees. While she was busy with committees and National Board cohorts, her efforts and excellence in teaching did not go unnoticed. She was recognized with several teaching awards, although she rarely mentioned them in our conversations.

### Recognition

Virginia expressed that “teachers don’t hold each other up enough for accomplishments,” but she was recognized for her excellence by staff, administrators, students, and parents at Sunnyside, as well as external entities. Sue observed that Virginia certainly would have been a “distinguished” teacher had Virginia been evaluated using the Danielson model. In 1998, just nine years after re-entering formal teaching, she won a State Presidential Award for Excellence in Mathematics and Science teaching. In 2002, she was a Finalist for Illinois Teacher of the Year (sample administrator and student letters of recommendation for this award are included in Appendix L). In 2010, she was awarded the T.E. Rine Award for Excellence in Secondary Mathematics Teaching, Illinois Council of Teachers of Mathematics. P.J. provided a copy of a letter he had written in a letter of support for this award: “Virginia is a model of professional growth, a leader not just by her own example but by her willingness to give her own time and energy to the development of others...it’s hard to overstate the impact she has had on my thinking about teaching and on my own role as department chair and coach to other teachers.” While P.J. could so easily see the impact Virginia had on others, Virginia recognized that in teaching, one does not always see the effects of one’s work.

### Reflections on Teaching

When asked to reflect on the meaning of her teaching experiences, Virginia paraphrased a quote by Alice Freeman Palmer (1897), a past president of Wellesley: “We come to college to know, for knowledge is sweet and powerful...it elevates the mind and makes us citizens of the world.” She had regularly shared this quote with students and parents. Virginia reflected, “To

me, that's what education is all about and that's what being a teacher is about, having a sense that it's really the process that you're involved with...that it's far bigger than you, it's far bigger than your classroom or even a particular student. It's a major endeavor that can change somebody's life for the better." She continued, "Being a teacher means casting your net into the future not knowing where it will land or what it may catch...It's a matter of faith that what you're doing in the now can have an impact in the future, and that you can be content without knowing precisely what that impact might be." Virginia is fortunate to have stayed in contact with former students and club members via notes, e-mails, and letters and knows the impact she had on them, but more often she does not know.

Virginia also observed that teaching "is essentially an altruistic profession. You are giving a lot to someone else, who may never in a million years say 'thank you,' or even *think* 'thank you,' but you still do it...and you may go the extra mile for someone who basically [resists your efforts] because you know it is the right thing to do." She noted that she chose to teach despite the lack of respect and recognition that can be felt: "They don't get respect from the public. They don't earn commensurate with the amount of work they do."

She continued, "I truly believe in education. It is one of the things that changes one's life and, truthfully, one of the things that makes the United States possible is the fact that we have a public education system which for generation after generation has brought people from one place to another and to where they want to go." Thus, Virginia had a sense of civic duty as well as altruism with regard to teaching students. Virginia's need to give was recognized by others. Jennifer, in an interview, observed that teaching was "a calling" for Virginia. "I think that really

effective, good teachers, it's a calling. It's not a job. It's 'I have this, and I need to share it.'

Virginia was one of those people that had to share it."

Virginia loved teaching and reflected, "I always found the actual teaching easy. I found that being on my feet in front of a class to be something I did naturally." Virginia continued, "If you are very lucky in life, you find a profession that brings you joy...most people don't find that, but I did, in teaching." She recalls, "I loved doing it. I was made to do it. I liked every second of it. I liked preparing. I liked the students. I liked the discipline. I liked thinking of new things to do. I liked working on a new course and figuring out how we could mold all the different levels of learning in there. I liked the collegiality with other teachers. Teaching was something I really wanted to do."

### Virginia Retires

It was fall, 2010, and Virginia was looking forward to retirement at the end of the school year with mixed emotions. She loved her job, but her husband had retired, and she now had several grandchildren who lived out of the area. She was wrapping up her professional duties and transitioning committee and course responsibilities to her colleagues, and still enjoying every day with her students. Then a routine blood test indicated possible elevated levels of a cancer indicator. She had beaten back pancreatic cancer, but she knew that if it returned, she might not be so fortunate.

She had been very fortunate in 2003. The tumor was Stage 2, caught relatively early because it had blocked her pancreatic duct and triggered pancreatitis. However, the location also necessitated a very difficult surgery. Thirteen hours of surgery and eight blood transfusions

culminated in the unfortunate news that it was not possible to completely remove all tumor cells and that eventually it would likely grow back, even with the chemotherapy. So Virginia lived with this uncertainty, and she now again faced the reality that in a few short months, she might be dead. She re-evaluated her priorities as she had when she was battling cancer.

Several weeks of tests brought the good news that the cancer had not, in fact, returned, however, this scare resulted in a decision to retire mid-year. I remember a conversation with her in the faculty lounge: I was unaware that she was already planning to retire at the end of the year, as she did not want announcements, fanfare or parties, and I expressed my surprise that she was leaving mid-year. I had been impressed by her when we worked together on the School Improvement Team. She was well-respected and well-regarded as a teacher, and known for her excellence in and out of the classroom. She was an outstanding teacher who had made extraordinary accommodations for a couple of students on my caseload who were gifted and had autism. She had understood them in a way few teachers could, perhaps because her own granddaughter has autism. I was unaware that she was older than most retirees at 71: she was so young, vibrant, energetic, and positive. She was always one who said, “Why can’t we do this?” and “How can we make this happen?” when others saw only the impossible. She explained her recent cancer scare and the reality that her life could be cut to a few short months with little notice. She wanted to see her grandchildren and travel while she still could. As much as she loved teaching, it was time to focus on spending time with her family.

I was sad to see this wonderful teacher leave, but relieved that the return of the cancer was a false alarm and happy for her that she would be able to see her family more often. We were professional colleagues, not really friends, but she had done amazing things for students

with and without special needs, and I had learned from her by watching her involvement on committees and with students. Students had always talked about what a wonderful teacher she was, and described having a depth of caring and knowledge I did not hear about other teachers. She does see her grandchildren regularly, but she also now works on an ACT tests committee, travels to two states to help align their curricula to Common Core, and continues to mentor teachers seeking National Board Certification. In fact, she offered to mentor me through the National Board process “after the doctorate.”

At the end of my last interview with her, the doorbell rang. A boy about ten years old was there for his tutoring session, smiling and eager to learn. It felt like such a natural juxtaposition of events as I exited and then he entered her home. That afternoon, Virginia had first spent two hours helping me with my research, and now she was going to help a little boy with his math. My first thought was that she must have boundless energy, and my second thought was that this is actually how she *recharges* her energy. She thrives on teaching and helping others!

I thought about the past year of discussions with her, the themes I had discovered so far, and the lessons that I could take away from this teacher. Already, I sensed that motivators, in particular intellectual stimulation, creativity, relationships with students, and personal growth might emerge as crucial factors in her retention. Hygiene factors, those things over which she really had little control, did not seem to matter as much to Virginia. Regardless of external factors, and driven by internal motivators, she is a *teacher*.



## CHAPTER 5

### DISCUSSION AND CONCLUSIONS

Virginia Highstone is an excellent teacher who remained in teaching for many years. She dedicated herself to the academic and personal growth of students and fellow teachers, constantly strived to improve curricula, and genuinely cared for students. A series of interviews with Virginia and others and an analysis of documents yielded a biography of her teaching career in the context of her life and significant historical events. Aspects of her story are now analyzed using Herzberg's Motivator-Hygiene Theory.

#### Herzberg's Motivator-Hygiene Theory

What kept a teacher like Virginia in teaching? What factors supported her passion for excellence and high expectations of herself and her students? Herzberg et al. (1959) and Herzberg (1966) studied motivational factors in the workplace. When study participants reported feeling happy with their jobs, they usually "described factors related to their tasks, to events that related to them that they were successful in the performance of their work, and to the possibility of professional growth" (Herberg et al., 1959, p. 113). When employees reported feelings of unhappiness, they were associated with contextual hygiene factors of the job, such as salary and working conditions.

Herzberg and others developed the two-factor theory of motivational and hygiene factors, and explained how these factors contribute to job satisfaction and dissatisfaction (Herzberg et al.,

1959). Both kinds of factors meet the needs of employees: motivators support the individual's aspirations toward self-actualization, while hygiene factors meet the individual's need to avoid unpleasant circumstances in the workplace. Importantly, the factors that lead to job satisfaction are separate from those which lead to dissatisfaction (Herzberg, 1966). Eliminating dissatisfaction through hygiene factors does not induce a state of satisfaction, but a neutral state. Satisfaction can only come from motivators and the performance of the job.

### Motivators in Virginia's Story

Herzberg (1966) found that subjects reported satisfying experiences in terms of factors intrinsic to the content of the job itself (Herzberg, 1966). "The factors that lead to positive job attitudes do so because they satisfy the individual's need for self-actualization in his work...Man tends to actualize himself in every area of his life, and his job is one of the most important areas...It is only from the performance of a task that the individual can get the rewards that will reinforce his aspirations" to self-actualization (Herzberg et al., 1959, p. 114). In Virginia's case, performing the job of teaching may have fulfilled her need for self-actualization in her work.

Hersey and Blanchard (1982) suggested Herzberg's motivation-hygiene theory was reinforced by McClelland's concept of motivation. McClelland (1961) suggested that some people are motivated by a drive to achieve, and strive for personal achievement. McClelland suggested that when a need is strong in an individual, the need motivates that person to use behavior to satisfy that need (1961). People with low achievement motivation tend to be concerned with environmental factors, while people with high achievement motivation are more interested in motivators. Kast and Rosenzweig (1970) suggested that the need for achievement

underlies self-actualization. For Virginia, this certainly may be the case. Among the factors considered are Virginia's own needs for achievement and self-actualization and the role that teaching played in satisfying those and other needs.

It is important to understand that such factors must be present for satisfaction to occur, and their absence can lead to no satisfaction. These factors were motivators and included factors such as: challenge, achievement, esteem, recognition, the work itself, responsibility, advancement, the opportunity to learn, and growth. In the present study, the following satisfiers emerged: the work itself (including creativity, classroom management, curriculum, challenge, intellectual stimulation, interpersonal relationships, joy, a sense of purpose, and altruism), achievement, growth (including teacher preparation, support and mentoring, and the opportunity to learn), responsibility (including change agent, professional development of others, and committees), and recognition.

### Work Itself

Herzberg et al. (1959) utilized the term "work itself" when their respondents "mentioned the actual doing of the job or the tasks of the job as a source of good or bad feelings about it" (p. 48). Further, these were aspects of the job that gave respondents "tremendous satisfaction" which were "related to the nature of their work and were rewarding in themselves with or without specific achievement or recognition," including items such as creative work, challenging work, varied work, and an opportunity to complete a task from beginning to end (Herzberg et al., 1959, p. 61). The present study revealed that Virginia found satisfying many aspects of the work itself. These factors included creativity, classroom management, curriculum, and

challenge, as well as factors that were a source of satisfaction and good or rewarding feelings about the job, including intellectual stimulation, interpersonal relationships, joy, a sense of purpose, and altruism.

### Creativity

Smith and Shields (2013) discovered that creativity was a primary satisfier for social workers, a field similar to teaching. Hargreaves (2003) suggested that teachers became dissatisfied if creativity was constrained, and it seems creativity was an important satisfier for Virginia. Indeed, Sue believed that creativity was essential to Virginia's happiness in teaching. Virginia feels that she is very creative as well as analytical. Hence, coupled with her intellectual need, she also needs creativity to be a satisfied person.

Virginia enjoyed creating student projects that reflected an unusual application or understanding of a given math concept, such as asking students to do an artistic project involving angles. These projects often allowed students to shine in ways the student themselves did not expect. One young man, when assigned the project examining angles, took "beautiful pictures" of rooflines and other structures. He grew mathematically and discovered his talent for photography, and eventually pursued college at an art institute. This is just one of many examples of Virginia's creativity applied to help students explore mathematics, and themselves, in novel ways.

While there is some evidence to suggest that creativity may be an important retention factor, more research is needed in this area to ascertain whether many teachers at different stages

of their careers find it as crucial as did Virginia. This creativity seemed to be an asset to her classroom management, as students seemed interested in learning in her classroom.

### Classroom management

Problems with student discipline, student attitudes and behaviors have been cited as reasons to leave teaching (Brill & McCartney, 2008; Johnson & Birkland, 2003; Killian & Baker, 2006; Trisler, 1996), however, Ingersoll (2001) noted that good student discipline reduced teacher attrition, and Becker's (1994) study indicated that student discipline was not a factor in teachers' early retirement decisions. For the most part, Virginia reports success in student discipline. There were a few incidents at Chicago Elite School where Virginia was disappointed in an administrator's response to student discipline issues, enough so that when Virginia decided to leave teaching to start a family, the lack of support for student discipline issues eased her decision.

It seems that when Virginia resumed teaching later at Sunnyside, she felt more comfortable with classroom management, perhaps because she had completed a formal teacher preparation and student teaching program, found innovative ways to foster learning, was more mature, and brought the experiences of parenthood with her. When asked what Virginia's classroom looked like on a typical day, Sue reported that the kids were relaxed, friendly, responsive, enjoyed the math, and seemed to trust that Virginia would take care of their needs. In an evaluation, Sue wrote that Virginia worked to build a positive classroom and made personal connections with students. Evidence for her classroom management skills was also found in her National Board Teacher Certification portfolio. She described her lessons, her

movements in the classroom, and student responses to her lessons. It seemed that everything she did was for a purpose, and students responded to her teaching appropriately.

Virginia loved everything about teaching and felt at ease in the classroom. She looked forward every day to the fun and relaxed atmosphere she created in her classroom. She reflected that teachers are unique among many professionals because they prefer to spend time with young people rather than with their peers. For Virginia, working with students was fun all the way to the last day, and she knew when she decided to retire that it was the thing she would most greatly miss. Since student discipline issues are cited by teachers leaving earlier in their careers (Brill & McCartney, 2008; Johnson & Birkland, 2003; Killian & Baker, 2006; Trisler, 1996), there may be value in focusing on classroom management practices of teachers at various stages of their careers in order to ascertain how those skills develop, how they relate to student success, and how they affect teachers' desires to remain in teaching. It would be interesting, for example, to conduct a mixed methods study including a survey of a large number of teachers at various points of their careers, as well as a case study or narrative inquiry focusing on a few teachers in practice, and correlate study data with academic progress data. Additionally, classroom management practices have changed dramatically over the years. It may be worth exploring how teachers shift their classroom management practices over the courses of their careers and how they share that knowledge with other teachers.

Virginia viewed mathematics as the vehicle for teaching life skills and behaviors, such as confidence, respectfulness of self and others, organizational and study skills, pride in one's work, integrity, timeliness, collaborating successfully with others, respecting others, and even planning

for possible unexpected disruptions to one's work. Classroom management was tied closely to curriculum.

### Curriculum

While teaching at Chicago Elite mainly concerned direct instruction, worksheets, and exams, the predominant model at the school, she already felt the need to improve lessons and teaching techniques, a desire that continued through tutoring and then later when she taught at Sunnyside. The job itself also grew more complex over the years; however, Virginia knew that she had also grown more complex. She had increased the use of computers and graphing calculators, implemented project-based learning that has become a standard in many departments at Sunnyside, supplemented books that lacked the depth of thinking she sought to foster in her students, and continually tried to improve her material. She constantly strived to improve her curricula and lessons, even those lessons that had gone well in prior years. Her decision-making power may have contributed to her retention (Hughes, 2012; Ingersoll, 2001; 2003b; Slye, 2000). The autonomy that she had in creating and rewriting curricula has been cited by teachers as a factor in retention (Hughes, 2012). Further research is needed to determine the relationship between teachers' decisions to remain in teaching until retirement and their abilities to make changes to curricula.

Virginia enjoyed the challenge of improving her lessons and her teaching. McClelland (1961) asserted that high achievers distinguish themselves from others in their desire to do something better. They want to improve on the way something has been done. Virginia, as a

high achiever, was always striving to meet the challenge of improving curricula and teaching methods.

### Challenge

While she was “terrified” when she started at Chicago Elite, she found that teaching was “simple” and she enjoyed it. However, she also credited over-preparation and hard work that made teaching seem simple for her. For some teachers, challenge might be managing a classroom, but for Virginia, challenge came in forms that required higher-level intellectual skills, creativity, and compassion. For example, she altered, updated, and improved several math curricula. She brought increased technology to the learning experience. She helped create the University of Chicago math curriculum. She presented at several conferences. She supported other teachers in their professional development through formal and informal mentoring. She challenged herself to achieve National Board Certification. Importantly, she rose to the challenge of meeting the needs of very diverse student learners, and she strived to improve lessons. Sue noted in a formative evaluation about an observed geometry lesson that after several years of trying to improve a particularly difficult lesson, Virginia had succeeded in that challenge.

Virginia taught students with many ability levels and backgrounds, from those who struggled in school to those who were gifted but perhaps required non-academic supports. She was challenged to find the best ways to help them learn math while supporting the whole student. Her self-efficacy likely contributed to her motivation to continue in teaching (Bandura, 1997; Perriochione et al., 2008). Her goal was to have most students learning how to apply math in



novel ways, and to demonstrate an understanding that was deeper than that usually expected in typical math classes. Math teachers correlated with higher student achievement (Goldhaber & Brewer, 1996), and teachers who improved student performance stayed in teaching longer (Goldhaber, et al., 2007). Virginia enjoyed the challenge, and the concept of challenge should be further explored as a possible retention factor for other teachers. She was challenged to use her intellect in her professional activities and teaching, and that teaching met her need for intellectual stimulation was a consistent theme throughout our interviews.

### Intellectual stimulation

Virginia is very intelligent and thoughtful. She expresses her ideas clearly. She has been a high achiever her entire life, having excelled in a private high school and at Wellesley, a prestigious women's college. She reported that she has a high IQ, and her intelligence is apparent without being overt. She had majored in history, but took advanced math classes out of personal interest. At Chicago Elite School, she was surrounded by other high achievers, and found intellectually stimulating conversationalists among her colleagues. The students she taught were often bound for schools such as Harvard, Princeton, and Yale. She had experienced high intellectual stimulation at Wellesley, grew bored in banking, and found that teaching met her need for intellectual stimulation.

Later, having earned her Master's at Northwestern University and working at Sunnyside, she continued to find her work intellectually stimulating. She enjoyed the challenges of finding new ways to teach students at all learning levels, including bringing graphing calculator technology to Sunnyside. She frequently participated in or presented at conferences and

professional organizations. She also assisted in writing the University of Chicago math curriculum. She strongly believes that teaching fulfilled an intellectual need, and if it had not done so, she may have sought a profession that could better fill that need. She feels that the analysis, complexity, and synthesis of teaching on both a daily and a long-term basis met an intellectual need, and that a career that did not allow that level of thinking would have been dissatisfying.

Others noted that intellectual stimulation seemed to be crucial for Virginia's happiness in teaching. Sue, Jeff, Jennifer, and John, former mentee, all described Virginia's intellect and specifically the satisfaction of her intellectual needs through her work. It is interesting that this particular factor was not mentioned by name in the literature on teacher retention, yet played such an important role in Virginia's satisfaction and retention in teaching. Kaptijn (2009) found that affective commitment correlated with higher order personal needs among retail workers, and it may be worth pursuing research of this factor to determine the strength of this factor for retention of teachers. In addition to frequently mentioning intellectual needs, Virginia also reported that relationships with others, especially students, as well as a few colleagues, contributed to her satisfaction and retention in teaching.

### Interpersonal relationships

While Herzberg cites relationships as a dissatisfier, or something that if improved induces a neutral state but does not affect motivation, Battatori (2009) suggested that for teachers, such relationships may be satisfiers, or intrinsic motivators. For Virginia, relationships seemed to be both hygiene factors and satisfiers, depending on the level of intellectual stimulation and/or

emotional connection involved. It seems that certain relationships with others were far more important to her retention than the status as a hygiene factor alone would be expected to convey.

In general, Virginia's relationships with others were a hygiene factor that at best was a neutral factor except for a few crucial, particularly satisfying relationships. For example, her relationships with some members of the faculty at Chicago Elite and most members of the math department in her early years at Sunnyside were not satisfiers, but were hygiene factors that were dissatisfying or neutral. A few relationships at both schools were satisfiers. With these relationships, it is possible that it is not the existence of the relationship itself, but the intrinsic reinforcement she received from some other factor, such as intellectual stimulation or a deeper emotional connection, arising from the relationship, that contributed to her retention in teaching. For example, while Virginia credits the work itself as being intellectually stimulating, she also cites her relationships with intelligent colleagues and members of committees and other organizations as being crucial. She observed that even when things were uncomfortable in the department, the intellectual conversations were interesting.

Farthing (2006) found that relationships with co-workers were one of the most important factors in teacher retention. McClelland (1961) suggested that some people prefer to spend time in social relationships and groups, prefer cooperative situations over competitive ones, and desire relationships with a high degree of mutual understanding. Positive, collegial interactions are important to teacher job satisfaction (Alt & Henke, 2007; Ingersoll & Smith; NCTAF, 2007; Robbins-LaVicka, 2007) and increased teacher retention (Smith & Rawley, 2005). Virginia reported several collegial interpersonal relationships with co-workers as they worked together on collaboration teams at Sunnyside.

It is possible that emotional connections associated with some co-worker and student relationships contributed to Virginia's longevity in teaching. Manuel and Hughes (2006) stated that "Teaching and learning, at its core, is about relationships and connections-between teachers and students; accomplished teachers and new teachers, schools and communities..." (p. 22). Relationships with others are considered by Herzberg to be hygiene factors. However, it is possible that for teachers, the emotional connections within the relationships with some colleagues are, in fact, satisfiers. Virginia had cited collegial, professional relationships with others as crucial in her retention; however, emotional connections associated with some of those relationships were particularly important. Virginia described several strong emotional connections to others which contributed to her retention in teaching beyond the typical professional relationships with colleagues and students. For example, Bobbye and Virginia were close friends at Chicago Elite School. Virginia remembers they had similar educational backgrounds and were in similar places in life. It was natural that they became friends. Virginia recalled that she and Bobbye hit it off personally. In addition to being supportive colleagues, they also socialized together on weekends and off-hours. Her friendship with Bobbye from Chicago Elite School continues today.

Similarly, Virginia repeatedly cited her relationship with Sue, the Sunnyside department chair, as crucial to her retention in teaching. Virginia reported that Sue is similarly very intelligent and they complemented each other well as they worked to improve curricula. Sue recalled that the department was very collaborative and became more so over time. She noted that teachers needed to talk about what they were seeing and doing with students and in each others' classrooms, hook it back to math, and reflect on how it blends together. Sue and

Virginia, in particular, enjoyed many deep, intellectual discussions about the philosophy of teaching, pedagogy, and the ways students learn. They co-authored material, traveled to conferences together, and genuinely liked and respected each other as teachers, colleagues, and friends.

In addition, Virginia repeatedly cited her connections and relationships with students as crucial to her longevity in teaching. In fact, she stated that she knew before she retired that the one thing she would miss most about teaching was the students. Prior research indicated that emotional connections are related to passion for working with students: teachers stayed in teaching because of this passion for teaching students, their desire to help students grow academically and socially, and their care for students (Cochran-Smith, 2004; Feistritzer & Haar, 2005; Guarino et al., 2006; Sergiovanni, 2005). Noddings (1995) also suggested a connection between these elements: “Caring implies a continuous search for competence. When we care, we want to do our very best for the objects of our care” (p. 676). Thus, Virginia’s care for students contributed to her passion for teaching, fulfillment of personal needs, and retention.

From her earliest days at Chicago Elite to her last days at Sunnyside, Virginia connected with students on a level beyond academics. While she helped them learn math, she also demonstrated care for them and was open to listening to their interests and concerns. When a student named Joe shared that his mother was ill, but did not understand the purpose of hospice, Virginia gently explained what hospice usually meant and shared her own experience with the loss of her mother at a young age. She told the social worker and the counselor, but he seemed to prefer Virginia’s company, and Joe continued to come to Virginia’s room every day before school to sit quietly and sometimes talk about his mother. When Joe’s mother passed away,

Virginia attended the funeral. Joe continued to visit her daily, and she helped him through the loss of his mother.

While she supported students through personal loss, some students saw her as a mentor or confidante and came to her room before or after school to talk. Sam was one such student. His home life was difficult, but he enjoyed his conversations with Virginia. She had invited him to Thanksgiving dinner so he would not spend the day in a public park. More importantly, she took a personal interest in his application to Harvard, and she was likely instrumental in his acceptance to Harvard. He has since moved to Michigan, and Virginia and Sam remain in contact with each other. Several of the others interviewed for this study had also cited the unusually close relationships and connections Virginia had made with students as a factor in her retention to retirement. For example, Jennifer and Amy both talked extensively about Sam and Virginia's role as an adult close to him.

This level of emotional connection may be related to her level of commitment. Commitment is part of teachers' emotional connections or reactions to experiences as teachers. These contribute to depth of personal investment in students and schools (Ebmeier & Nicklaus, 1999). This emotional bond formed through commitment can lead to a motivation to work (Mart, 2013), which supports Herzberg's (1966) reported relationship between motivation and satisfaction. This may support Kaptijn's (2009) study that the satisfaction of higher order personal needs through motivation and hygiene factors is related to affective commitment; however, further study is needed concerning the relationships between interpersonal relationships as satisfiers, commitment, and teacher retention. Also worth exploring is whether emotional connections with students are necessary for teachers to find satisfaction and remain in

teaching. Perhaps emotional connections and affective commitment are related to a term that Virginia used frequently: joy.

### Joy

One does not hear the word “joy” very often, but Virginia used that word several times when she reflected on her teaching, and each time she said it, I could see the joy in her expression as she smiled and her face and hands became animated. It was as if she could not contain to mere words the joy she felt as she described teaching. Even when faced with a significant dissatisfier, such as sexual harassment or a threat to personal safety, she loved her job and her students.

Her experience seems to support prior research conducted with a group of 100 experienced teachers. Marston et al. (2006) found that fulfilling professional commitments and working with students were the highest retention factors. Similarly, others found that teachers remained because of their passion for teaching students, their desire to help students grow academically and socially, their care for students, their enjoyment of teaching, and their feeling that it was important (Battle & Looney, 2012; Cochran-Smith, 2004; Feistritzer & Haar, 2005; Guarino et al., 2006; Sergiovanni, 2005; Veldman et al., 2013). Virginia’s experiences not only support these studies, but also Curtis’s (2012) report that satisfaction with being a teacher greatly influenced the retention of math teachers at the high school level.

Notably, she used the word “joy” when she described her return to teaching after battling pancreatic cancer. She had decided to do only those things she loved, and she knew she would return to teaching as soon as possible because it brought her joy. Indeed, a study of 46 practicing

teachers revealed that their desire to remain in teaching was “primarily a function of how much they enjoyed it, found it interesting, and saw it as contributing to some salient aspect of their self concepts...teachers [therefore] could be primarily concerned with whether teaching supports fundamental self processes rather than aspects of teaching such as low salary and lack of administrative support” (Battle & Looney, 2014, p. 377).

Virginia’s joy with teaching may be related to organizational commitment, which includes affective, continuance, and normative commitments (Cohen, 2007; Meyer & Allen, 1991). Affective commitment concerns emotional attachment and identification with the organization, acceptance of the organization’s goals and values, and wanting to work toward those goals and values (Medallion, 2013; Weiner, 1982). Continuance commitment involves staying with an organization because of factors such as salary, rank, and retirement benefits (Medallion, 2013; Obeng & Ugboro, 2003). Normative commitment is a feeling of obligation to the organization (Meyer & Allen, 1997).

Given Virginia’s report that she returned to teaching after surviving pancreatic cancer because of the joy it brought her, these commitments may have played a role in her joy. She enjoyed working at Sunnyside and experienced an unusual level of administrative support, respect, and value among fellow teachers, students, and parents, so affective, continuance, and normative commitments could have played a role in her return and retention, although she did not mention “commitment” as a factor in our interviews. It may be worth exploring with other retired teachers organizational, affective, continuance, and normative commitments and the roles they may play in teacher retention to retirement. For example, how strongly do emotional attachments and identification with their schools, as well as accepting and working toward their



school's goals, affect retention to retirement? Additionally, affective commitment may include the sense of purpose Virginia reported as a retention factor, but that relationship was not explored in this study.

### A sense of purpose

Intrator and Kunzman (2006) suggested that teachers must probe their sense of purpose and deliberate about what matters most in teaching. While Virginia may have explored these concepts over the course of her career, surviving cancer gave Virginia unusual insight into her personal sense of purpose as related to teaching. When she met Sam, she thought that perhaps she survived for kids like Sam. Sam needed someone to listen to him, to help him, to be an advocate for him, and to be there for him. She wonders how Sam's life would have been had she not been there when he needed her. She had invited him to Thanksgiving dinner rather than have him sit in a public park on a cold November day, but she also encouraged him to go to Harvard. Amy, Sam's guidance counselor at Sunnyside, confirmed Virginia's role as both an important mentor and someone who facilitated Sam's application to Harvard. Virginia hopes that Sam remembers her as an advocate for him and as someone who believed in him, and he confirmed in his e-mail interview her role as advocate, mentor, personal friend, and someone who believed in him. This sense of purpose, that she was there to support students who otherwise might not get the support they need, may be an extension of her sense of altruism. She has a need to give to others, and teaching satisfied that need. Her discovery of this sense of purpose out of crisis may or may not be unique to Virginia, and it is unknown whether other retired teachers would report feeling a similar sense of purpose.

## Altruism

Virginia feels that another deep need fulfilled by teaching is altruism. She has a strong desire to give to others, and observed that teaching is essentially an altruistic profession.

Teachers give a lot to someone else who may never show appreciation, and may even resist teachers' efforts, but teachers give anyway and then give more when they need to. Virginia often worked before and after school and through her lunch hour with students. Each year she had several "regulars" who brought their lunches, and she helped them understand math while they all ate lunch together.

Virginia's sense of altruism and giving is tied to a greater sense of civic duty, as she believes in the educational system as a means to better peoples' lives. This same sense of service was identified by 675 practicing Midwestern teachers as the most important factor in their retention as teachers (Miller, 2002). Virginia's need to give was recognized by others. Jennifer observed that teaching was a calling for Virginia and Virginia needed to share her knowledge and expertise with students

Interestingly, those who had a strong desire to help and gave more to others than self were more likely to leave teaching (Trustees of Indiana University, 2002). However, Virginia seemed to benefit a great deal from her altruism. This factor needs more exploration, as Virginia's experiences placed her at higher risk of leaving, yet she stayed in part because her personal sense of altruism was satisfied. Giving to others was intrinsically motivating, and Virginia found that her achievements in teaching also fulfilled personal needs. Virginia achieved

many goals, both personal and professional, that arose from externally- or internally-imposed sources.

### Achievement

Achievement is the need to excel, to strive to achieve in relation to standards, to want to successfully complete a job, and to actually accomplish the tasks of the job, such as successful student, personal, and district goal outcomes (Egan, 2001; Herzberg et al., 1959; Keating, 2000; McClelland, 1961). These achievement-oriented individuals are seeking recognition and feedback for improvement. They seek situations in which they can be personally responsible for finding solutions to problems, can obtain prompt feedback to measure personal improvement, and can set moderately challenging goals (Robbins, 2001). Herzberg et al. (1959) included in their definition of achievement: “successful completion of a job, solutions to a problem, vindication, and seeing the results of one’s work” (p. 15). Importantly, Virginia was able to achieve both personal and professional goals important to her satisfaction with her work. This supports the findings of Marston et al. (2006) that fulfilling professional commitments was an important retention factor.

Virginia achieved in many ways professionally: improving and writing curricula, working on University of Chicago Math curriculum, earning National Board Teacher Certification, winning a teaching award, being nominated for a state teaching award, being invited to serve on crucial school and district committees, being recognized as an excellent teacher, among many others. However, Virginia reported that her greatest sense of achievement arose from her daily direct teaching responsibilities. Teaching always gave her a sense of accomplishment.

Virginia passionately sought to help students understand the most complex math, and knew how to lead them to more complex levels of thinking. Her students did well on exams compared to other teachers, and typically did well on measures such as the ACT. Virginia knew that she was an effective teacher, and this strong sense of self-efficacy helps people accomplish difficult tasks, increases job satisfaction among teachers, and increases the likelihood that teachers remain in the classroom (Bandura, 2007; Edwards, 2003; Hughes, 2012; Perriochione et al., 2008). Teachers who increased student performance stayed in teaching longer (Goldhaber et al., 2007).

Indeed, developing new projects and new ways of helping students to learn complex material brought tremendous satisfaction and a sense of success. When she developed a new project, for example, and teachers were still using it successfully several years later, she felt a great sense of achievement for leaving a lasting impression on the course. For Virginia, achievement went beyond student achievement and success to personal achievement, and she found both satisfying, as she achieved goals related to student and district goals, as well as personal goals. While personal professional goals were met, it is apparent that Virginia may have achieved through teaching certain personal goals related to self-actualization needs, such as intellectual stimulation, interpersonal connections through relationships, creativity, and altruism, among others. Much of the research on achievement in teaching concerns student achievement, however, personal achievements, especially those that support self-actualization (Herzberg, 1966; McClelland, 1961), may also play an important role in teacher satisfaction and retention and may be worthy of study. One of the other personal goals achieved by Virginia through teaching was growth.

### Professional Growth

Professional growth includes the possibility for growth and situations in which an individual can advance her own skills and in her profession (Herzberg et al., 1959). While Herzberg (1966) described growth as a satisfier in the context of advancement, in Virginia's experiences, growth itself was a satisfier absent actual promotion. Virginia sought opportunities for personal and professional growth, as she had a strong need to learn and improve herself and her teaching. Interestingly, she did not overly concern herself with definitions or roadmaps for movement toward teacher excellence (e.g. Danielson, 1996, 2011; Zarra, 2003), yet she seemed to be driven to always improve, and sought opportunities and people that would help her do so. It seems that she moved through stages of teaching (Leithwood, 1992) and engaged in purposeful reflection to grow as a teacher (Acheson & Gall, 2003; Clark, 1986; Intrator & Kunzman, 2006; Osterman, 1990; Senge, 1987; Schon, 1987). Growth is discussed here in terms of teacher preparation, support and/or mentoring, and opportunity to learn.

### Teacher Preparation

Teacher preparation includes initial desire and education. Virginia had two different paths to the two stages of her formal teaching career. Chicago Elite regularly hired teachers without formal teacher training, but who had very strong academic majors and records and connections to eastern schools. She began teaching at Chicago Elite after her father and husband suggested she would be a good teacher, so her initial desire was not reflected in her preparation for this career. Despite her lack of formal training, she learned quickly and was an effective

teacher who enjoyed teaching. While she left teaching after only a few years, she left Chicago Elite because she and her husband started a family and child care was not available. Having children and child rearing are known to affect teacher retention (Allen, 2005; Alt & Henke, 2007; Ingersoll, 2001), as is a family move (Ingersoll, 2001).

Interestingly, Virginia had no plans to return to formal teaching when she later began tutoring students in math, but her experiences as a tutor prepared her in unique ways for working with students when she would return to teaching. She developed a depth of analysis and understanding of student difficulties that would serve her well in her second round of formal teaching.

When she entered formal teaching the second time, she decided that she would complete a formal teacher preparation program, including student teaching, which was not required because of her prior teaching experience. She chose to earn a Master's degree. Those who earn a Master's or other degree are more likely to remain in teaching (Alt & Henke, 2007), however, some studies suggested that teachers with graduate degrees and those in math and science were more likely to leave teaching (Borman & Dowling, 2008; Ploegstra, 2008), as were those with strong academic backgrounds (Boyd et al., 2005). Further, she re-entered teaching very certain of her career choice, and so she was more likely to stay in teaching (Alt & Henke, 2007; Feistritzer & Haar, 2005). Does teacher preparation influence the decision many, many years later to remain in teaching until retirement? The literature seems to lack information about the relationship, but Virginia did not cite this as a factor in her retention, either. Virginia loved math, wanted to work with high school students, and knew that she could make a difference.

This supports Curtis's (2012) similar observations. Once in a teaching position, however, support and mentoring may play a role in satisfaction and retention.

### Support and Mentoring

Teachers who experienced positive support and mentoring during their induction were more likely to remain in teaching (Allen, 2005; Curtis, 2012; Guarino et al., 2006; O'Connor et al., 2011). Teachers cited lack of adequate mentoring as a reason to leave teaching (Brill & McCartney, 2008). At Chicago Elite, Virginia did not have a formal mentor, but she had several informal mentoring relationships, including Bobbye and several other teachers. Virginia reflected that these relationships were important in her retention during those first years, especially since she had no formal training in teaching. She sought advice from her colleagues about everything from keeping a grade book to student discipline issues. Importantly, she cited faculty workroom conversations about philosophy and pedagogy of teaching as important in her development as a reflective teacher. While the attrition rate among teachers without a formal mentoring and induction program is 41% (Ingersoll & Smith, 2004; Smith & Ingersoll, 2004), Virginia cited family reasons rather than an absence of such a program as the primary factor for leaving Chicago Elite School.

Later, at Sunnyside, she had a designated formal mentor, and Virginia recalls that the teacher was a poor teacher and mentor, but Virginia had no single informal mentor, either. At both Chicago Elite and Sunnyside, Virginia had created her own cadre of informal mentors during her induction periods, and experienced the positive support that influenced her retention in teaching. Unknown is the degree to which this support contributed to her staying in teaching

for many years to retirement, but it seemed that she continued to learn from others throughout her career, even as she mentored others both formally and informally. Further research is needed to ascertain the effects of informal mentorship on teacher longevity.

### Opportunity to Learn

Virginia is thirsty for knowledge and personal growth. A consistent theme in Virginia's responses involved her very high need for personal growth. Simply put, she loves to learn and seeks every opportunity to increase her personal knowledge. She is happiest when she is learning something new. Smith and Rawley (2005) reported that professional development increased both teacher quality and retention. Hargreaves (2003) similarly found that professional development was an important factor in teacher retention.

Importantly, for Virginia, it seems, teacher self-monitoring and self-choice were important in professional learning and development, as Hargreaves (2003) had found for other teachers. Perhaps her greatest opportunity for learning and growth was earning National Board Teacher Certification. She completed this reflective process in 2000, and was only the second teacher in the district to do so. Virginia often sought learning and growth opportunities in conferences, trainings, formal coursework, and discussing ideas with others. In particular, outside professional development opportunities prompted her to look beyond herself, her department, and her school to improve professionally.

Personal growth is recognized as a means of increasing satisfaction through job enrichment (Herzberg, 1968; Steers & Porter, 1983). Importantly, the growth Virginia cited seemed to come mainly from those opportunities that she sought or created for herself, in support



of Hargreaves' (2003) conclusions. More research is needed to determine how externally-imposed vs. personally-chosen professional growth opportunities affect teacher retention to retirement. Some of these opportunities for professional growth came in the form of Virginia taking on more responsibilities, discussed in the next section, where she collaborated with others to render change or improvement to such things as a curriculum, program, or person.

### Responsibility

Responsibility includes those events in which a person derives “satisfaction from being given responsibility for his own work or for the work of others or being given new responsibility” (Herzberg et al., 1959, p. 47). Leithwood (2002) suggested that increased responsibility was associated with increased decision-making. Teachers with more decision-making power were more likely to stay in teaching (Ingersoll, 2001; 2003b; Slye, 2000). This certainly seems true for Virginia. She sought or was given responsibility in several areas of teaching. Sue noted in an evaluation that Virginia continued to play an important role in the classroom, the department, the school, and the wider educational community. Several areas of responsibility are discussed: change agent, professional development of others, and committees.

### Change Agent

Virginia was often a change agent to review and update curricula. After teaching a given class for several years, she was typically asked to teach another course in order to improve it and rewrite the curriculum. She created and shared new projects and class assignments with other teachers. This high level of autonomy and decision-making ability is associated with greater job

satisfaction and teacher retention (Allen, 2005; Becker, 1994; Guarino et al., 2006; Ingersoll, 2001; 2003b, Olsen & Anderson, 2007; Slye, 2000; Trisler, 1996). Her experiences also support Curtis's (2012) findings that high school mathematics teachers' abilities to make decisions about teaching techniques, course topics, and textbooks significantly influenced their decision to remain in teaching

Virginia enjoyed this responsibility of change agent: the role satisfied many personal needs including creativity, intellectual stimulation, challenge, and achievement. It is unknown, however, if the degree of satisfaction Virginia enjoyed as change agent would be cited by other teachers as a satisfier contributing to retention. While she happily contributed to the improvement of curricula, she also enjoyed helping others to grow professionally.

#### Professional Development of Others

Teachers should work in school communities in which members help each other to grow and succeed, share responsibility for student success, and create a culture where novice and experienced teachers work together to improve student achievement (NCTAF, 2007).

Additionally, Moir (2006) found that veteran teachers benefited when they mentored new teachers. Virginia took on both formal and informal roles in professional development of other teachers. Her formal roles included serving as a mentor to several teachers during her tenure at Sunnyside and mentoring cohorts of teachers engaged in National Board Teacher Certification. Informally, she collaborated with other teachers to improve courses and teaching and also informally mentored teachers through National Board Teacher Certification.

Formally, she served as a mentor to four new teachers and as cooperating teacher for eight student teachers, two of whom were hired afterward. John, former mentee, as a new teacher who similarly did not have a math major, was mentored by Virginia. He recalls that his experience enriched his teaching, and their discussions on philosophy of teaching continue to shape his teaching practices today. John described her as a “mother” to the department, as she supported and mentored teachers on a regular basis.

Informally, Virginia collaborated with other teachers on courses to improve teaching and learning, offering her insights and expertise. Interestingly, Sue recalled that sometimes she and Virginia would purposely have certain discussions at specific times in the office so staff members would overhear and perhaps actively participate in or learn indirectly from their conversations. Virginia also offered to help individual teachers with their own reflective National Board Teacher Certification efforts. P.J. recalled her generous offer to read his essays, and where he took her advice for changes, he scored very well. He had two young children and no time to commit to weekly cohort meetings, so her encouragement helped him achieve National Board Teacher Certification. It would be interesting to explore the strength of this factor with other teachers at different points in their careers and how it influenced retention to retirement.

In addition to working toward improvement of teaching and student outcomes through formal and informal mentoring, Virginia also served on several committees that worked to improve some aspect of curricula, student achievement, or school environment.

### Committees

Virginia served on several committees. She worked with a team of authors on the University of Chicago Math Project, developed a district-wide plan on the district's Gifted Committee, chaired Sunnyside's Advisory Team, served on Sunnyside's School Improvement Team, and served as a board member for the Metropolitan Mathematics Club of Chicago. All of these committees proposed and/or made significant changes in their task area. Her participation on these committees supports Hargreaves' (2003) observation that teachers must be able to use their professional judgment, as well as Leithwood's (2002) idea that increased decision-making was associated with increased responsibility and collective problem solving. Teachers with more decision-making power were more likely to stay in teaching (Hughes, 2012; Ingersoll, 2001; 2003b; Slye, 2000). Serving on these committees also allowed Virginia to exercise her trusted professional judgment and experience, as well as perhaps fulfilled some other needs such as intellectual stimulation, creativity, and altruism. Perhaps on some level, when Virginia was asked to serve on a committee, her value and excellence were recognized.

### Recognition

Increases in the aforementioned responsibilities were often an outcome of recognition: people recognized Virginia's excellence and effectiveness and asked her to participate in activities which increased her responsibility. Herzberg et al. (1959) asserted that "some act of notice, praise, or blame was involved" in recognition, and "the source could be almost anyone: supervisor...a client, a peer, a professional colleague, or the general public" (p. 45).

Clearly, her excellence was recognized. Nine years after re-entering teaching, Virginia won a Presidential Award for Excellence in Science and Mathematics Teaching. In 2002, she was a finalist for Teacher of the Year. In 2010, she was awarded the T.E. Rine Award. Virginia was also recognized as an excellent teacher by colleagues, administration, parents, students, and outside agencies and committees. Consistently, in my interviews with other people, when asked if they wanted to add anything at the end of our interview, everyone mentioned her excellence. The Danielson Model (1996, 2011) was not used at Sunnyside during her employment, but Sue acknowledged that if Virginia had been evaluated using the Danielson (2011) model, Virginia would have been in the “Distinguished” category of teachers.

Notably, Virginia expressed that she chose to teach despite the lack of respect by the public and recognition by colleagues. She felt that teachers do not recognize each others’ accomplishments as they should. However, teachers should receive some recognition from colleagues, administrators and district personnel (Alvy, 2005). Davis (1988) suggested that the motivator of recognition was long-lived, indicating its importance in motivation and satisfaction. Because of its potential importance, this factor should be explored further with other teachers who remain in teaching until retirement.

Several satisfiers contributed to Virginia’s retention in teaching. Further research is needed to explore whether and how these factors would contribute to other teachers’ retention to retirement. In particular, those satisfiers that contribute to self-actualization (Herzberg, 1966; McClelland, 1961) should be explored, as those seemed to be particularly powerful satisfiers for Virginia. Sergiovanni (1967) concluded that teachers can experience job satisfaction without

altering or taking away dissatisfiers/hygiene factors. For the most part, this seemed to be true for Virginia, as discussed in the following section.

### Dissatisfiers/Hygiene Factors in Virginia's Story

Herzberg (1966) found that dissatisfying experiences, or hygiene factors, often resulted from extrinsic, environmental, or non-work related factors, such as poor physical working conditions, policies, salaries, status, personal life, supervisory styles, relationships with coworkers, and negative conditions of health, comfort, security, and safety (Herzberg et al., 1959). These characteristics “focus on the context in which the job is done” rather than the job itself (Herzberg et al., 1959, p. 63).

These factors often center on the avoidance of “unpleasant situations” (Herzberg et al., 1959, p. 114). Further, “when these factors deteriorate to a level below which the employee considers acceptable, then job dissatisfaction ensues. However, the reverse does not hold true” (Herzberg et al., 1959, p. 113). It is important to note that someone who is not dissatisfied is not necessarily satisfied. These factors do not lead to satisfaction and motivation, but can contribute to dissatisfaction if they are absent or negative. Satisfying hygiene needs can only prevent dissatisfaction, not generate satisfaction. Several authors emphasized the importance of attention to working conditions (Allen, 2005; Carroll, 2006; Hammerness, 2006; Killian & Baker, 2006), but dissatisfaction did not necessarily cause teachers to leave their jobs (Sergiovanni, 1967).

Virginia reported several hygiene factors, and some of them occurred at a level which contributed to dissatisfaction for Virginia. However, Virginia also experienced a great enough level of satisfaction among the satisfiers that only an issue of personal safety while teaching at

Sunnyside led her to seriously consider leaving teaching prior to retirement. She did leave teaching early in her career to start a family, a demographic risk factor for attrition (Guarino et al., 2006).

In the present study, the following dissatisfiers/hygiene factors emerged: administration and policy, working conditions (including school facilities, safety, time and workload, facilities available for doing the work, and support for professional development), and factors in personal life (including demographics, family, and health).

### Administration and Policy

Herzberg et al. (1959) considered two aspects of administration as related hygiene factors of administration: social interactions with supervisors and perceptions of competence, management and fairness of supervision and policies. Because administrators and policy are inextricably linked, and perhaps indistinguishable by employees, this is treated as one category with sub-categories.

### Administration

Herzberg et al. (1959) considered two types of social interactions with administration. Social interactions are those which are unrelated to performing the job itself, such as talking about non-work items on a coffee break. Sociotechnical interactions are those interactions that occur while people are doing their jobs. While Herzberg et al. (1959) considered social interactions between superior and employee as important, the research also revealed that people may report perceptions of administration as a separate concept. Employees may say, for

example, that a superior is “perpetually nagging or critical” or “kept things humming smoothly and efficiently” (p. 47) as factors that exist, but not necessarily associated with a social relationship.

With the exception of Virginia’s friendship with Sue, the department chair, with whom Virginia experienced both types of interactions, Virginia’s relationships with superiors at Chicago Elite and at Sunnyside are classified as sociotechnical interactions. In other words, Virginia reported that her interpersonal relationships with superiors typically centered on the job itself rather than social interactions unrelated to the job. Inadequate administrative support is one reason that teachers leave the profession (Brewster & Railsback, 2001). However, she remembers typically having administrative support at Chicago Elite, and an unusual level of support compared to most other teachers at Sunnyside. For example, she was given accommodations after back surgery and cancer treatment without asking for them, unusual at Sunnyside, and was allowed sub coverage and monetary support for multi-day conferences at times when most other teachers applying for professional development coverage and monetary support were denied. Additionally, except for one incident with the Internet threat, she felt supported when her students rarely faced disciplinary action for behaviors such as cheating. Her experience in which the district was willing to fight a cheating case in court is the exception rather than the rule.

At Chicago Elite, when Virginia and Bobbye were called to an angry parent meeting in the principal’s office, the principal calmly supported Virginia and Bobbye. Lack of parent support and appropriate involvement makes teachers feel uneasy (Johnson & Birkeland, 2003; Harper, 2009), so administrative support with this parent was appreciated. When Virginia



occasionally sent a student for discipline issues to Lucy, Virginia was supported. At Sunnyside, Virginia felt as if she was viewed as a “favorite child” of the administration. It seemed that whenever she asked for something, the administration supported it.

Indeed, positive administrative support is an important retention factor (Allen, 2005; Boyd et al., 2009; Brewster & Railsback, 2001; Brill & McCartney, 2008; Brown & Wynn, 2009; Charlotte Advocates for Education, 2004; Guarino et al., 2006; Hirsch, 2005; Johnson & Birkeland, 2003; Marston et al., 2004; Prather-Jones, 2011). While Virginia felt favored, she also felt that there were reasons for it: she was an excellent teacher who did her job very well; she immediately alerted administration to problems such as cheating; and she offered respectful opinions and ideas about other matters involving students, curricula, and school policy. Jeff, a former assistant principal, confirmed that Virginia was very well-liked and respected by the administration.

Virginia recalls very few instances of dissatisfaction with administration: a couple of issues at Chicago Elite School and one at Sunnyside. While at Chicago Elite, the department chair engaged in sexual harassment of the younger female staff. At the time, Virginia did not know it was sexual harassment: she remembers feeling uncomfortable and wondering if this was how people acted in the workforce. This “unpleasant factor” (Herzberg et al., 1959), was one which today would certainly result in disciplinary action of the offending employee, yet at the time sparked only bewilderment in the young Virginia. Sexual harassment, *per se*, was not mentioned in the teacher retention literature. However, teacher perceptions of administration are an important factor in teachers’ decisions to leave teaching (Boyd et al., 2009). Perhaps because of her naiveté and the social norms of the 1960’s, Virginia did not report this factor in her

decision to leave that teaching position, but it really is unknown whether this played some role in her decision to leave Chicago Elite.

The second incidence of dissatisfaction with administration at Chicago Elite involved a shift to a chairman who did not back teachers on discipline issues. When she and other teachers sent female students to Courtney, a male administrator who had taken the place of the more supportive Lucy, he often failed to back the teachers and even questioned the teachers as to why the student was sent to him. While Virginia reported leaving Chicago Elite to start a family, the lack of administrative support and student discipline issues, attrition factors cited by several authors (Brewster & Railsback, 2001; Curtis, 2012; Hirsch, 2005; Johnson & Birkeland, 2003; Killian & Baker, 2006; Trisler, 2006), certainly eased the decision. It is difficult to ascertain how strong this factor was in her decision to leave Chicago Elite School, but when she described her decision to leave, she said the choice was no longer hers, as pregnancy precluded a teaching position at the time.

At Sunnyside, one instance in particular colored her perception of the administration. A young man who posted a threat on the Internet genuinely concerned Virginia and her husband. She perceived the administration as not supporting her concerns adequately, and she and her husband were fearfully changing locks on their doors. The administration, unbeknownst to Virginia, was struggling to figure out how to investigate and resolve this new type of threat. Jeff, one of the assistant principals at the time, explained that they simply did not know how to legally investigate and manage the problem. A protocol did not yet exist. Because her personal safety was threatened and the administration was unprepared to help her, Virginia was dissatisfied with administration at that time. Her temporary dissatisfaction with the administration seems to have

reflected both a lack of expediency and communication. However, when the situation was resolved, Virginia was ultimately satisfied with the outcome.

With the exception of the Internet threat incident, Virginia did not report appreciable levels of disillusionment with Sunnyside administration, and, in fact, felt that she was viewed favorably by the administration and described herself as a “golden child.” Virginia’s positive experiences with administration contributing to her retention are not unique among teachers. Hughes (2012) found that teachers want to work in schools with higher levels of administrative support and clear expectations, and several authors reported positive administrative support as an important retention factor (Allen, 2005; Boyd et al., 2009; Brill & McCartney, 2008; Brown & Wynn, 2009; Guarino et al., 2006; Hirsch, 2005; Johnson & Birkeland, 2003; Marston et al., 2004; Prather-Jones, 2011). It may be worth exploring with other veteran teachers the relationship between the perceived degree of administrative support and likelihood to stay in teaching. It is possible that Virginia’s perception of differential treatment contributed a great deal to her retention, but the strength of that factor for other teachers is unknown. Policy, discussed in the following section, is another aspect of administration.

### Policy

Hargreaves (2003) noted that policies instituted at the school, district, state, and federal levels affected teacher retention, especially if many changes were mandated simultaneously. Too many demands and administrative bureaucracy yielded stressed and discouraged teachers (Chen & Miller, 1997; Marlow, 1996; Valli & Buese, 2007). When new policies conflicted with long-standing, good teaching practices, teachers, especially idealists, were more likely to leave

the profession (Trisler, 1996; Haberman, 2004). Virginia did not report that policies negatively affected her teaching. In fact, on the contrary, Virginia served on several committees that proposed policy changes and affected curricular decisions. She seemed to embrace initiatives that would improve student learning. While Edwards (2003) reported that veteran teachers found testing accountability issues stressful, Virginia did not mention concerns about how her students would perform on tests. It would be interesting to explore how other retired teachers viewed these issues and how the issues related to their remaining in teaching.

Salary is a contractual issue administered and handled under the policies of the district. The higher the salary, the more likely a teacher is to remain in teaching (Allen, 2005; Alt & Henke, 2007; Boe et al., 1997; Guarino et al., 2006), however, a substantial increase in salary would not influence leaving teachers to stay in the profession (McLaughlin et al., 1986; Weiss & Boyd, 1990), perhaps because reasons for leaving are often multifactorial. Increasing salaries does not change other factors that influence teachers to leave the profession (McLaughlin et al., 1986). Beginning teachers are more concerned about salary (Harper, 2009), and it was a concern for Virginia early in her career when she was asked to return to Chicago Elite. She recalls that even if they were able to find childcare, she and her husband could ill-afford to stay in the city with their family, even with both of their incomes.

Curtis (2012) reported that mathematics teachers left the profession in part due to low salaries, and Virginia observed that teachers, as a profession, are generally underpaid. However, she did not cite salary as a factor in her retention, in agreement with research that indicated that the importance of salary in retention declined over time (Boe et al., 1997; Murnane & Olson, 1990). Interestingly, among early retirees in Illinois, salary was not a consideration (Becker,

1994), so it is possible that teachers who are deciding to leave or stay in teaching are less motivated by salary once they reach later stages in their careers. Harper (2009) found that teachers are motivated later in their careers by retirement benefits, indicating that continuance commitment (Medallon, 2013; Obeng & Ugboro, 2003) may play a role in teacher retention.

Virginia felt that her salary was an important part of the family's income, as they had college tuitions to pay, but she did not report that it was too low. It is possible that continuance commitment (Hughes, 2012; Medallon, 2013; Obeng & Ugboro, 2003) played a role in her retention, first as she had children attending college and later as a teacher approaching retirement. It is also possible that her family's economics, although not discussed with her, afforded her the freedom to worry less about money than other teachers might. She lives in a modest home in a now-affluent suburb and her husband was gainfully employed. Virginia seems to have been a more service-oriented teacher who was motivated less by salary and more by factors other than money, such as intellectual stimulation, creativity, and student achievement.

Service-oriented teachers were not motivated primarily by money, but the intrinsic reward of their roles in student achievement (Berry, 2008; Rosenholtz & Simpson, 1990). It is also worth noting that when her safety seemed seriously threatened, salary and retirement factors were not mentioned as factors in her decision to leave or stay in teaching, but, in fact, she may have had more freedom to choose because of the security of her family's economics. Continuance commitment may not then have been a primary factor in her retention. More importantly, Virginia could have left teaching after battling cancer, but chose to return to teaching. She cited the love she had for teaching and the joy she experienced, not salary, as her motivation to return. Another hygiene factor considered here is working conditions.

### Working Conditions

Herzberg et al. (1959) included in this category environmental factors such as physical conditions, comfort, safety, and facilities available for doing the work. Positive working conditions, including adequate school facilities, were found to be important retention factors (Allen, 2005; Brill & McCartney, 2008; Buchanan, 2012; Hanushek et al., 2004a, 2004b; Schneider, 2003). Adequate material resources were also important in teacher retention (Johnson & Birkeland, 2003). Four factors are discussed here: school facilities, safety, facilities and materials available for doing work, and support for professional development.

#### School Facilities

Regardless of the weather, Virginia travelled between buildings at Chicago Elite and carried all of her teaching materials with her. The buildings were old, but Virginia did not mention school facilities in her decision to leave Chicago Elite. Similarly, Sunnyside was very old and in disrepair by the 1990s, when Virginia started, and was rebuilt and remodeled by 2002. The old Sunnyside was stiflingly hot, with little air movement at times. Crumbling and peeling walls and rotten floors were home to insects and rodents. Technology was outdated. However, it was known to be an excellent school with dedicated teachers. Inadequate facilities can contribute to teacher attrition and turnover (Borman & Dowling, 2006). However, Virginia stayed because other factors ameliorated the effects of the negative condition of the facilities.

Hence, while Virginia did not leave teaching because of poor facilities, these facilities also did not play a role in Virginia's retention in teaching. It is unknown, however, how this factor may affect other teachers' decisions to stay until retirement. It is worth noting that

Sunnyside was remodeled and a modern, clean addition completed in 2002. This change in environment, while noted as a positive by Virginia, was a hygiene factor that at best moved from negative to neutral. It did not increase her satisfaction. For Virginia, it did not seem to be as important where she taught as it was that she found satisfaction and fulfillment of personal needs in teaching.

### Safety

Virginia did not report feeling unsafe at Chicago Elite. She did feel uncomfortable when sexual harassment was taking place, but she did not feel threatened. Virginia did not feel unsafe at Sunnyside, except for the one incident with a student who posted a vague threat on the Internet, described previously. She briefly considered leaving teaching, or at least leaving Sunnyside at this point, because she was genuinely concerned for her safety and was disappointed in the initial response of the administration. The dissatisfaction with a safety concern was great enough that it briefly outweighed the strength of the motivation factors.

### Time and workload

Virginia mentioned the time involved in preparation and assessment at both Chicago Elite School and Sunnyside; however, they were not reported by Virginia as factors in her retention in teaching. Time and workload issues were reported as affecting satisfaction and retention in other studies, however (Marston et al., 2004; Olsen & Anderson, 2007). Unreasonable time demands, such as new initiatives with inadequate implementation time, are problematic for teachers, and

some teachers are more likely to leave teaching if they cannot balance life and work (Chen & Miller, 1997; Farber & Ascher, 1991; Haberman, 2004; Ploegstra, 2008).

While Virginia mentioned many late evenings of work, it seemed to be more an observation or statement of fact rather than complaint. Perhaps perception of time demands and workload is important, as Virginia seemed to accept time demands and workload as simply part of the job that she enjoyed. During both of her periods of teaching, however, she did not have the same level of family demands that other teachers might report. While at Chicago Elite, she had no children. While at Sunnyside, her daughters were older and did not require extensive parenting. While time demands and workload were dissatisfying hygiene factors for other teachers who left the profession, they were more neutral for Virginia. Further exploration of time and workload factors in relation to balancing personal lives and work at various points in teachers' careers may be fruitful.

#### Facilities and Materials Available for Doing Work

Virginia did not report a lack of facilities and materials for doing her work at either Chicago Elite School or Sunnyside. Virginia remembers writing assignments and assessments on the board for students to copy while at Chicago Elite. They also had a mimeo machine. This was not a lack of facilities and materials, *per se*, as this was typical of the 1960s. At Sunnyside, when she did not like a textbook or curriculum, she changed it. As technology expanded, she was often one of the pioneers bringing it to Sunnyside. She did not mention instances of inability to find or create the materials and facilities she needed. She focused instead on what she could do and what she could obtain, sometimes through grant support. While another



teacher might have reported a different experience, and many have left due to lack of resources (Borman & Dowling, 2006), Virginia's experiences with materials and facilities were generally positive. If Virginia found they were lacking, she responded by adapting to the situation and finding ways to ameliorate it. For another teacher, this factor may have been sufficiently dissatisfying in combination with a dearth of satisfiers to effect a decision to leave earlier in a career. Further research is needed to ascertain the degree to which facilities and materials affect retention of teachers to retirement. Another aspect of working conditions is support for professional development, discussed in the following section.

#### Support for Professional Development

Support for professional development may have played a significant role as a hygiene factor for Virginia. Hargreaves (2003) noted that teacher self-choice in professional development was important in teacher retention. She was able to choose conferences, and Virginia was able to both attend and present at conferences which required travel expenses and sub coverage. While the district did not offer such opportunities and support to all teachers, it is possible that it was an important hygiene factor for Virginia. Such self-chosen professional development may also have helped fulfill satisfiers such as intellectual stimulation and her need to learn.

#### Factors in Personal Life

Factors in personal life are part of the context in which the job is done, and so are considered hygiene factors. Factors in personal life include demographics, family, and health.

### Demographics

While Herzberg did not include demographics as a hygiene factor, the demographics of an individual are part of the context in which the job is done, and so are included here. Virginia Highstone is a white, female, retired teacher who experienced two different periods of formal teaching. Some studies did not find correlations between teacher attrition and variables such as college major, highest degree earned, family background, race, ethnicity, and bilingualism (Billingsley, 1993; Boe et al., 1997). However, age displayed a strong correlation, with teachers leaving early in their careers or at retirement (Boe et al., 1997; Ingersoll, 2001). Early in her career, she was a female who worked in elementary education, and therefore more likely to leave teaching due to family factors (Allen, 2005; Alt & Henke, 2007; Guarino et al., 2006), and she did leave when she and her husband started a family. As a white female who entered teaching again as an older woman, she was more likely to remain in teaching until retirement (Allen, 2005; Alt & Henke, 2007; Guarino et al., 2006). As a teacher who stayed within 150 miles of where she grew up, she was also more likely to stay in teaching (Boyd et al., 2003; Feistritzer & Harr, 2005), and she did so. Questions remain as to the strength of demographics as a factor that influences teachers' satisfaction and retention to retirement.

### Family

Herzberg et al. (1959) included those family factors that were directly related to the job itself in some way, such as a relocation that the family did not want or family problems that arose from the job itself. Not included are factors in the personal life that affected the person's

views of their job. Factors in Virginia's personal life influenced her retention in teaching early on.

Virginia left her teaching position at Chicago Elite primarily because she and her husband were starting a family. Her doctor had advised her to stop teaching, and there were no day care options when she was asked to return to Chicago Elite School. Having children, indeed, negatively affects retention (Allen, 2005; Alt & Henke, 2007). Later, she returned to teaching in large part because of family needs. Her daughter had emotional difficulties and Virginia returned to teaching when a social worker encouraged her to do something other than be overly involved in her daughter's care and to provide a model for her daughter. Family did not seem to play a role in her retention at Sunnyside; however, it may be important to other teachers and worth exploring.

### Health

Ingersoll (2001) reported that teachers were more likely to leave teaching due to health issues. Health contributes to the context in which a job is done, and is a hygiene factor. In some cases, hygiene factors of health are under the control of the employer, as when a special chair was bought after Virginia's back surgery and her schedule adjusted after her cancer battle. When Virginia left Chicago Elite, it was under a doctor's advice in order to have a successful pregnancy, but she would not have been able to stay at Chicago Elite once her pregnancy became physically apparent. At the time, this negative condition of health affected her ability to stay at Chicago Elite, but it was not her choice. As a hygiene factor it seemed neutral. She did not seem to have feelings of dissatisfaction of it at the time, and she accepted it as the social norm. It

would be interesting to explore how Virginia would perceive it as a woman today. Would she now see having to leave Chicago Elite because of pregnancy as a negative hygiene factor rather than a social norm?

When Virginia later developed pancreatic cancer, the cancer actually clarified her love of teaching and reinforced her commitment to teaching. In remission, but still faced with the uncertainty of her future health, she chose to do only what she loved and ceased doing what she did not love. Her negative condition of health seemed to have moved away from negative on the hygiene spectrum as a result of reflection on her cancer experience. She chose to return to teaching even though she battled death. The intrinsic motivation associated with teaching was very strong and drew her back to the classroom.

Hygiene factors were explored during this investigation. For the most part, while Virginia recognized and acknowledged the existence of these factors, they did not play a crucial role in her satisfaction and retention to retirement. Where a factor was a stronger dissatisfier, as when school facilities or materials were lacking, Virginia seemed to choose to accept or neutralize the factor. It did not contribute to dissatisfaction. Her motivators were strong enough to find ways to work around any stumbling blocks to learning these factors created. However, another teacher's threshold may be very different, and they may be extremely dissatisfied with these factors and they may not be satisfied enough by other factors to remain in teaching to retirement. Some of these factors are under the control of the employer, so clarification of the strength of hygiene factors may be worth exploring. While eliminating dissatisfaction of hygiene factors does not induce a state of satisfaction, but a neutral state, reducing factors of dissatisfaction where possible may influence retention to retirement.

### Virginia Highstone Today

Virginia has remained active in retirement. (See Appendix M for a recent picture of Virginia). Virginia's decision to retire was one that reflected her desire to more often see her daughters and grandchildren who by then were living in other parts of the world, and that is one of the many things she is doing in retirement. She continues to tutor students in math. She worked for a division of ACT until they recently asked for a greater time commitment, and she declined. She had traveled to Kentucky, Ohio, Alabama and other states to train teachers on content and pedagogy in math and curricular alignment with Common Core Standards. She continues to work with local cohorts of teachers working on National Board Teacher Certification. She has continued her involvement in the Metropolitan Mathematics Club of Chicago, giving talks and also leading half-day seminars on teaching functions and three-day seminars on team-teaching Pre-Calculus. She is an avid reader, maintains beautiful gardens at her home, and enjoys doing intricate needlework. I had the pleasure of seeing some of her needlework. It is breathtakingly beautiful.

### Lessons for Teachers from Virginia's Story

I have had conversations with many experienced teachers over the years, but never as in-depth as those I had with Virginia while conducting this research. I found myself reflecting deeply on my own teaching and my responses to factors in the teaching environment. Many hours and thousands of pages of transcripts yielded much interesting information, but what is the "takeaway" for teachers from this work?

I feel very fortunate to have discovered this treasure, and believe that many other teachers would benefit from such conversations with experienced teachers or retired teachers. I encourage other teachers to seek an excellent, informal mentor and engage in conversation on a regular basis. The wisdom and perspective to be found there is priceless. Amid new mandates, accountability, and evaluation stresses, there is also a grace and a peace embodied in these teachers, perhaps because they can place them into the context of a long career.

There may be aspects of the teaching environment or context that teachers find dissatisfying. Factors such as parent involvement (too much or too little), socio-economic status of students, cultural considerations, building concerns, material concerns, student behavior, and student investment in their own work may affect teacher satisfaction. I encourage teachers to ignore, improve, or accept these factors to a level that they can tolerate--to neutralize them in some way--so that they can focus on those things that satisfy them. For example, if student behavior and investment are dissatisfying, providing increased support, having clear and high expectations and delivering high quality instruction may improve engagement, student self-confidence, and achievement (Akey, 2006).

It appears that factors that satisfy personal needs or contribute to self-actualization may be the most crucial retention factors. If teachers are not meeting their own needs through their work, they should identify and find a way to fulfill those needs. These needs may vary by teacher, but it is human nature that people seek to do things that benefit them in some way. Teachers may need to find ways to maximize fulfillment of their personal needs. Virginia actually created many of the motivation factors that then satisfied her needs. She did not passively wait for someone to provide them, and other teachers can orchestrate their own

teaching careers. For example, if personally meaningful professional development is important and is not being provided, teachers should seek it out, even if they are not reimbursed. If a teacher finds that they are losing sight of their purpose, they should focus on their students and their learning needs. Out of that will grow the desire to improve content knowledge and pedagogy, and they will use their skills to meet the new challenges they have set for themselves. If time and workload factors are overwhelming, teachers should find ways to work collaboratively with others and share responsibilities. It is through managing their own teaching careers that teachers will find joy in teaching for many years.

#### Lessons for Administrators from Virginia's Story

Hygiene factors, or factors extrinsic to the job itself, are often the first things that administrators attempt to change, as they are often "easy" to change: paint the walls, buy new furniture for the teachers' workroom, and make sure there is a good supply of copy paper. However, the more important but more difficult factors to change are those that are intrinsic to the job. Because only intrinsic motivators bring satisfaction, administrators should find ways to foster motivators in the workplace.

Perhaps teachers are unaware that self-actualization and meeting personal needs is possible through work: maybe this concept needs to be made more obvious. Teachers spend many hours of their days devoted to their work, and it should be work that brings satisfaction. Teachers sometimes give so much of themselves to their work that they perhaps forget to nurture their own needs. Teachers should have time to reflect on their experiences and teaching, not just

once or twice a year in evaluations, but on a frequent basis. Evaluations with administrators should be focused on growth rather than appearing punitive.

Administrators should trust their teachers and allow them autonomy to make decisions about what is best in their classrooms for their students. They were hired because they were qualified and retained because they were good. Teachers, like Virginia, WANT to be good teachers. They want to do the best job possible for their students. Administration should support them in their efforts: encourage collaborative planning and teaching, provide meaningful differentiated professional development or support teachers in finding their own growth opportunities, and celebrate successes.

### Potential Research

This biography of a single excellent teacher is a starting point for further research. Much of the research on teacher retention has focused on teachers who leave earlier in their careers, and most of those are quantitative studies which focus on major factors. Little has been done to discover why teachers, especially excellent teachers, stay to retirement. This distinction is important, as we should not be as concerned with retaining teachers as we should be with retaining excellent teachers. Encouraging every teacher to stay regardless of skills or effectiveness is undesirable, as an ineffective body in the classroom is not helping students and may even be harming them. However, we must discover how to nurture excellent teachers and retain them.

It is hoped that this qualitative study will inform the literature and plant the seeds for further research. There is now increased knowledge of factors which influenced the retention of



one excellent teacher to retirement. This information can be used to create other research instruments, including qualitative, quantitative, and mixed-methods approaches, with rich questions and breadth to capture desired data. For example, Likert Scales and surveys combined with focus groups may yield abundant, generalizable data. It would be very interesting to conduct a contemporaneous narrative inquiry with a small group of teachers in their last year or two of teaching to capture reflections as they approach and experience retirement. Very importantly, all of these areas of research must cut across socio-economic strata, school facilities, funding, demographics, and a myriad of other factors. Virginia was fortunate to teach at schools which served mainly middle and upper class students and supported teachers and curricula. Teachers serving other communities may report very different hygiene and motivator factors as contributing to satisfaction, dissatisfaction, and retention to retirement. There are several areas requiring study.

One of these areas is teacher excellence itself. Danielson (2011) has provided a model for teacher growth, with descriptors of events in a classroom and teacher behaviors which evidence excellence. It provides a road map for improvement, but it is not viewed by teachers as a growth model in District 1082 and perhaps other districts. Rather it is seen as a punitive instrument of evaluation because of the way it is actually used. It is also extremely time-consuming to complete even one evaluation with this model, much less facilitate frequent conversations between supervisors and teachers. Research, perhaps through mixed methods, may shed light on how this model is being implemented and how its implementation may be improved. For example, multivariate analysis of surveys of a large number of teachers, with focus groups or case studies with select teachers, may reveal valuable information. One area of

particular interest is determining how teachers process verbal and non-verbal information from students, parents, colleagues, and administrators and use that information to determine their own effectiveness.

Further research is needed to establish relationships between many factors and student success. How can characteristics of excellent teachers be cultivated in many teachers? How does an excellent teacher *become* an excellent teacher? What roles do mentoring and professional development play in developing excellent teachers, supporting motivation factors, and retaining teachers to retirement? Further, how does National Board Teacher Certification contribute to fostering excellence and to retention? Longitudinal studies of a range of teachers are needed to see how they develop and how those who become excellent teachers differ from those who are proficient, very good, or good.

Another area requiring study is teacher preparation. Virginia was unusual in that she had two different paths to formal teaching. Her formal, traditional teaching preparation program may have been a factor in her retention to retirement, but the strength of this factor for Virginia and other retired teachers is unknown. Perhaps her earlier experiences in teaching also contributed to her retention to retirement? Alternative paths to certification are used today, but little is known about how the different paths contribute to retention of veteran teachers, especially excellent teachers. Do the different paths affect teacher self-efficacy or other motivational factors, for example? Surveys, structured interviews, and a review of records may shed light on the relationship between paths to teachings, teacher excellence, and long-term retention.

Also of interest are the relationships between retention and curricula, student and teacher interest, teacher flexibility in meeting standards and working with the curricula, accountability,

and student achievement. Virginia found crucial for her satisfaction such factors as creativity and the ability to alter curricula. What would other teachers say at different stages of their careers about these factors, and are they important for their retention? Given more recent pushes toward standardized curricula and one-one technology implementation, exploring the changing faces of curricula and creativity and potential impacts on teacher retention may also be a topic of interest. Analysis of survey data, along with selected interviews and an analysis of achievement data may yield important information.

There are many areas of potential research arising from this biography of a single teacher. Both quantitative and qualitative studies are needed to explore motivators and hygiene factors, how they relate to student achievement, and how they influence excellent teachers' decisions to stay until retirement.

### Summary

The purpose of the study was to examine a retired excellent teacher's reflections on career, professional, and personal influences which contributed to her retention in teaching. This study was guided by the research question: How have career, professional, and personal influences contributed to one teacher's retention?

Virginia Highstone is an excellent teacher who shared her teaching story during a series of interviews at her home. Her passion for teaching and for working with students was abundantly clear during our conversations. At times, she was so expressive as she described her experiences that the *joy* she found in teaching became readily apparent. Virginia's story was

explored through a biography of her teaching career and an analysis of the revealed factors using Herzberg's Motivator-Hygiene Theory (Herzberg et al., 1959).

Motivators are factors intrinsic to the job itself. The following satisfiers emerged: the work itself (including creativity, classroom management, curriculum, challenge, intellectual stimulation, interpersonal relationships, joy, a sense of purpose, altruism), achievement, growth (including teacher preparation, support and mentoring, and the opportunity to learn), responsibility (including change agent, professional development of others, and committees), and recognition. For Virginia, satisfaction of these factors fulfilled personal needs and may have contributed to her own self-actualization and retention in teaching to retirement. Fulfillment of her personal needs seemed to be inextricably tied to her love of teaching and motivated her to strive to give her students the very best of everything—curricula, pedagogy, emotional support, and herself.

Hygiene factors are factors extrinsic to the job itself and included administration and policy, working conditions (including school facilities, safety, time and workload, and facilities available for doing the work), and factors in personal life (including demographics, family, and health). For Virginia, these factors represented various degrees of dissatisfaction, but did not appreciably contribute to her decision to remain in teaching to retirement. It did not seem to matter so much *where* and under *what conditions* she taught, but that she *taught*, that she loved it, and that she found *joy* in teaching.

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## APPENDIX A

### VIRGINIA HIGHSTONE'S CURRICULUM VITAE

### Formal Education

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NORTHWESTERN UNIVERSITY Evanston, IL Master of Science in Education and Social Policy,

June 1992 Cumulative GPA 4.0

#### Coursework in Mathematics

Euclidean and non-Euclidean Geometries	Set Theory and Metric Spaces
Programming in BASIC	Probability for Engineering
Statistics: Data Display and Design	Number Theory
Advanced Boolean Algebra	Mathematics for Secondary Teachers

WELLESLEY COLLEGE Wellesley, Massachusetts Bachelor of Arts, 1961 • Cumulative GPA 3.6

- Wellesley College Scholar 1959,1960,196double major in History and Mathematics

#### Coursework in Mathematics

Introduction to Calculus (2 semesters)	Differential and Integral Calculus (2 semesters)
Differential Equations	Introduction to Modern Algebraic Theory
Advanced Calculus (2 semesters)	Fundamental Principles of Logic (2 semesters)

### Certification

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Illinois Master Teacher Certificate – Secondary Mathematics

National Board Certification, Adolescent and Young Adult Mathematics (2000), recertification in 2010

Illinois Verification: Gifted Education

### Professional Development/Continuing Education

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**Workshops and Course Work:** workshops focusing on the use of technology to enhance mathematical thinking, writing in the mathematics classroom, teaching gifted students, and meeting diverse learning modes; work with James Curry and John Samara on designing effective units using their models based on Bloom's Taxonomy and learning styles; special interest in alternate assessment and development of long-term projects.

### **Conference Attendance**

Exeter Conference on Secondary Mathematics & Technology 1994

NSF Summer Project on Technology Elmhurst College 1994 & 1995

Illinois Association for Gifted Children Regional Convention 1994, 1995, 1996

UCSMP User's Conferences and Summer In-services, 1991-2001, 2009-2011

ICTM Convention 1993-2010                      ICTM Leadership Conference, 2007, 2003, 2000, 1996, 1994

Metropolitan Mathematics Club Workshops to Promote the Standards 1992-2010

NCTM National Conference 1996-2010                      MMC Summer Conference on Teaching 2011-2013

## **Teaching Experience**

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### **Teacher, Mathematics Department, \*\*\*\*\* High School, 1991-2011**

**Lead teacher** Enriched Precalculus for gifted Juniors (1996-2010): developed 3rd course in gifted sequence to feature technical writing using MATHEMATICA, problem-solving using the TI-84 and BASIC programming, creative and analytical projects, regular problem sets and non-routine problems; added informal unit approaching calculus (different ion and integration) from a modern perspective

**Lead teacher:** College Algebra Functions, Statistics, and Trigonometry (1992-2003): planned text adoption; integrated alternate assessment, cooperative learning, use of technology, technical writing as a course goal in conjunction with Writing Center; chaired curriculum project to establish teaching and learning guidelines.

**Lead teacher:** Algebra 9 UCSMP Algebra (1994-2000): established learning and technology goals for 7 sections; implemented study skills strand to include criteria for note taking, notebooks, and homework and activities to move student thinking to the metacognitive level; set guidelines for achievement and assessment; developed projects to include written reports, visual and oral presentations, and technology-based analyses from numerical, graphical, and algebraic viewpoints.

Lead teacher Enriched Geometry course for gifted Freshmen (1993-6, 2000 - 2010): developed course to provide integration into high school work ethic and thinking levels, study guides and help with study skills in conjunction with \*\*\*\*\* Literacy Center; extensive work with Geometer's Sketchpad, TI-84 graphing calculator, and programming in BASIC; hands-on activities in model building and data collection; weekly problem-solving of non-routine problems; creative and analytical projects; oral and written presentations, and preview of calculus topics including solids of revolution and optimization problems

Lead teacher Advanced Algebra with Trigonometry Honors (2003-2007): developed approach that used multiple representations of functions and equations viewing them from numerical, graphical and algebraic perspectives; added individual and groups projects featuring analysis of classes of functions using technology; made writing an integral part of the mathematical experience; enhanced the use of the graphing calculator and added Lead Teacher programming in BASIC as a problem solving tool, use of Mathematica and TI-Interactive as opportunities to use computer-assisted algebra, graphing technology, and writing. Worked to adopt new texts appropriate to an honors course and aligned with department objectives and philosophy

Lead Teacher Geometry Honors (various times between 1991 and 2010) wrote and implemented introduction to Geometer's Sketchpad, added programming in BASIC with a focus on graphics, implemented an approach that helped students to focus on guided review of Algebra I as it applies to geometry, added materials to help students organize their study of geometry and review effectively for assessments, developed individual and group projects linking geometry to the real world and to the arts and previewing topics from trigonometry

**Tutor of mathematics, self-employed, 1975-2013:** experienced in diagnosis and remediation of individual problems in cognition and learning and in overcoming mathematics anxiety and maximizing mathematics performance

**Teacher, Mathematics Department, \*\*\*\*\* School of Chicago** 1962-1965

### Professional Activities

#### **Professional Activities within District \*\*\***

Leader Mathematics Department Curriculum Team: worked directly on writing curriculum documents for Algebra 9, Geometry 10H, Enriched Frosh Geometry, Enriched Precalculus, Advanced Algebra with Trigonometry 11H; supervised faculty in writing documents for other courses; set department standards for curriculum, working directly with the Principal to refine school expectations to fit mathematics content. (2001 – 2009)

Mentor to four new Mathematics teachers, using cognitive coaching to help them understand and reflect upon teaching and classroom management, implementation of curriculum, relationship with students and colleagues.

Cooperating Teacher for eight student teachers from Roosevelt University, the University of Chicago, Elmhurst College, National Lewis University, two of whom were hired by the \*\*\*\*\* Mathematics Department (1993-2010)

**Chair** \*\*\*\*\* Advisory Team, a site-based management team made up of staff, administration, students, and parents; initiatives include Freshman and Senior Parents' Nights, Freshman mentoring program, school beautification program, speakers to counteract school issues such as alcohol use and bullying, parent forums on articulation between middle schools and high school, and decision to end class rank (2000-2010)

**Member** Planning Consortium formed to study collaborative teams within all school departments, based on the Japanese Lesson Study Model; helped with faculty training and consulted with Science Department on implementation. (2002-2003)

**Member** \*\*\*\*\* High School Steering Committee to oversee implementation of professional study of \*\*\*\*\* High School (1997-8)

**Member** District \*\*\* Strategic Planning Committee on Communications (1996-7)

**Department representative** \*\*\*\*\* High School Technical Advisory Committee (1996-1997)

**Member** District \*\*\* Gifted Committee (1995-97, 2002-2003), at work on district-wide plan for gifted students

**Member** \*\*\*\*\* High School Substance Abuse Prevention Team (1992-1994)

**Committee Member** Selection Committee for National Honor Society (2000-2010)

**Advisor** Empower, a group focused on women's issues and rights (2000-2010)

### **Other Professional Activities**

**Board Member**, Metropolitan Mathematics Club of Chicago, 1999-2002, served on Scholarship Committee

**Co-Chair**, Metropolitan Mathematics Club Workshops to Promote the Standards; revitalized and reformed a day of workshops which attract over 600 mathematics teachers from all grade levels and which are designed around NCTM Standards

**Member**, Local Advisory Committee, NCTM National Conference, Chicago, 2000; co-chair Evaluation Committee

**Mentor and Speaker**, training events for Illinois teachers seeking National Board Certification; conducted workshops around Northern Illinois on various aspects of planning lessons to be examined, videotapes; read essays in a wide variety of disciplines, focusing on mathematics, but including, art, English, and science; received training in mentoring practices, including cognitive coaching (2000-present)

**Assessor**, NBCT Mathematics Modules on Geometry and Technology: received training in using rubrics developed by the National Board and in maintaining integrity of assessment process (2003-2006)

**Cohort Leader** led cohorts of teachers seeking National Board Certification within District \*\*\* (2009-2011), at Nequa Valley High School (2012), at High School District 99 (2013), based in Glenhaven (2014-present)

**Reader** for 10 Illinois National Board candidates in the areas of Art Education, Media and Library Science, and School Counseling; responsible for provided feedback on Standards, Architecture of Accomplished Teaching, and other key components for successful completion of entry on student work and differentiation. (2014)

**ACT Consultant** Worked as member of a group of master teachers to develop QualityCore® curriculum for high school mathematics in order to add rigor and relevance; aided in development of precalculus course goals, wrote sample precalculus model unit on rational and polynomial functions, edited model units for precalculus and advanced algebra. Trained in delivery of five-day professional development to introduce QualityCore® materials including standards linked to Common Core standards, improvement of curriculum and pedagogy, research-based classroom strategies to enhance student learning, scaffolding, and test-taking skills for both multiple-choice and extended response assessments. Delivered QualityCore® Professional Development in multiple districts in Kentucky, Alabama, New \*\*\*\*\*, Ohio, and New Mexico alone and in concert with other master teachers and interdisciplinary teams. (2009 – 2014)

### **Professional Activities: Publications**

***UCSMP Geometry (2nd ed.)*** 1993,1994 worked with team of authors to develop philosophy of the text, in particular the approach to proof and to problem-solving, wrote and edited lessons, problem sets, activities, and projects, wrote assessment instruments to conform to the philosophy of the text.

***UCSMP Functions, Statistics, and Trigonometry (2nd ed.)*** 1996 worked with a team of authors to reconceptualize pacing and order of topics, use mathematical models to motivate each chapter, add calculator-based technology activities within lessons; reworked chapter on descriptive statistics to conform to AP Statistics Syllabus; wrote chapter on exponential growth and logarithms, adding material on logarithmic re-expression and judging goodness of fit with residual plots; rewrote material on trigonometry to fit target student population by changing pacing and focus, adding real-world problems, and expanding in-class activities

***UCSMP Transition Mathematics (3<sup>rd</sup> ed.)*** 2005-2006 worked with a team of authors to rethink pre-algebra text in light of new research on younger adolescent learning modalities; developed chapter which moved proactively to thinking in terms of generalizations, categories, and hierarchies; added activities using TI-84 calculators to explore geometry and transformations, patterns and expressions, linear relationships; did extensive work with geometry and algebra components, writing new lessons, activities, question sets, and projects.

***Virginia Highstone: Equations That Model Growth and Decay***, in Bringing The NCTM Standards to Life: Exemplary Practices from High Schools, (Yvelyne Germain-McCarthy), Larchmont, NY: Eye on Education Press, 1999; included in 2<sup>nd</sup> edition, 2014

***The Algebra of Expressions and Equations: Starting Freshmen off Right in High School*** (with Susan



Brown and Joanne M Corwin) in Designing Effective High School Units (James Curry and John Samara ed.), Illinois Association for Gifted Children, 1995

### **Professional Activities - Lectures and Workshops**

Speaker (with Susan Brown), Metropolitan Mathematics Club of Chicago, *Is Acceleration Enough? Challenging the Gifted Mathematics Student*

Speaker: Equity 2000 Conference, Providence, RI: *Geometry of Transformations*

Speaker: Elmhurst College Seminar Series: *Transformations and Their Impact on the Secondary Curriculum*

### **Workshops:**

- District \*\*\* – Developed and taught three-day workshop for 8<sup>th</sup> grade teachers to introduce them to content and pedagogy for teaching Geometry from High School text; emphasis on development of proof, integration of algebra into geometric problem solving and tips for successful teaching of geometry to gifted students. (2014)
- Metropolitan Mathematics Club of Chicago – Developed (with two other teachers) and taught 3-day workshop on Teaching Precalculus for high school teachers; responsible for modules on polar graphing, logarithmic functions and problems featuring logarithms, the ambiguous case, trig identities and equations, and developing and presenting challenge problems in these and other precalculus topics. (2011-2013)
- Metropolitan Mathematics Club of Chicago – Developed and taught with Dr. Stephen Conde of IMSA a 3-hour workshop for high school teachers on “Function Basics”, including definition and symbols, composition and decomposition, and transformations. (2015)
- **Speaker** at local, state, regional, and national mathematics conferences on a wide variety of mathematics topics, often focused on alternate assessment, integration of technology into the mathematics classroom, and meeting a variety of student learning styles. (1992 – 2011)

- **Professional Activities - Affiliations**

National Council of Teachers of Mathematics

Metropolitan Mathematics Club

Illinois Council of Teachers of Mathematics

### **Awards and Honors**

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1997-98 – Winner, *Mathematica* High School Grant

1998 – State Awardee, Presidential Award for Excellence in Mathematics and Science Teaching

2002 - Finalist, Illinois Teacher of the Year

2010 – Winner, TE Rine Award for Excellence in Secondary Mathematics Teaching, ICTM

### Community Service

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**Admissions Representative**, Wellesley College Alumnae Society (1991- 1997)

**President**, Chicago Wellesley Club (1997-1999)

**President**, Wellesley College Class of 1961, 2001-2006

**Program Chair**, Wellesley College Class of 1961 50<sup>th</sup> Reunion Committee

**Reunion Chair**, Wellesley College Class of 1961, 55<sup>th</sup> Reunion (June, 2016)

**Mentor**, Bridge Communities (1995-1998); act as friend and goal-keeper for homeless family in two-year transitional housing program

**Stephen Minister**, First Congregational Church of Glenhaven, 2010-present; Stephen Leader, 2011-present

**Chair, Open and Affirming Ministry**, First Congregational Church of Glenhaven, 2011-present

**Member**, New Members Ministry, First Congregational Church of Glenhaven, 2012-present

APPENDIX B  
E-MAIL EXCHANGE WITH SUBJECT  
INDICATING AGREEMENT  
TO PARTICIPATE

Pat - Of course you have my help. And no compensation is necessary. I think it is a great dissertation idea, and of course I like case studies as a stepping off point.

Spring/summer sounds fine. I will be here in Glenhaven and we can meet and talk at our convenience.

I love retirement - don't miss the grind. I do have three students I am working with at present including my one and only from (Sunnyside): XXXX [name removed by author].

Keep up your good work. You are such an effective advocate for your students.

Virginia

--- On **Mon, 10/18/10, Rowe, Pat** <[prowe@sunnyside1082.org](mailto:prowe@sunnyside1082.org)> wrote:

From: Rowe, Pat <[prowe@sunnyside1082org](mailto:prowe@sunnyside1082org)>

Subject:

To: "H.@" <[H.@"](mailto:H.@)>

Date: Monday, October 18, 2010, 8:28 AM

Hi Virginia-

How are you?

I hope all is well.

I am writing to ask a rather large favor, but I think it is one you may enjoy.

I don't know if you know that I have been working on my doctorate in Curriculum and Instruction. I am in my methods writing class now. My topic involves talking to retiring/recently retired teachers to discover factors which contributed to their professional growth and retention as teachers. Initially, I thought I would interview several people and look for themes, etc., but as I read and think deeply about what I am really trying to add to the literature, I am now considering that I would rather conduct a more in-depth case study of one or two EXCELLENT teachers. When I think about the excellent teachers I know, you are at the top of the list.

I am wondering if you would be interested in helping me with this endeavor. You have been fabulous with a wide range of students, and have been honored for your teaching. If I remember correctly, you also have National Certification, which means you have engaged in reflective professional development.

I believe this would be something that we would start in the spring and/or summer, and I believe would involve three interviews and opportunities for you to check my interpretations. Since this is a case study, if you would be willing to share past writings, past documents, or current documents if you are journaling, that would make for a stronger dissertation. We may use your name or a pseudonym.

I am not sure what I can give you in return (besides gratitude), but I was thinking along the lines of a gift certificate for you, or starting a named scholarship fund or an award in your honor. I would truly appreciate your help with this. I believe that discovering what helps excellent teachers "survive" to retirement is an important part of discovering how we can retain excellent teachers in the profession. I have found many studies which ask teachers why they left after 5 or

10 years, and a few studies asking long-time teachers about retention, but no studies including the voices of excellent teachers who stayed to retirement.

Please let me know what you think, and thank you for considering this.

Regards,

Pat Rowe

APPENDIX C  
INFORMED CONSENT, CONSENT TO AUDIO RECORD,  
AND PERMISSION TO PHOTOCOPY, STORE, AND  
USE DOCUMENTS FORMS

## INFORMED CONSENT FORM FOR SUBJECT OF BIOGRAPHY

CONSENT TO PARTICIPATE: I agree to participate in the research project titled "A Biography of an Excellent Teacher to Ascertain Factors that Influenced her Retention in Teaching," being conducted by Patricia S. Mannion Rowe, a graduate student at Northern Illinois University. I have been informed that the purpose of this dissertation study is to discover how retention factors and professional growth contributed to the retention of a recently-retired excellent teacher.

I understand that if I agree to participate in this study, I will be asked to do the following: participate in a series of interviews lasting 6- 90 minutes over several months for a biographical study (the researcher anticipates 6-10 interviews conducted over a 2-3 month period), reflect on teaching and professional growth experiences, and evaluate the biographer's interpretations of my responses. I will also provide documents which will be interpreted by the biographer and evaluate the interpretations. I will be asked and required to provide names and contact information of former colleagues, administrators, and students, and no one other than those that I name will be contacted.

I am aware that my participation is voluntary and may be withdrawn at any time without penalty or prejudice, and that if I have any additional questions concerning this study, I may contact Patricia Rowe, \*\*\*\*\* or Mary Beth Henning (faculty advisor at Northern Illinois University, \*\*\*\*\*). I understand that if I wish further information regarding my rights as a research subject, I may contact the Office of Research Compliance at Northern Illinois University at \*\*\*\*\*.

I understand that the intended benefits of this study include an increase in understanding how excellent teachers can be retained by school districts, my own reflection on my career and a copy of the dissertation for my family.

I have been informed that potential risks and/or discomforts I could experience during this study include the possibility that some of the memories I relay may be uncomfortable. I understand that all information gathered during this study will be kept confidential by having all materials related to the study kept in a locked cabinet when not in use, original recordings will be destroyed within 1 year of completion of the doctoral program by the researcher, and original transcripts will be destroyed within 5 years of completion of the doctoral program by the researcher. I understand that this will result in a published dissertation and possible associated publications. At this time, I elect not to use a pseudonym as a participant, but may choose at any time to request that a pseudonym be used by the researcher.

I understand that my consent to participate in this project does not constitute a waiver of any legal rights or redress I might have as a result of my participation, and I acknowledge that I have received a copy of this consent form.

---

Signature of Subject and Date

CONSENT TO AUDIO RECORD: I agree to be audio-recorded during a series of interviews and the interviews will be transcribed to a word-processed format.

---

Signature of Subject and Date

CONSENT TO PHOTOCOPY AND STORE DOCUMENTS: I agree to allow my original documents to be photocopied twice (one copy as a working copy, the other stored in a locked file cabinet as a back-up).

---

Signature of Subject and Date

USE OF PSEUDONYM: I agree to participate in the investigation (check one).  
 \_\_\_\_\_ with a pseudonym      \_\_\_\_\_ using my name

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Signature of Subject and Date

INFORMED CONSENT FORM FOR ADDITIONAL SUBJECTS  
(ADMINISTRATORS, COLLEAGUES, FORMER STUDENTS (OVER AGE 18))

CONSENT TO PARTICIPATE: I agree to participate in the research project titled "A Biography of an Excellent Teacher to Ascertain Factors that Influenced her Retention in Teaching," being conducted by Patricia S. Mannion Rowe, a graduate student at Northern Illinois University. I have been informed that the purpose of this dissertation study is to discover how retention factors and professional growth contributed to the retention of a recently-retired excellent teacher, Virginia Highstone.

I understand that if I agree to participate in this study, I will be asked to participate in a brief (approximately 20 minute) interview by phone, e-mail, or in person to answer questions related to my knowledge of the biography subject and events that she reports.

I am aware that my participation is voluntary and may be withdrawn at any time without penalty or prejudice, and that if I have any additional questions concerning this study, I may contact Patricia Rowe, \*\*\*\*\* or Mary Beth Henning (faculty advisor at Northern Illinois University, \*\*\*\*\*). I understand that if I wish further information regarding my rights as a research subject, I may contact the Office of Research Compliance at Northern Illinois University at \*\*\*\*\*.

I understand that the intended benefit of this study is to increase understanding of how excellent teachers can be retained by school districts.

I have been informed that potential risks and/or discomforts I could experience during this study include the possibility that some of the memories I relay may be uncomfortable. I understand that all information gathered during this research will be kept confidential by having all materials related to the study kept in a locked cabinet when not in use. Original recordings will be destroyed within 1 year of completion of the doctoral program by the researcher and original transcripts will be destroyed within 5 years of completion of the doctoral program by the researcher. I understand that this will result in a published dissertation and possible associated publications. Although the subject has chosen not to use a pseudonym, I may choose to do so. I also understand that I may ask to use a pseudonym at any point in the study even if I had previously agreed that my name could be used. I understand that the subject will not have access to the tapes or transcripts from my interviews, but my observations and comments may be included in the dissertation and any subsequent publications arising out of the project.

I understand that my consent to participate in this project does not constitute a waiver of any legal rights or redress I might have as a result of my participation, and I acknowledge that I have received a copy of this consent form.

---

Signature of Subject and Date

CONSENT TO AUDIO RECORD: I agree to be audio-recorded during a series of interviews and the interviews will be transcribed to a word-processed format.

---

Signature of Subject and Date

CONSENT TO PHOTOCOPY AND STORE DOCUMENTS: I agree to allow original documents (if applicable) to be photocopied twice (one copy as a working copy, the other stored in a locked file cabinet as a back-up).

---

Signature of Subject and Date

USE OF PSEUDONYM: I agree to participate in the investigation (check one).

\_\_\_\_\_ with a pseudonym      \_\_\_\_\_ using my name

---

Signature of Subject and Date



APPENDIX D  
INTERVIEWS 1-3

## INTERVIEWS 1-3

These interviews focused on the subject's teaching history as part of the context of her life history. The following questions are starting points, and other questions may arise during the interview process.

Today, I'd like to find out why and how you became a teacher and hear the story of your teaching career.

1. Tell me about your educational background. How did you prepare to become a teacher?
2. How old were you when you started teaching professionally? How many years have you been teaching?
3. Where have you taught and how long in each position?
  1. a. What led you to change your teaching job each time?
4. Think back to when you decided to become a teacher. Why did you decide to become a teacher?
5. Think about an excellent teacher you had when you were growing up. Did he or she enjoy teaching? Why do you think he or she enjoyed teaching? What do you think they did not like about teaching? What factors contributed to him or her remaining a teacher?
6. Describe your early teaching experiences.
7. Were there any particularly difficult experiences in your early years? Tell me about them. When? Where? How did you respond?
  7. a. Repeat for easy.
  7. b. Repeat for rewarding.

8. Was there a pivotal moment in your early years where you considered leaving teaching?  
What factors played a role in this feeling? What factors influenced you to stay?
9. Did you have a mentor, either formal or informal? How did that influence your early teaching experiences?
10. What else was going on in your life in the early years?
11. Tell me about other things you did at school besides teaching itself.
12. Tell me about your family and community experiences outside of school and work.
13. Tell me about the middle years of teaching. What years were those?
14. Were there any particularly difficult experiences in your middle years? Tell me about them. When? Where? How did you respond?
  14. a. Repeat for easy.
  14. b. Repeat for rewarding.
15. Was there a pivotal moment in your middle years where you considered leaving teaching? What factors played a role in this feeling? What factors influenced you to stay?
16. What else was going on in your life in the middle years?
17. Tell me about other things you did at school besides teaching itself.
18. Tell me about your family and community experiences outside of school and work during this time.
19. Tell me about the later years of teaching. What years were those?
20. Were there any particularly difficult experiences in your later years? Tell me about them.  
When? Where? How did you respond?

20. a. Repeat for easy.
20. b. Repeat for rewarding.
21. Was there a pivotal moment in your later years where you considered leaving teaching?  
What factors played a role in this feeling? What factors influenced you to stay?
22. What else was going on in your life in the later years?
23. Tell me about other things you did at school besides teaching itself.
24. Tell me about your family and community experiences outside of school and work during this time.
25. Think of an excellent teacher you knew that was close to retirement or was retiring. Tell me when and how you knew this teacher. What factors do you think made them stay until retirement?
26. What other things were going on in your life while you were teaching?
27. What aspects of your personality contributed to your teaching career? How did your personality affect your teaching and your view of teaching at various points in your career?
28. How did you integrate your personal life and your teaching career?
29. Tell me more about your teaching career.
30. Are there any final thoughts or words you would like to add as we complete this session?

APPENDIX E  
INTERVIEWS 4-6

## INTERVIEWS 4-6

Interviews 4-6 asked the subject to give details of her experiences and stories. Additional questions may arise during the course of the interviews.

1. Today, I'd like to hear more about your experiences as a teacher. Think back to a typical school day early in your career. Tell me where and when this day occurred. Tell me about it from the moment you woke up until you went to sleep at night.
  1. a. How did your typical day change over the years? How did your day become easier? More difficult?
  1. b. How did these changes influence your decision to remain a teacher?
  1. c. Did these changes ever make you want to leave teaching? What made you stay in teaching?
2. Tell me a success story with a student or class.
  - 2.a. How did the success come about?
  - 2.b. How many years had you been teaching when this happened?
  - 2.c. How did your experience influence the event?
  - 2.d. How did you feel through the process?
  - 2.e. How did your colleagues and administration respond to this success?
  - 2.f. Tell me more stories like this (repeat above questions for other stories).
  - 2.g. How did these successes influence you to remain in teaching?
3. Tell me a story of a particularly difficult situation with a student or class.

- 3.a. How did the situation come about?
- 3.b. How did you resolve the situation?
- 3.c. How many years had you been teaching when this happened?
- 3.d. How did your experience influence the event?
- 3.e. How did colleagues and the administration respond to this difficulty?
- 3.f. How did you feel through the process?
- 3.g. Tell me other stories of difficulties with students or classes (repeat above questions for each story).
- 3.g. Did you consider leaving teaching because of these difficulties? If so, what made you stay in teaching?

APPENDIX F  
INTERVIEWS 7-9



## INTERVIEWS 7-9

Interviews 7-9 asked the subject to describe her relationships with students, parents, teachers, other personnel, and administrators. Other questions may arise during the interview.

Today, I'd like to hear about your relationships with students, parents, teachers, other personnel and administrators.

1. How would you describe your relationship with students?
  1. a. Think about the most difficult situation you had with a student you have had over the years. Tell me about the situation. What happened? How did you resolve the situation? How was the administration involved? How were parents involved? How were other teachers and other personnel involved? In what ways was this situation challenging? In what ways was this situation fulfilling or satisfying? How did you feel about it? Did you ever consider leaving teaching because of the situation? What factors contributed to this? Why did you stay in teaching?
  1. b. Think about the best situation you have had with a student over the years. Tell me about it. How were parents involved? How was the administration involved? How were other teachers or school personnel involved? In what ways was this situation challenging? How was it fulfilling or satisfying? How did you feel about it? How did this situation contribute to your staying in teaching? What specific factors or feelings contributed to this?
  1. c. Tell me about a pivotal moment in your relationships with students that affected your decision to remain in teaching.

1. d. How did these relationships with students contribute to your remaining in teaching?

What factors played a role in your remaining in teaching over the years?

2. How would you describe your relationship with parents? Ask questions above.

3. How would you describe your relationship with other teachers? Ask questions above.

3.a. What advice and support did you receive from your peers?

4. How would you describe your relationship with other personnel?

5. Did you have a mentor, either formal or informal? How would you describe your relationship with that person? Tell me about him/her and the mentor process.

6. How did your peers contribute to your professional growth?

7. How were you a teacher-leader? How did you contribute to the professional growth of others?

8. How would you describe your relationship with administrators? Ask questions from question 1.

8.a. What advice and support did you receive from your administrators? How did this change over the years?

8.b. What kind of school climate did your administrators create? How did the climate change over the years?

8.c. What were your working conditions like? Did you feel secure in your job?

8. d. Did you feel as if you had power as a teacher? Autonomy? What were your responsibilities?

- 8. e. Did your administrators trust you as a teacher? How? What did they expect from you?
- 8. f. How did your administrators motivate you?
- 8. f. How did your administrators contribute to and support your professional growth?
- 8. g. How were you recognized for your work by your administrators?
- 9. Tell me about a pivotal moment with regard to your administration that influenced your decision to remain in teaching.
- 10. Tell me about your building, facilities, and classroom. How did you obtain teaching materials?
- 11. Tell me about your relationships with other staff such as technical support, media, library personnel, custodial staff, cafeteria staff, etc. How did these relationships contribute to your satisfaction as a teacher?
- 12. Tell me about your working conditions.
- 13. Did anyone else influence your teaching? How?

APPENDIX G  
INTERVIEWS 10-11

## INTERVIEWS 10-11

Interviews 10-11 asked the subject to reflect on the meaning of her experiences.

Additional questions may arise during the course of the interview. The numbers in parentheses after the question indicate the research question for which it is expected to yield data.

1. Today, we will talk about what your teaching experiences mean to you. First, tell me about what it means to be a teacher.
2. Tell me about what your experiences as a teacher mean to you.
3. You had told me a story about.....what did that mean to you?
4. How did this experience influence you to remain in teaching? Was there a pivotal moment that you had to make a decision to remain in teaching? Name the reasons that you stayed in teaching.
5. Repeat 3 and 4 for other stories/experiences, with specific analysis of her stories related to students, parents, administrators, colleagues, and other staff.

APPENDIX H  
INTERVIEWS 12-13

## INTERVIEWS 12-13

These interviews asked the subject to describe her process of professional growth. Other questions may arise during the course of the interview. The numbers in parentheses after the question indicate the research question for which it is expected to yield data.

1. Today, I'd like to hear about your professional growth as a teacher. What types of professional development training or growth opportunities were available to you? How did these come about?
  - 1.a. How did you participate in them?
  - 1.b. How did these training or growth opportunities influence your growth and development as a teacher?
  - 1.c. How did these opportunities affect your relationship with your administrators? Colleagues? Students? Parents? Other staff?
  - 1.d. Tell me about a professional growth opportunity that was pivotal in your teaching career.
  - 1.e. How did these opportunities influence you to remain in teaching?
  - 1.f. What factors arising from these opportunities affected your decision to remain in teaching?
2. Did you seek professional growth opportunities independently?
  - 2.a. Did you seek additional professional growth opportunities on your own?

- 2.b. Why? How did you come to decide on a particular growth opportunity?
- 2.c. How did these opportunities enhance your teaching?
- 2.d. How did these opportunities affect your teaching?
- 2.e. How did these opportunities affect your relationship with your administrators?  
Colleagues? Students? Parents? Other staff?
- 2.f. Tell me about a professional growth opportunity that was pivotal in your teaching career.
- 2.g. How did these growth opportunities contribute to your staying in teaching until retirement?
- 3. How did you contribute to the growth of colleague's expertise?
- 4. Tell me about your participation in educational decision-making?
  - 4.a. Did you feel empowered because of your professional growth?
- 5. How did your professional growth fulfill personal needs?
- 6. How did professional growth affect your teaching?
- 7. How did professional growth influence you to remain in teaching?



APPENDIX I  
INTERVIEWS 14-15

## INTERVIEWS 13-15

These interviews asked the subject to identify and describe work and life factors which contributed to her retention in teaching. Other questions may arise during the interview.

Today, I would like to talk about the factors that affected your decision to remain in teaching until retirement.

1. Describe a time that you were happy in teaching.
  - 1.a. Why were you happy? What factors contributed to your happiness?
  - 1.b. How did your personality contributed to your happiness?
2. Describe a time that you were not happy in teaching.
  - 2.a. Why were you unhappy? What factors contributed to your unhappiness?
  - 2.b. How would you describe the process through which you dealt with these feelings? How did your personality contribute to this process?
  - 2.c. Did you consider leaving teaching? When?
  - 2.d. What factors made you consider leaving teaching?
  - 2.e. What factors influenced you to stay in teaching?
3. How did working conditions impact your decision to remain in teaching?
4. How did your relationships with students, colleagues, parents, and administrators impact your decision to remain in teaching?
5. How did professional development impact your decision to remain in teaching?
6. How did support from your administration impact your decision to remain in teaching?

- 6.a. What advice did you receive over the years?
7. How did support from your colleagues impact your decision to remain in teaching?
  - 7.a. What advice did you receive over the years?
  - 7.b. What advice would you give now to fellow teachers if you could do so?
8. How did taking on leadership roles impact your decision to remain in teaching?
9. How did a mentor (either formal or informal) impact your decision to remain in teaching?
10. How did your relationships with students influence your decision to remain in teaching?
11. How did your relationships with colleagues influence your decision to remain in teaching?
12. How did your relationships with administrators influence your decision to remain in teaching?
13. How did your relationships with parents influence your decision to remain in teaching?
14. How did you participate in the decision-making process at your school? Was this important to you in remaining in teaching?
15. How did salary and benefits impact your decision to remain in teaching?
16. How did technology impact your decision to remain in teaching?
17. How did policies impact your decision to remain in teaching?
18. What role did recognition play in your decision to remain in teaching?
19. How did factors such as esteem, opportunity to learn, growth, challenge, achievement, recognition, the work itself, responsibility, and advancement impact your decision to remain in teaching?

20. How did your personality contribute to your decision to remain in teaching to retirement?
21. How did factors such as working conditions, personal life, status, supervisory styles, health, comfort, security, and safety impact your decision to remain in teaching?
22. What could your school or district have done to retain more excellent teachers until retirement?
  - 21.a. What else could be done to retain more excellent teachers until retirement?
23. Why do you think you stayed in teaching until retirement?
24. Why do you think other excellent teachers stayed in teaching until retirement?
25. What can be done to foster excellence in/for teachers?
26. What advice would you give to a young or mid-career teacher about staying in teaching until retirement?

APPENDIX J

INTERVIEW WITH OTHERS

RECOMMENDED BY BIOGRAPHICAL SUBJECT


## INTERVIEW WITH OTHERS RECOMMENDED BY BIOGRAPHICAL SUBJECT

1. Virginia Highstone told me that she knew you through/at, etc context). Would you please tell me about how you know Virginia Highstone?
2. She told me that she was your (mentor, colleague, teacher, etc. relationship). Would you please tell me about it?
3. What was her response in the (relationship) situation?
4. What was your response in the (relationship) situation?
5. Why do you think Virginia stayed in teaching until retirement?
6. Is there anything you would like to add about Virginia?

APPENDIX K  
EXAMPLES OF NOTES WRITTEN  
BY STUDENTS TO VIRGINIA

Mrs Highstone,  
Thanks for teaching me pre-  
calc this year. Once again  
I enjoyed having a class with  
you. I think you are an  
excellent teacher. I admire  
your knowledge and thank  
you for sharing it with us.  
I also appreciate your flexibility  
and calmness. Thank you for  
caring about us And what  
is going on in our lives. It's  
nice to know that you are  
here if I ever need advice or  
someone to talk to...

all and all it was a good  
year & I thank you for contrib-  
uting to that. Have a wonderful  
summer & take some time to  
relax (and visit your grandkids!)  
I'll see you at relay & then  
hopefully next year at Empower.






Mrs. Highstone-

Thank you very much for the recommendation that you wrote for me this year. I appreciate your efforts especially because I am no longer a member of your class, you still took the time to write for me. This shows a great interest in the futures of your students, which means a great deal to me and other students as well, I'm sure. Also, I think this is a good time to thank you for all that you taught me in two years that you were my math teacher. The knowledge and love of math that I have gained as a result of your efforts is phenomenal.

Thank you,



Mrs. Highstone,

Thank you, thank you for this year and for the knowledge and intrigue you brought into my life. It was a true blessing to have such a gifted teacher all year - never in my wildest imaginings dream that I would excel in mathematics. I have always struggled and you and York have nurtured me along so well. I know I have come a long way when I find myself thinking in variables and looking forward to theory discussions.

Despite the things I learned this year, my discoveries were not limited to academia. Outside the realm of mathematics, I learned from you what is compassion; I learned patience; most importantly, I learned humility. I knew this the moment I stepped up to the board and I didn't die from shame of not knowing.

These things are invaluable, for they will benefit me for the rest of my life. You have no idea how much I admire you, Mrs. Highstone. I will always know that it was you who propelled myself with the tools to become a truly "unique" individual.

Always,

Mrs. Highstone,

I wanted to make sure I thanked you for being such a wonderful teacher before I leave [redacted]. You were one of my most influential teachers. I learned more in your class about math, and about myself than I did in any other math classes combined. I really grew a lot last year. You challenged me, yet helped to give me the confidence that I needed to succeed. Me and [redacted] became best friends in your class. (It all started with Mathematica) I really was able to strive to achieve a higher level of understanding in math last year. You had just the right balance of seriousness and humor. I really enjoyed coming to your class each day. I know that you cared about each student individually. You seemed to know me very well. Thank you for the recommendations too. I know they take a lot of work and I really appreciate them. I can only hope to get professors as wonderful as you next year. You really have made a difference in my life. Thank you for all of your time and for your enthusiasm.

Love,


[redacted]

Mrs. Highstone,

May 23, 2003

I'm not sure if you remember teaching me during my freshman year, but I remember everything that you taught me during second period Algebra 9H. You taught me to take responsibility for my actions and that it pays to do homework. I must say that I have never had a teacher as gifted as you are. I want to thank you for your effort and your dedication to your students. It seemed as though you made a special effort with me to help me succeed. Your smile always brightened my morning, and your persistence drove me to success. Thank you for your time and thought.

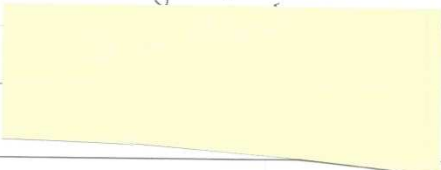
Just so you will know, I have paid my acceptance fee to The Ohio State University, and I will be enrolled there next fall. Thank you for helping me to get there! To be honest, I enrolled in college algebra this year hoping that you would be my teacher. I was crushed. Yet optimistic when I saw Mrs. Eastman's name on my schedule. Freshman year was the best year to have you because you taught me discipline. Freshman year was the worst year to have you because my expectations of future teachers were far too high. Thank you for being a great teacher! You made a huge difference! Thank You!



June 2000

Mrs. Highstone~

Now that I'm graduating, that algebra review that I failed back in the first week of freshman year seems like a lifetime ago! I just wanted to thank you for being such a guiding light for me through high school. You have always been there watching out for me, through good days, bad days, breaking points, challenges, successes, a divorce, and any BASIC that gave me problems. Which, in retrospect was every program I tried. But I am so lucky to have had you as a teacher for a year and a half, an Empower sponsor for three, and a mentor for my life. Your caring and support has gone far past the boundaries of course curriculum to concern for my well-being as a person. I also see that compassion for every student you teach; whether they love you or pester you daily, you always make sure they are alright. Thank you for caring so much for everyone, and for me especially. I hope my brother will be lucky enough to have you as a teacher in a couple of years, he has certainly heard enough good things about you from me. Again, thank you so much for everything. Good luck with Empower in years to come, it's really starting to grow again! And best wishes on your health, as well, I hope that all continues to go well. I will write from college to check in every once in a while. Thank you for getting me through these trying years~



APPENDIX L

EXAMPLES OF LETTERS

WRITTEN ON VIRGINIA'S BEHALF

FOR A TEACHING AWARD NOMINATION



Virginia Highstone

Student Letter of Recommendation  
Mrs. Virginia Highstone  
Those Who Excel Award  
Jan. 8, 2002

I've never been too great in math, so when I received my schedule for senior year I was less than thrilled to find out that I would be taking college algebra, especially as the last class of the day. I knew that I would be spending the period counting down the minutes until the bell rang. But my senior year math class was different. For the first time in my life I actually began to enjoy math, and even better I understood it. I now know that logs are exponents and exactly what a quadratic equation can be used for. I have this knowledge because of my teacher, Virginia Highstone.

The first day of class Mrs. Highstone went over a description of the college algebra course, her expectations of the class and her past background in teaching. From my first impression of her I knew that she would impact my life more than by just teaching me math.

Mrs. Highstone has very high expectations for her students, and she encourages and helps us in reaching the expectations. Mrs. Highstone was always willing to give extra help to students who needed it. And she was always prepared to give many different examples to help us learn and understand the material in class. We were constantly using different techniques, such as group activities in which we needed to come up with a presentation to the class to teach a lesson. Another time she used class demonstrations where the entire class lined up according to height and then we used that data along with an additional demonstration to explain differences and proportions. She strived to make math more interesting by involving the students actively, not just lecturing.

Mrs. Highstone also took an interest in our individual lives, as well as including us in hers. She is a very personable individual, who cares very much for her students' education along with their well being.

I've learned a lot about myself from my experience in college algebra. Not how many formulas I could memorize or what the quadratic equation is, but how to balance my time, how to study for exams, how to view math in different ways. I've also learned to stand up for what I believe in and to be proud of who I am. Mrs. Highstone taught me more than just algebra, she helped me learn about myself.

I highly recommend Virginia Highstone for the Those Who Excel Award. She is a very intelligent woman, and a wonderful teacher.



Class of 2001

Virginia Highstone

## Administrator Recommendation

The best hiring decision I ever made as department chairman was to select Virginia Highstone. [redacted] High School is a better place because of her presence, both for the students she has touched and the colleagues with whom she has worked. Recognizing her talents is not difficult, a fact that came to mind at a recent department chairs' meeting. The discussion was about teacher inservice. Our head librarian is new to the district, and just getting to know the faculty. She made the following comment

I can't think of any better inservice for a teacher than to watch this person named Virginia Highstone teach. College Algebra classes were in the library this week and it was an education just to watch her in action. Every teacher at [redacted] should have the opportunity to learn from observing her.

The librarian had never met Virginia, but immediately recognized that she is truly exceptional.

Part of Virginia's power comes from the fact that her teaching is based on a coherent, well-articulated philosophy. Her actions are focused toward goals that come from those ideas. New ideas become part of the fabric of her thinking, and she puts her thinking into action. What she does is purposeful and directed and, as a result, highly effective.

Virginia's students always feel that they are being stretched. At the same time, however, they are secure in knowing that they are being supported and have developed the tools to tackle the challenges Virginia sets for them. Virginia works to build self-reliance by teaching students to monitor and organize their thinking. They have enormous faith in her. But more importantly, she helps them build faith in themselves as they are successful in learning to understand significant ideas.

A particular strength is Virginia's broad understanding of the variety of ways that students learn. She designs instruction to meet their many different needs. One difference is maturity. She approaches freshmen differently from seniors, and works to help students grow in maturity and thinking ability as they move through high school. Another difference is ability. Virginia is hugely successful in working with students ranging from those with learning problems to the highly gifted, sensitively designing instruction to fit her students' thinking and needs. For instance, her weaker geometry students use tactile and kinesthetic experiences to differentiate and remember relationships. Gifted students are pushed toward the theoretical and analytic more quickly and deeply. Virginia has a strong commitment to average students. She has helped to design programs that ask more of these students- and these programs get results. While building skills is important, it must be accompanied by a strong, interconnected understanding of the subject. Whatever the level of the student, Virginia sets tasks which demand that they think deeply and build an integrated understanding of mathematics. She also moves them forward in their more general



## Virginia Highstone

academic skills and helps them to prepare for the adult world they will be joining so soon. Virginia works closely with parents and counselors, drawing upon all the school's resources to understand her students and help them succeed.

Another of Virginia's strengths is a creative flair that captures the essence of a curricular goal and transforms it into an activity that motivates students' thinking. Her teaching is filled with examples. My favorite is a task about inverse functions, a very deep and difficult idea. Students were asked to pick two related functions from everyday life, one that can be reversed with an inverse and one that cannot, and illustrate each with a drawing. The students' examples were amazingly insightful! For instance, one boy chose methods of joining two metal parts: screws or solder. A screw can be unscrewed, but a solder joint is not removable. Of course, some students' products showed flawed reasoning, which led to a rich class discussion about important mathematical concepts. The key to the success of this small, but very effective, activity was having the students produce drawings. The visual format drew the viewer to think about the key relationship.

But Virginia's influence extends far beyond her classroom. She views teaching as a collaborative enterprise in which we (the department, the school, the wider educational community) are always working to understand what makes teaching work for our students. I always tell new teachers to watch and learn from Virginia. Overhearing her phone calls to parents and listening to her thoughts in office discussions is an education in teaching philosophy and skills. She leads by example and inspiration. Just as she does with students, Virginia pushes the thinking of the teachers with whom she works. Her firm sense of purpose and ability to articulate her understanding of teaching are important. She is frequently sought out to serve on district committees because of her knowledge, analytical skills, and ability to articulate the thinking of the group. Projects such as curriculum work are more thoughtful and effective when Virginia is involved. New ideas become part of the fabric of Virginia's thinking, and she puts her thinking into action. She is able to take any task and raise the thinking level of everyone involved.

In short, I feel that Virginia Highstone is the very best choice for the Illinois Teacher of the Year. Not only is this an award, but it is a position. The winner will act as an emissary to improve education in Illinois. Virginia would be a superb spokeswoman. Because she is grounded in a well-articulated conception of teaching, she would deal effectively with the complex issues we face. Her warmth, wisdom, and ability to communicate would stimulate the thinking of those concerned about education in Illinois. You would find, as I did, that this would be the best hire you could make!

*Susan B.*

Susan B. Mathematics Department Chairman

## APPENDIX M

### PICTURE OF VIRGINIA HIGHSTONE

