An examination of secondary social studies educators' intentions regarding staying or leaving the teaching profession

Paul G. Fitchett

A dissertation submitted to the faculty of the University of North Carolina at Chapel Hill in partial fulfillment of the requirements for the degree of Doctor of Education in the School of Education.

Chapel Hill
2008

Approved by:

Advisor: Dr. Xue Lan Rong

Reader: Dr. Cheryl Mason Bolick

Reader: Dr. Barbara Day

Reader: Dr. Suzanne Gulledge

Reader: Shenyang Guo

-

-

ABSTRACT

PAUL G. FITCHETT**:** An examination of secondary social studies educators' intentions regarding staying or leaving the teaching profession (Under the direction of Dr. Xue Lan Rong)

This study was designed to examine the demographic and professional mechanisms that contribute to social studies teachers' professional intentions. Utilizing the National Center for Educational Statistics (NCES) Schools and Staffing Survey (SASS), research was conducted to investigate the occupational perceptions of secondary social studies teachers compared to other core subject areas (math, science, and English). Logistic regression models were constructed to analyze the associations between explanatory variables and teacher intention to leave or stay.

Research findings indicated that social studies teachers differ from other core subject areas in demographics, professional perceptions, and teacher intent. Results suggested that social studies teachers tended to be White males. Moreover, minority and women practitioners were less likely to intend to stay in teaching. Logistic regression models pointed out that social studies teachers working with higher minority, lower socioeconomic students were more likely to remain in teaching. Among advanced degree holders, social studies teachers with a Masters in an education field were less likely to intend to stay. Teachers with a Masters in a social studies related field were more likely to remain teaching. From these findings, school, district, and college/university leaders need to implement retention policies that recognize the demography and professional attitudes of secondary social studies teachers.

-

DEDICATION

To my parents, Reid and Donna Fitchett
Thanks for making me do my homework.

To my brother, Mark
Those long weekends kept me going.

-

ACKNOWLEDGEMENTS

This work would not have been possible without the support and kindness of my friends. Brian, you taught me that "education" and "schooling" are not synonymous. Ryan and Adrienne, thanks for giving me a bed (or couch) to sleep on during the North Carolina Social Studies Conference. Marty and Keri, I appreciate your consistent support of my work and scholarly accomplishments. Lee and Jennifer, your humor and honesty are always refreshing. Josh and Jenny, thanks for keeping me grounded. Mark and Leah, without those dinners, I probably would have starved.

I offer my most sincere gratitude to my committee. Dr. Barbara Day, your guidance as I entered my doctoral program was crucial. Dr. Shenyang Guo, your advice has helped me develop into a better researcher and scholar. Suzanne Gulledge, I hope that I can be as upbeat and energetic a social educator. Dr. Cheryl Mason Bolick, I appreciate your willingness to welcome me into the social education fold.

And lastly, to my advisor and mentor Dr. Xue Lan Rong. You challenged me to work harder and more diligently than I ever thought I could accomplish. This dissertation would have never been possible without your patience, honest criticism, and professionalism. Thank you.

-

TABLE OF CONTENTS

-

-

LIST OF TABLES

-

LIST OF FIGURES

CHAPTER 1: INTRODUCTION

Background

Teachers contribute approximately 4% to the entire non-military workforce of the United States (Ingersoll, 2001). Therefore, the turnover rate within the teaching profession has dramatic effects not only within institutions of education, but also resonates along economic and intellectual lines. Previous research on teacher attrition has pointed to a myriad of reasons why educators are leaving the profession[1]. The authors of *No Child Left Behind* (NCLB) have suggested that teacher shortages are attributed to rapidly increasing student enrollment and an expanding retiring teacher pool (Ingersoll, 200l; Darling-Hammond, 2003). Consequently, schools of education and local education agencies have lowered their standards for certification in an effort to increase the number of teachers (Harrell, Leavell, van Tassel, & McKee, 2004).

Richard Ingersoll (2003) posited that teacher shortages cannot be explained dismissively by the retirement of the baby boomer generation. On the contrary, younger teachers are leaving the profession in greater numbers. This "revolving door" policy suggests that school-wide factors contribute to the increasing number of teachers who leave the field via attrition.

Attrition is defined as the voluntary leaving of teachers from the workforce before retirement age (MacDonald, 1998). *Retention* refers to behavior characterized by remaining in the profession. In his investigation of teacher turnover, Ingersoll (2001, 2003) defined

[1] In this study, the terms "profession" and "occupation" are used interchangeably

-

educators who depart teaching as "leavers" and educators who remain in teaching as "stayers." Empirical studies suggested that attrition rates are higher among secondary teachers and lower among elementary teachers (Boe, Bobbit, Cook, Barkanic, & Maislin, 1998; Ingersoll, 2001, 2003).

Among secondary educators, numerous studies have attested to increasing attrition rates for math and science teachers (Guarino, Santibãnez & Daley, 2006; Ingersoll, 2003; Stinebrickner, 1998). Seeking better employment opportunities, these teachers are more likely to leave than teachers of English and the social studies (Hansen, 2001; Ingersoll, 2003). Also, recent analysis of a nationally represented dataset revealed that social studies teachers were more likely to leave than science educators (Luekens, Lyter, & Fox, 2004). These findings contradict previous studies of teacher attrition, which indicated that science teachers were more likely to leave as opposed to social studies practitioners (Murnane et al., 1991; Ingersoll, 2001). Future research into the differences between social studies and non-social studies teachers would provide insight into attrition behavior among the subject areas[2].

Little quantifiable research has been conducted to examine the characteristics of social studies teachers. Ochoa (1981), Risinger (1981), and Nelson (1981) provided the first large dataset analysis of the social studies identity. Demographically, social studies teachers tended to be White males with more advanced degrees than other secondary educators (Risinger, 1981). In terms of professional perspectives, they viewed salary, discipline, professional status, and leadership as major predictors of job intention (Nelson, 1981). Subsequent research (Leming, 1991; Bliss & Banks, 1994) found similar results. However, their findings employed outdated data and may not offer a contemporary insight on this

[2] In this study, the terms "content area" and "subject area" are used interchangeably. The term "discipline" is used to refer to a specific content course such as world history in social studies. "Student discipline" refers to learner behavior. "Discipline structure" refers to the macro-level school management plan established by the principal.

-

particular issue. Furthermore, none of these studies utilized nationally represented data and lacked external validity of the sampling conducted[3]. In order to make generalizable assessments of the mechanisms contributing to teacher attrition in the social studies content area, a more comprehensive sample was required.

In determining the theoretical construction of the research model for examining social studies teacher turnover, it was necessary to review empirical studies that contribute to the study of attrition and retention. From this examination, the model constructed drew upon scholarly research to determine which factors are most likely to contribute to a teacher's professional intention to stay with or leave the profession.

Among teacher-wide specifics, demographics have shown to be an important predictor of attrition. Age has been significantly associated with the attrition rates among the youngest and the oldest teachers (Mont & Rees, 1996). In addition, males view teaching as a stepping-stone toward career advancement while females enjoy the flexibility that teaching affords them (Luekens et al., 2004). Minorities are more likely to remain in teaching, though their numbers are not sufficiently represented in the workforce (King, 1993; Imazeki, 2004). Teachers with advanced degrees are less likely to remain in teaching, unless their advanced degree is education-specific (Hansen, 2001).

School-wide characteristics indicate that salary dissatisfaction is the primary predictor of teacher turnover (Stinebrickner, 1998; Harrell et al., 2004). Among non-pecuniary (non-salary) factors, the number of minority students and special needs students has a negative effect on teacher intention for retention (Johnson, Berg, & Donaldson, 2001). Among school-wide predictors, studies analyzing school leadership have concluded that teachers are more likely to leave if they do not have a good working relationship with their principal

[3] External validity refers to the generalizability of a study's results within a target population (Shadish, Cook, & Campbell, 2002). In the case of the aforementioned studies, this population would be social studies teachers.

-

(Taylor & Tashakkori, 1995). Additionally, teachers who have problems with a school's discipline structure and students' classroom behaviors are more likely to leave (Ingersoll, 2001; Luekens et al., 2004). According to one study, student discipline concerns were second only to salary in determining turnover behavior (Harrell, et al., 2004). Good collegiality and the effective communication between faculty and administration have been associated with higher retention rates, especially among novice teachers (Darling-Hammond, 2003). However, empirical studies analyzing their effectiveness have had mixed results (Harrell et al., 2004; Luekens et al., 2004). Further research is needed to investigate this topic. In an era of increased teacher accountability, researchers found detrimental effects of high stakes testing on teachers' retention (Certo & Fox, 2002). Little research has been conducted as to how the increased emphasis in testing over the last several years has adjusted probability rates for leavers and stayers. More analysis is recommended in this area.

Interpreting the exogenous factors (teacher leadership style, student discipline, discipline structure, collegiality, workplace conditions, and teacher demographics) among the characteristics and perspectives of social studies teachers, a research model has been constructed. It analyzes the mediating and direct effects of subject area idiosyncrasies on teacher turnover likelihood. By contextualizing the importance of subject area on teacher turnover, researchers can better understand why social studies teachers decide to leave or stay in the profession.

The State of Social Studies

Over the last twenty years, social studies education has taken a backseat in the push toward increased curriculum standardization and emphasis on high-stakes testing. Hamstrung from testing requirements, teachers at the elementary level often limit social studies instruction in favor of traditionally assessed subjects. Recent studies at the K-5 level

-

point toward increased marginalization of the subject in favor of reading and math (Heafner et al., 2007). At the secondary level, a focus on the social studies has been replaced by a discipline-specific rhetoric. The federal government's *America 2000* and *Goals 2000* programs highlighted the importance of geography, history, and civic education (Evans, 2004). The term "social studies" was never mentioned in policy. To the chagrin of social educators, *No Child Left Behind* legislation has helped shape a modern definition of social studies. De-emphasizing the importance of human connections, cross-discipline epistemology, and critical thinking, this re-definition stresses an isolated subject-area competence.

In collusion with these efforts, the conservative Fordham Foundation published *Where Did Social Studies Go Wrong?* (Leming, Ellington, & Porter-Magee, 2003)—an indictment on current social studies practice and theory. Jingoistic in tone, the collection of essays consistently reiterated the patriotic responsibility for increased social studies instruction in US schools. Specifically, the report suggested that post-*9/11*social studies should re-emphasize back to basics principles of standardization and prescriptive instruction. Leming et al. (2003) attacked progressive instructional strategies. Constructivist learning was labeled as "un-intellectual", technology as a panacea for poor instruction, and non-direct teaching as empirically unsound. Few studies have sought to determine how this ideological war between progressive social studies instruction and the current standardization practices have impacted the perceptions of social studies teachers.

This study sought to examine the characteristics and perceptions of social studies teachers in the *No Child Left Behind*-era. In addition, the connections between the identity of social studies educators and their professional commitment were addressed. By understanding how these practitioners differ from other subject areas, one may better develop

-

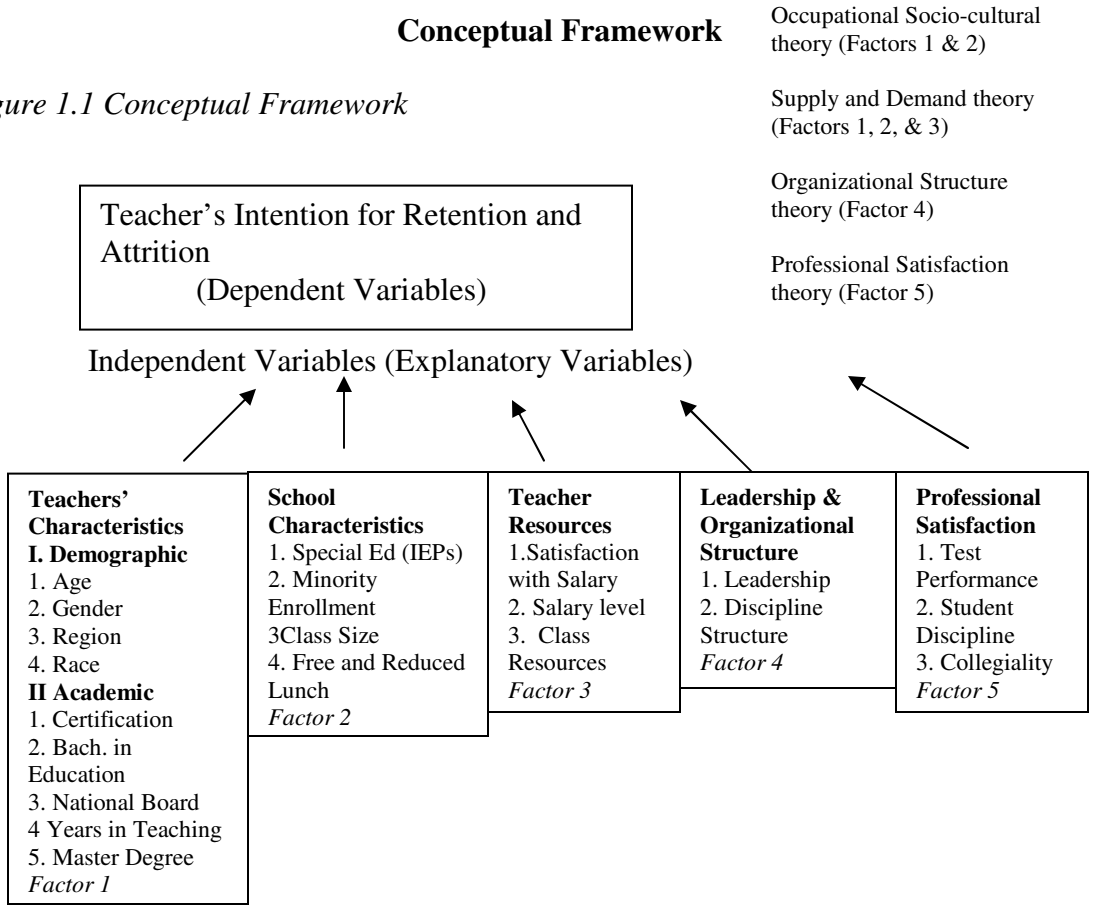
recruitment and retention policies. Finally, by investigating the nature of current social studies teachers, one can better understand the effects of the current standardization movement on social education in the United States.

Purpose of the Study

Using the data from 2003-2004 Schools and Staffing Survey, the purpose of this study was to investigate secondary social studies teachers' leave or stay intentions based on the differences in demographic and professional backgrounds, school characteristics, and their perceptions of several important aspects of their professional lives . This study also explores how social studies teachers differ from the other teachers in the above-mentioned domains. By examining the professional intention of secondary social studies teachers, school systems can develop policies to retain high quality practitioners who will better prepare learners to participate in the democratic process.

Conceptual Framework

Figure 1.1 Conceptual Framework



-

In order to test the subsequent research questions, a conceptual framework was constructed (see Figure 1.1). The literature on teacher attrition and retention rates within U.S. schools has investigated numerous variables to explain for growing teacher shortages and alarming turnover rates (Guarino, Santibãnez, & Daley, 2006; Ingersoll, 2001, 2003). However, there is a scarcity of research attempting to suggest mechanisms for this phenomenon. The following diagram parameterized these variables in a reciprocal, non-recursive causation model. Five factors: teachers' characteristics, school characteristics, teacher resources, leadership and organizational structure, and professional satisfaction were based on numerous empirical studies and were structured to show an impact on endogenous construct, professional intention. These five factors were derived from four major theories relevant to explaining teachers' retention and attrition. They were occupational social-cultural theories (factors 1 and 2), supply and demand theories (factors 1, 2 and 3), organizational structure theories (Factor 4) and professional satisfaction theories (factor 5) (Boe, Bobbit, Cook, Barkanic, & Maislin, 1998; Bogler, 2001; Falch & Strøm, 2004; Hansen, 2001; Ingersoll, 2001, 2003; Singh & Billingsley, 1996; Stinebrickner, 1998). Each of the exogenous constructs loaded onto measured variables from the 2003-2004 Schools and Staffing Public School Teacher Survey (SAS) implemented by the U.S. Department of Education. Accordingly, the endogenous constructs loaded onto a measured variable from the same measurement tool.

Indicating Factors

The five-explanatory constructs loaded onto twenty variables. For example, as Figure 1 illustrated, the factor "leadership and organizational structure," measured two combined measured variables (leadership and student discipline). The teachers' characteristics were

-

also loaded into two categories (demographic and academic). These measurements were conducted using four-level Likert-type scales ranging from strongly disagree to strongly agree. Administrative behavior (principal's attitude toward teachers), principal dialogue (toward teachers), administrative support of special education, and principal communication with staff were each utilized as measurements for "leadership." "Student discipline" was defined as the effect of student behavior on classroom instruction. A more elaborated explanation of variable selection is included in Chapter 3 and the descriptions of each of the 20 variables employed in the data analyses for this dissertation are included in Appendix B.

Criterion Factors

The "intention" construct was the measurement of a teacher's intention to leave the field of teaching or stay as long as possible. The SASS measurement scale was converted into a dichotomous measure coded "leave" or "stay." Previous research in teacher turnover pointed out that utilizing intention to determine attrition was an acceptable measure of educator's commitment (Singh & Billingsley, 1996).

Research Questions

Five major research questions were asked in this paper (More detailed descriptions regarding these five research questions were provided in Chapter 3 and Table 4.1 in Chapter 4):

1. Who are secondary social studies teachers? How are social studies teachers different from the English, science, and math teachers?
2. What are the self-perceived intentions regarding retention and attrition for social studies teachers, and how are these self-perceived attention/attrition intentions different among social studies teachers and English, science, and math teachers?

-

3. What are the variables in the five factors contributing to teachers' intention regarding retention/attrition? Is there a difference in professional intention among social studies teachers and all other teachers when related variables were controlled for?
4. What is the association between the variables in the five factors and teachers' professional intention within social studies? How are the effects of these explanatory factors different for social studies teachers compared to teachers in other core subject areas?
5. How do the significance and the magnitude of these explanatory variables vary in correspondence to social studies teachers' intention at ordinal levels of contrast?

The above-listed five research questions attempted to explore the professional and demographic indicators of teacher attrition/retention among social studies teachers. Moreover, it also offered an opportunity to analyze the different characteristics and perspectives among subject areas in order to determine which “mechanisms” most significantly contribute to teacher commitment in the field.

CHAPTER 2: LITERATURE REVIEW

Introduction

According to a recent estimation (Ingersoll, 2001), a quarter of the nation's teachers who entered the workforce in the 1960s and 1970s may retire within the next five years. The current US Presidential Administration and Department of Education have indicated that the recent teacher shortage in a number of states is due to the "graying" of the current teacher workforce. However, independent analysis has countered that deficits in the workplace are attributable to teacher turnover.

Ingersoll (2003) suggests that the nation has developed a "revolving door" policy regarding the nation's teachers. In the 1999-2000 school year, 534,861 new schoolteachers entered the profession. In that same year, 539,778 teachers left the profession. Remarkably, 30% of all new teachers leave within the first year and 50% leave within the first five years (Adams, 1996; Ingersoll, 2001). Unable to maintain a consistent workforce, classrooms are repeatedly filled with novice educators who (due to inexperience) cannot provide the best possible education for the nation's children. Furthermore, attempts at implementing alternative certification programs have failed to retain teachers (Hansen, 2001).

Research into teacher turnover has sought to determine causal effects of attrition. *Attrition* is often operationalized as the voluntary leaving of teachers (MacDonald, 1999). *Retention* refers to the retaining of educators within the field. Ingersoll (2001) defines these teachers as "leavers" (those who leave) and "stayers" (those who remain in teaching). Incorporating this terminology, numerous research and theory has sought to establish which

-

factors contribute to teacher retention and attrition (Ingersoll, 2003; Guarino, Santibãnez, & Daley, 2006).

Among subject areas, differences in qualifications and characteristics of teachers affect their intentions to leave or to stay within the field (Boe, Bobbitt, Cook, Barkanic, & Maislin, 1998; Guarino, et al. 2006). According to recent data from the Schools and Staffing Survey (99-00), approximately 47% of the schools surveyed reported vacancies in secondary social studies (Ingersoll, 2003). Among these reported schools, 14% had difficulty filling the positions.

This literature review investigated teacher characteristics among secondary social studies teachers. Specifically, it detailed teacher characteristics and teacher beliefs that contribute to attrition and retention rates. Furthermore, the literature review explored teacher and school-wide factors of teacher turnover based upon existing theory and empirical findings. These predictors were divided into "factors of influence": teacher characteristics, school characteristics, teacher resources, leadership/organizational structure, and professional satisfaction. Finally, the review provided between-subject area comparisons of teacher turnover rates and conjectured as to the reasons for the differences among various subjects in secondary education.

The literature review, focusing on teachers' retention and attrition, identified four theoretical constructs. Occupational social-cultural theories mainly addressed the relationship between how people choose their occupations, length of tenure, and socio-demographic characteristics. It also included how practitioners perceived their human environment in relation to job desirability. The economic theory emphasized the supply and demand relationship between people's perceived value (e.g., professional credentials, etc.) on the job market and the needs of the market (see Boardman et al., 1982). Specifically, it suggested

-

that educators have to weigh cost versus rewards. At the forefront of this theory was the impact of salary level on teacher retention. In addition, teacher perspectives of school characteristics and student demographics had an influential effect on risk/rewards of teaching. Among different subject areas, the "opportunity costs" of teaching compared to the financial and professional incentives supplied varied results. The organizational structure theory contended that teacher retention and attrition were associated with leadership qualifications of the schooling institution (see Bogler, 2001). Teachers were more likely to remain in the profession if their principal maintained a collaborative and encouraging leadership style. In addition, the principal should have a supportive student discipline plan that was confirmed by staff. Lastly, the professional satisfaction theory posited that tangential aspects of the teaching culture such as student behavior, collegiality, and high stakes testing influence professional intention. Teacher perspectives of violent or abusive behavior within the school can have an adverse effect on teacher retention. Concurrently, teacher collegiality serves as a support system for educators. Schools that fail to foster such a professional climate are more apt to lose teachers to other professions. Within the last ten years, high-stakes testing and accountability measures have become more pervasive. The professional satisfaction theory suggested that increased pressures from these assessments exacerbate attrition rates within the teacher occupation. These four theories offered a foundation for the empirical studies included in the following literature review.

Empirical Characterization of Social Studies Teachers

A paucity of empirical research details the characteristics of social studies teachers and provides insight into their attrition patterns within the field. The majority of articles in social studies journals tend to focus on the pedagogy and instructional aid in collusion with various content matters. The oldest and most detailed study of social studies teacher

-

characteristics was conducted by Ann Ochoa and her colleagues (1981) for a special edition of *Social Education*. Their research population consisted of 402 self-selected secondary social studies teachers in six states: Kansas, Mississippi, Washington, Wisconsin, Vermont, and New Mexico. Teachers were administered a survey, and descriptive statistics of mean were utilized as a measure of analysis. No viable inferential statistical analysis (ANOVA or regression analysis) was conducted. In addition, the study suffered from deficiencies in external validity by not drawing from a more nationally representative sampling frame. Though not wholly generalizable, the study does provide some useful information about the social studies teacher population from regions throughout the United States. It is from these findings that the majority of literature on social studies characteristics is presented.

Social Studies Teachers' Demographics

According to Frederick Risinger (1981), using the Ochoa survey data, approximately 89% of social studies teachers are White, followed by 10% Black and less than 1% Hispanic. Unlike the feminization of other subjects, nearly 70% of all secondary social studies teachers sampled were male. Social studies teachers were more likely to have a M.A. or M.S. as opposed to general teaching positions, especially males who outnumber female Masters recipients 48% to approximately 41%. In terms of age, 17% of the males in social studies were under the age of 30 years (in 1981) compared to 13% of the women. These findings indicated that males make up a younger portion of the workforce. The data further proposed that more males are likely to leave social studies teaching as opposed to females (Nelson, 1981). Risinger (1981) posited that this phenomenon is due to male teachers' desire for administrative positions and higher paying opportunities.

These results (Risinger, 1981) were mirrored in succeeding studies (Leming, 1991; Bliss & Banks, 1994). Later research pointed out that White teachers maintain an

-

overwhelming majority (94%) over minorities in social studies teaching. Leming's (1991) review of teacher characteristics suggested that males have increased their gender dominance, up to 75% of the secondary social studies workforce. Bliss and Banks (1994) developed a quantitative research model similar to the one used in the Ochoa study. However, due to their limited sample size (n=41) and nested location (all studies conducted in up-state NY), it is inappropriate to suggest that any differences between their demographic characteristics and that of the Ochoa study are statistically reliable. The significance of demographic variables in determining teacher attrition rates is further elaborated later in this review.

Social Studies Teacher Perceptions

Extrapolating data from the Ochoa study (1981), Nelson (1981) concluded that an overwhelming majority of social studies practitioners enjoy teaching, but one-third would consider another profession if the opportunity arose. Professionally satisfied social studies teachers indicated an optimistic view of their future in social studies education. They maintained administrative support, reported confidence in their content knowledge, received the support of the community, had adequate class sizes, and managed their students' discipline. Among social studies "leavers," 48% left due to salary concerns. However, 45% of the "stayers" reported that they would quit if greater job opportunities were presented. Among non-pecuniary (non-monetary) factors, 40% of the leavers reported difficulty with school administration and 50% reported behavior problems. Most notable from the study, social studies teachers reported low perception of job status-- 23% among leavers and 25% among stayers.

In his review of social studies literature, Leming (1991) concluded that lower social status of teaching and unsatisfactory salary was negatively related to job satisfaction. Social

-

studies teachers were more likely to have issues with their occupational standing and financial security than teachers in other content areas. Moreover, the study suggested that social studies teachers were more concerned with out of school influences in term of job satisfaction and retention. Sixty-seven percent of social studies teachers identified student home life variables (parental support, drug and alcohol use, etc.) as important predictors negatively related to their job satisfaction. Bliss and Banks (1994), utilizing a similar framework to Ochoa (1981), produced similar results. However, in their sample of upstate New York schoolteachers (n=41), they determined that student discipline, not salary was the most important factor in determining a teacher turnover rate among social studies teachers. Later in the literature review, a more comprehensive view of school and professional factors affecting teacher turnover will be introduced.

Of the major research studies referenced, the Ochoa study (1981) was the most comprehensive--with a more diverse sampling frame than any of the others. To date, no single comprehensive research model has attempted to provide a nationally representative analysis of the characteristics of social studies teachers and their influences on teacher turnover issue within the subject. In the following sections, factors that contribute to teacher turnover at the teacher and school level will be reviewed.

Teachers' Characteristics

Demographic

Age

Previous empirical research indicated that attrition is highest in the earliest years of a teaching career (Mont & Rees, 1996; Stinebrickner, 1998). Implementing survival analysis techniques, these earlier studies suggested that the probability of leaving the field decreases with age. These results were further duplicated with the National Center for Educational

-

Statistics Schools and Staffing Survey (99-00) data and multiple regression analysis to reveal that a teacher had a 171% higher odds of leaving as a younger teacher (<30 years) than as an older teacher (>50 years old). These results implied that younger teachers are more likely to seek alternative employment opportunities due to their inexperience in classroom management and the lure of more lucrative salaries.

Investigation of actual teachers who leave and stay revealed a more comprehensive picture of the age effect. Luekens and colleagues (2004) used data from the 2000-2001 follow-up survey of the SASS survey data. From their findings, they were able to analyze the distribution of "leavers" based upon age. They discovered that retirement accounted for 20% of teachers leaving the profession. A study conducted by Falch and Strøm (2005) found similar results in Norwegian schools; thereby implying that these issues are common in the profession outside of the United States education industry.

The literature on teacher age and its effect on attrition/retention within the profession indicated that those most likely to leave are neophytes (Ingersoll, 2003). Only a minority of the "leavers" was retirement bound. Therefore, a greater number of teachers are leaving due to attrition. Further research needed to determine whether or not subject area (i.e. social studies) significantly reacts with years teaching.

Gender

Early studies between gender and teacher turnover suggested that females are more susceptible to teacher burnout than males (Lachman & Diamant, 1987). These same studies concluded that males are more likely to leave teaching, especially if they have a specialized degree (i.e. engineering, computer science). However, a six-year longitudinal study of over 2,000 elementary school teachers employing a Cox regression model revealed that women were 37% more likely to leave teaching than men (Adams, 1996). Rate of attrition increased

-

to 43% for women under the age of 40 years. Although these findings had broad implications, they failed to control for pregnancy and other maternal responsibilities traditionally afforded to women.

In a hazard function analysis of longitudinal data, Stinebrickner (1998) deduced that controlling for marriage and pregnancy, men had a greater retention rate than women. However, as determined in previous studies, men who work in specialized fields (often the sciences and mathematics) tended to leave teaching. More recent reports of teacher turnover have attempted to synthesize these two arguments in order to develop a more cohesive theory. Luekens and his colleagues (2004) posited that male teachers are more likely to view teaching as a stepping stone career toward greater job advancement within or outside of the education industry. Conversely, females are attracted to the flexibility of teaching and view it as friendly to the domestic-sphere often attributed to females. Only one study, Mont and Rees (1996), suggested that gender did not have a significant affect on turnover. These results are likely due to a failure to include sufficient covariates (such as subject area) for gender-specific behavior within the model.

The findings presented in the research literature on teacher attrition are similar to the survey analysis of social studies conducted by Risinger (1981). Research suggested that male social studies teachers, like other secondary educators, are more likely to view the profession as a step toward more rewarding opportunities. Therefore, we posited that results from this study would yield similar findings as that of Stinebrickner (1998) and Luekens et al. (2004) with males being more likely to leave teaching than stay.

Race

The majority of research in describing the characteristics and perspectives of minority teachers has centered on the position of African Americans in the profession. King (1993)

-

conducted a mixed methods study on the perspectives of 41 African American teachers from a highly respected teacher education program. The participants tended to be first generation college students. The majority of the cohort were female, leading the researchers to conclude that teaching is not as of yet an attractive profession for male African Americans (for similar findings see Murnane, Singer, Willett, Kemple, & Olsen, 1991). The results from the study concluded that a majority of African Americans enter teaching in order to give back to the community and advocate for students with similar ethnic and cultural backgrounds as themselves. Moreover, these teachers viewed themselves as role models for minority youth. Teaching served as a professional step toward greater social respectability. Consequently, issues of salary were not as prevalent among this African American cohort as in other empirical studies.

Complementing King's findings, empirical studies measuring teacher turnover found that Black teachers were less likely to leave the profession than their White counterparts (Murnane et al., 1991; Adams, 1996; Ingersoll, 2001). Murnane et al. (1991) conducted a longitudinal study of teachers in North Carolina and Michigan. Their findings indicated that in North Carolina 75% of the Black teachers remained in the profession after five years compared to 61 % of the White educators (similar results were found in Michigan). A more detailed analysis ascertained that the racial demographics of the classroom significantly affected the retention rate of minority teachers (Imazeki, 2004). Non-white teachers who teach non-white students were more likely to stay in teaching than if they teach in predominately White classrooms. Analysis of National Center for Educational Statistics (NCES) data concluded that half of the turnover for minority (Black and Hispanic) teachers was due to retirement as opposed to 28% among White teachers. Though Rong and Priessle (1997) conducted an analysis of the declining percentage of Asian American teachers in the

-

U.S. teaching force, there is a significant deficiency in the amount of research conducted on non-Black minority teachers and their turnover rates.

As mentioned in previous literature (Leming, 1991; Risinger, 1981), Whites made up an overwhelming majority of social studies teachers. There has been little research examining the characteristics of minority social studies teachers in the field and their reasons for leaving or staying in the profession. However, the Euro-centric curriculum that pervades American schooling and social studies instruction (see Cornbleth and Waugh, 1995; Willinsky, 1998) might prove a deterrent for minority teachers in the content area.

Academic

Degree Status

Researchers have been undecided on the role of degree status in determining teacher turnover. According to a longitudinal study that employed a hazard regression model on 2,000 elementary school teachers, traditionally certified teachers were 68% more likely to leave the profession than non-certified or alternately certified educators (Adams, 1996). In a separate study of New York state teachers, the type of degree awarded was determined insignificant in teacher turnover (Mont & Rees, 1996). However, a more recent analysis of the same sample determined that degree-holders from highly competitive universities leave more frequently than degree-holders from less prestigious colleges and universities (Lankford, et al., 2002). In a regional sample collected from investigators at the University of Northern Texas, practitioners with advanced degrees were more likely to leave teaching in order to pursue other career opportunities (Harrell, Leavell, van Tassel, & McKee, 2004).

Information in other large datasets provides a contextual representation of degree effects. For example, in their probit analysis of Missouri schoolteachers, Podgursky et al. (2004) determined that race and gender served as a significant moderator for degree-status.

-

In particular, Black males who attended highly competitive schools (with high ACT scores) were most likely to leave teaching. Podgursky et al. posited that Black males are less likely to enter teaching as a whole. Combined with high ACT scores, these individuals perceived teaching as a less prestigious (or lucrative) profession. Conversely, studies have found that less competitive Black female teachers are less likely to leave (Murnane et al., 1991; Podgursky et al., 2004). Research concluded that female minorities view teaching as a path toward middle class status.

According to reports from NCES and utilizing a national sample, 84% of M.A.T. and B.A. in subject area stay in teaching (Hansen, 2001). Comparatively, of the teachers who declare education majors, 53% stayed in the profession. Among alternate certification programs, 34% remained in teaching after three years. These findings suggested that teachers with advanced degrees outside of education were more likely to leave the profession in order to capitalize on their degree status. Conversely, advanced degree holders with an education concentration were more likely to remain in the field. Alternative certification programs failed to retain teachers because they do not sufficiently prepare novice educators for the demands of the profession.

While this literature provided insight into the effects of degree status on teacher turnover, they failed to take into account subject area and undergraduate major. Among social studies teachers, research concluded that they were more likely to have acquired an advanced master's degree (48%) than non-social studies teachers (43%) (Risinger, 1981). Further research is needed to determine the types of degrees awarded to social studies teachers and the effects on teacher turnover.

-

National Board Certification

One of the most recent attempts to establish a quality workforce has been the creation of a national certification program by the National Board for Professional Teaching Standards (NBPTS). The program has sought to construct a cohesive and quantifiable measure of quality among education professionals (www.nbpts.org). With varying state certification standards, a NBPTS certification credential is perceived as an interstate measure of teacher excellence. To apply, teachers are required to have taught for a minimum of three years and hold a valid license within their content area. In addition, they complete a rigorous certification process including written examination and a comprehensive portfolio. Upon successful completion, state and local school systems reward teachers with salary incentives and other forms of recognition. All of these system-wide polices are an attempt to retain higher echelon school personnel (Goldhaber, Perry, & Anthony, 2004). Therefore, one may conclude that teachers who hold these distinguished credentials are more committed to teaching than practitioners lacking NBPTS certification.

School Characteristics

Classroom Demographics

Empirical studies of classroom characteristics (those apart from the teacher) were shown to significantly impact teacher turnover rates. Earlier studies examining class size (number of students) in a longitudinal study revealed that increased class size proportionately impacted teacher turnover (Mont & Rees, 1996). An analysis of the standardized co-efficients (B) revealed a shift from .209 to .349, thereby indicating that increased class size of 40 % had a 67% greater effect on teacher attrition than smaller class sizes. In addition, this earlier study pointed out that the number of minority and special needs students in the classroom increased the rate of attrition. Unwilling or unable to cope with the challenges,

-

teachers within this setting often opt to leave the schools instead of meeting the challenges. Later studies of NCES data revealed that this is a generalizable trend among school communities throughout the nation (Ingersoll, 2003). Concurrently, research specified that schools enrolling more than 35% minority students showed a 16.8% "leaver" rate; whereby schools enrolling less than 35% minority students indicated a 14.7% "leavers" rate (Johnson, Berg, & Donaldson, 2001).

One of the major difficulties in determining the effects of these non-pecuniary factors is controlling for salary effects. A study conducted in Norway provided insight into the role of these school-level characteristics on teacher turnover. Falch and Strøm (2005) contended that American schooling is inextricably tied to salary level because teacher pay varies from state to state and district to district. On the other hand, Norwegian schools are regulated by the national bureaucracy and maintain equal pay levels of scale regardless of location; thereby controlling for salary effects. In their findings, teacher turnover rates increased among educators teaching in high minority schools (16%) as opposed to teachers located in low minority schools (9%). In addition, these findings concluded that teachers of special needs children were more likely leave. While this study is not completely generalizable to the American teaching profession, it illustrates the socio-economic effect of demographic and occupational perspective on teacher turnover rates.

Within the United States, a descriptive analysis of New York state schoolteachers revealed that the most qualified educators teach in the most affluent schools (Lankford, Loeb, & Wyckoff, 2002). Though the sample in that study is not nationally representative, their research showed a disturbing inegalitarian trend. Lankford and colleagues posited that teachers in high poverty, urban areas are the least qualified. Moreover, these schools tended to have the lowest salaries. As a result, these disparities contribute to a bifurcated schooling

-

system. The highest qualified teachers work in more affluent schools while the poorest schools are left under-staffed.

Qualified teachers prefer to teach closer to their homes (Boyd et al., 2005). Because the majority of educators live above the poverty line, fewer quality teachers choose to work in a poorer, low performing environment. In addition, the demand for these practitioners is high. Therefore, proximity to home, affluence, and classroom environment factors act as selling points for non-poor institutions. To compound the dilemma, schools in the most need of highly qualified teachers suffered from grave inequalities in funding and vastly diverse student needs (Berry, 2004). These factors aggravated substantial differences in teacher salaries and working conditions, thereby affecting the supply of teachers in hard-to-staff schools. Hard-to-staff schools were frequently forced to hire the least desirable candidates. The ramifications of this staffing process impacted students' education. Evidence has shown that learners in these poorest school systems received sub-standard instruction and were often irreparably disadvantaged compared to their peers in more affluent schools (Kozol, 1991).

Empirical evidence suggested that non-majority school-wide characteristics could have regressive effects on teacher retention. Among secondary social studies, little research has been conducted to determine whether these general education results were replicated in earlier studies. Studies of social studies characteristics revealed that practitioners in the field have an acute sense of democracy and well developed notions of equality (Kincheloe, 2001; Leming, 1991; Ochoa, 1981). Therefore, social studies teachers would be more likely to have a less prejudicial view of non-majority students. However, future empirical research into role of school demographics in shaping social studies intention to leave or stay is needed.

-

Policy implications of *No Child Left Behind*

Recent policy mandates by *No Child Left Behind* (NCLB) have sought to bridge these staffing disparities. NCLB has commanded that all school systems that seek Title I eligibility must recruit and retain highly qualified teachers by 2005-2006 academic year (Schwartzbeck, Redfield, Morris, & Hammer, 2003). In 2002, the federal government outlined a plan for how states could draw from approximately $3 billion in Title I and Title II money to meet the "highly qualified" standards (Berry, 2004). The plan emphasized strategies such as signing bonuses, merit pay, alternative certification programs, new teacher induction, empirically based professional development, and recruitment of non-traditional candidates.

One of the by-products of the NCLB policy has been an increased emphasis on standardization of curriculum and instruction. In order to assess the effectiveness of teachers and schools within such a regime, achievement tests are regularly employed to measure student effectiveness and teacher quality as well. Schools within a system and systems within a state are categorized and ranked according to their test results. Findings are publicly released. Schools and staff are either lauded or degraded from the results. Perhaps unfairly, these policies incur a stigmatization upon teachers and staff in low performing, poorer schools (Darling-Hammond & Sykes, 2003). Moreover, monetary compensation is often associated with higher test scores and status. Highly marketable, quality teachers within low performing institutions, fearing the repercussion of state and local sanctions, are less likely to remain in their schools. Federal policy such as *NCLB* and the Elementary and Secondary Education Acts will perpetuate the cycle of the most disadvantaged having the lowest qualified, least effective teachers unless more effective recruitment and retention strategies are developed (Darling-Hammond & Sykes, 2003).

-

Teacher Resources

Salary Effects

The research literature on attrition and retention most frequently pointed to teachers' satisfaction with salary level as a major component in turnover probability (Harrell, et al., 2004; Imazeki, 2005, Ingersoll, 2001; Luekens, et al, 2004; Mont & Rees, 1996; Stinebrickner, 1998). Boardman, Darling-Hammond and Mullin (1982) posited an economic theory of "supply and demand" to explain the importance of salary level among educators. Like other professions, teaching in American society takes place within a marketplace economy. The "demand" of teachers refers to the teaching positions available at a given level of compensation. Factors influencing demand are rising enrollments, lower pupil/teacher ratios, rising attrition rates, and early retirement (Grissmer & Kirby, 1997). "Supply" refers to the number of qualified teachers willing to work at a given salary level (Boardman et al., 1982). Further influencing factors of retention were opportunity costs. If a teacher thought that the opportunity costs were greater for teaching than the received compensation, then the teacher was more likely to leave the profession. Therefore, salary levels must adjust to compensate these opportunity costs per teaching position in order to minimize attrition.

Empirical analysis of current teacher turnover rates reflected this economic theory. Mont and Rees (1996) in a longitudinal study of New York state schoolteachers determined that a 10% increase in salary level coincided with a 6% decrease in attrition. Conversely, similar longitudinal studies revealed that higher salaries increased retention by 9% (Stinebrickner, 1998; Imazeki, 2004). Analysis of survey data specified salary concerns as the most frequently given response by teachers as a reason for leaving (Ingersoll, 2003; Harrell, et al., 2004).

-

The results among general education studies suggested that salary level is the most pertinent factor in determining teacher attrition. Among secondary social studies teachers, the results were mixed. Earlier studies (Leming, 1991; Nelson, 1981) concluded that salary was a primary concern for teachers of the social studies. Conversely, later studies (Bliss & Banks, 1994) placed salary satisfaction behind student discipline issues. Further research is needed to explore the interaction between social studies teachers and salary satisfaction to better understand the role of fiduciary effects on attrition/retention.

School Resources

Pecuniary factors influenced more than teacher salaries. Funding contributing to teacher materials and resources has been found to have a significant effect on teacher retention rates. In a study of New York state public schools, Lankford and colleagues (2002) posited that teacher's working in environments that did not provide sufficient instructional materials were more likely to leave teaching or transfer to other school systems. Most often, these educators taught in institutions located in high urban areas that lack sufficient resource funding. These findings echoed a longitudinal study conducted on teachers in Washington State (Gritz & Theobald, 1996). Using a probability model that incorporated a hazard function, this study concluded that pecuniary factors (excluding salary) influence the probability of teacher commitment to the profession. The analysis indicated that total expenditures at high to moderately impoverished schools significantly decreased the level of retention for both novice and experienced teachers.

Among social studies teachers, previous research findings revealed that practitioners are more likely to remain in the field if they are satisfied with their working environment and community support (Nelson, 1981, Leming, 1991; Bliss & Banks, 1994). While these smaller studies allude to social studies teachers' professional satisfaction, they failed to

-

specify instructional resource attainment. Further research is needed to determine how social studies practitioners perceive the importance of classroom materials.

Leadership & Organizational Structure

According to Ingersoll (2001, 2003), teacher approval of school leadership (i.e. the principal) was an important factor in determining turnover rates. Bogler (2001) posited that teacher-principal relations are important in maintaining professional commitment among practitioners. He proposed two forms of leadership theory (a dichotomy) in order to characterize principal administrative style. *Transactional* leadership encourages school administrators to preserve a bureaucratic hierarchy. The *transformative* school administrator motivates faculty and advocates workplace harmony through justice and equality. The transactional leader is autocratic. They desire control and stability through pre-*determined* authority and status. The transformative leader seeks open communication with staff and promotes participative decision-making. In attempting to support his theory, Bogler (2001) conducted a path analysis. His results determined that teachers under transformative leadership (r =.57, p<.001) were more likely to be satisfied with their working conditions than their counterparts in transactional-run schools (r =-.21, p<.001). Bogler theorized that teachers who have a stake in their school organizational structure are more likely to remain in the profession.

Further, empirical research demonstrated that teachers prefer participatory leadership qualities to strict hierarchical control. Job satisfaction serves as an important catalyst for teacher intention. Teachers who intended to stay in the field reported greater satisfaction in the workplace (Singh & Billingsley, 1996). Consequently, a relationship exists between teachers' leadership perspectives and job satisfaction. Using NCES data and multiple regression analysis, Taylor and Tashakkori (1995) found that the strongest predictor of job

-

satisfaction was leadership (r = .41, p< .05). Teachers who indicated that they were given a level of autonomy by school administration accounted for higher levels of workplace satisfaction. These teachers were more likely to express feelings of autonomy in their working environment and viewed their administrator (principal) as empathetic (Shen, 1997; Ma & MacMillan, 1999). In addition to a greater job satisfaction, educators who perceived a strong leadership were associated with high morale, an important predictor of teacher intention for stay (Weiss, 1999).

The connections between leadership and professional intent were not always as indirect as in the aforementioned studies. Administrative factors have a direct effect on teacher turnover. Ingersoll (2001) posited that a one-unit difference in leadership was associated with 23% difference in odds of leaving the profession. His research concluded that greater autonomy, teacher influence, and efficacious administration increased retention. Qualitative results yielded similar findings. In a series of interviews and focus group discussion of 41 teachers, Certo and Fox (2002) determined that quality leadership contributed to a teacher's decision to stay or leave. Among "leavers," a lack of effective leadership was often cited as the reason for attrition. Teachers criticized the strict, draconian leadership style. One educator commented, "Well, I think some of it had to do with the principal who we had here before. She was hard for some people to work for. Very dictatorial" (65).

Empirical evidence suggested that leadership style had a significant effect on teacher retention and attrition. Among secondary social studies educators, 40% of all social studies "leavers" reported issues with administration policies (Nelson, 1981). However, updated findings would serve as better predictors for leadership perception's role on teacher turnover among secondary social studies practitioners.

-

Professional Satisfaction

Student Discipline

According to earlier collected data for the Schools and Staffing Survey (1987-1988, 1990-1991, 1993-1994) behavior level of students was a major contributor of teacher turnover (Ingersoll, 2001). In the same study, one negative unit in a teacher's student discipline perspective was associated with a 47% difference in the odds of attrition intent. In a later teacher follow up survey in 2001, 13% of the leavers stated that poor behavior as the major reason for their decision to leave the profession (Luekens, et al., 2004). Harrell and colleagues (2004) in their study of 1,031 University of North Texas teacher graduates found that student discipline was second only to salary as a predictor of teacher turnover.

Among novice teachers, research results on the impact of behavior varied. Poll studies conducted by the Public Agenda Survey of 2000 concluded that student was a more important factor for new teachers than salary considerations (Hansen, 2001). Stockard and Lehman (2004) posited that new teachers lack the experience, management, and leadership skills developed by more experienced educators. Consequently, problems with behavior were more of a concern for first year teachers as opposed to veterans.

Secondary social studies teachers placed heavy emphasis on student discipline issues. In the Nelson study (1981), 50% of all leavers reported having behavior problems. In the same study, social studies "stayers" indicated that administrative support related to student discipline issues was one of the most significant factors for retention. In later research, Bliss and Banks (1994) ranked discipline problems above salary concerns as the most notable contributor to secondary social studies attrition. Due to the small sample size (n=41), the results from this study are at risk of succumbing to a type II error and low effect size. An

-

analysis of a more representative sample of social studies practitioners and their discipline perspectives on teacher turnover is required.

Collegiality

Darling-Hammond (2003) contended that teacher support systems and communication among faculty raised self-efficacy. She further posited that these functions help retain quality educators. Results on collegiality studies have been mixed. Ma and MacMillan (1999) studied 2,202 Canadian elementary school teachers. Using a multiple regression analysis, they concluded that communication with peers was a significant predictor of determining teacher job satisfaction and intention to remain in the field. A smaller and more localized American sample (n=1,031) generated less positive findings (Harrell et al., 2004). In this study, teachers' collegiality was insignificant in determining turnover. However, a large, nationally representative NCES dataset yielded more supportive results of Darling-Hammond's theory. Using Schools and Staffing Survey, Luekens and colleagues (2004) determined that leavers were less likely to have worked in a collegial atmosphere than stayers.

Among social studies teachers, issues of collegiality have yet to be reported as major findings. Therefore, recent data is needed to determine whether social studies instructors value collegiality in comparison to other subject areas and gauge the effects on teacher turnover.

High-Stakes Testing Anxiety

The recent push for high stakes testing and the subsequent curriculum reforms have added to the anxiety of classroom teachers (Hargrove, Walker, Huber, Corrigan, & Moore, 2004). Assessments have become gauges not only of student success, but teacher competence. As a result, many teachers choose to leave the profession rather than face the

-

scrutiny and frustration associated with standardization. In a qualitative study of forty-one K-12 schoolteachers, curriculum standardization and the pressures of testing were shown to increase teacher dissatisfaction and attrition (Certo & Fox, 2002). As one teacher stated, "The school system, they want you to have the kids well-prepared. Which is understandable, but they push a lot on you. Do this. Do that. This might work." (67). The study indicated that teachers affected by testing reforms feel blamed for struggling students. School officials with little experience with the curriculum often reprimanded these practitioners.

Among social studies teachers, the earlier research on professional perspectives and characteristics failed to take into account issues of testing or curriculum reform. More up to date analyses are need to determine the perspectives of social studies educators in this era of *No Child Left Behind*: explicitly, how these changing testing requirements and pressures affect professional commitment in the subject area.

The Role of Subject Area

Beyond the demographic characteristics, ecological factors, or professional perspectives of the teacher, subject area has a significant impact on teacher turnover rates. Boe and colleagues (1998) conducted probability analyses on three sets of SASS data in the early to mid 1990s. Their findings indicated that elementary school teachers are 88% more likely to be continuing teachers as opposed to secondary school teachers. These results implied that secondary education teachers are more likely to leave their profession, thereby creating new openings, as opposed to elementary practitioners.

Earlier studies concluded that secondary teachers of specialized degrees (i.e. engineering and computer science) are more likely to leave the profession in order to pursue more lucrative professions (Lachman & Diamant, 1987). Often these teachers work in areas of math or science. Consequently, empirical research in teacher education showed that

-

among math and science teachers, attrition rates are especially high (Guarino et al., 2006; Hansen, 2001; Imazeki, 2004; Stinebrickner, 1998). A survival analysis conducted with a longitudinal dataset of New York teachers presented contradictory findings (Mont & Rees, 1996). It concluded that being a secondary science or math teacher did not contribute to attrition behavior. However, due to the regionalism of the sample and issues of nesting, one can discount these findings in the presence of more nationally representative data.

Using SASS 1990 data, Ingersoll (2003) analyzed the differences of leave or stay characteristics based on subject area. His findings suggested that among secondary subject areas, attrition was the highest among math and science teachers and least among English and social studies. Yet, the most recent nationally representative study on actual "leavers" and "stayers" contradicted earlier findings of subject area comparisons of turnover rates (Luekens et al., 2004). Mathematics teachers have the highest number of "leavers" (9%) according to the 2000-2001 Teacher Follow-Up Survey. However, social studies teachers were second (8.8%), followed by science (7.3%) and English (6.3%).

The unexpected presence of a higher percentage of attrition among social studies teachers should be viewed as an alarming phenomenon. The construction of regression models to investigate the causal influence of subject area and the aforementioned professional variables on teacher attrition is essential to obtain a greater understanding of teacher turnover.

Professional Intent as a Determinant for Teacher Turnover

In order to measure the probability of teacher turnover, studies have utilized a teacher's intention to stay in the field as a scale of measurement (Singh & Billingsley, 1996). Commitment to remain in teaching is often viewed as a precursor to retention. Committed teachers are less likely to leave the profession in favor of other occupations. Moreover, by

-

narrowing the research focus to commitment levels (intention to stay or leave), the researcher can control for retirement, pregnancy, and other non-school related factors that contribute to attrition. The research into factors affecting attrition among social studies practitioners has yet to consider using professional intent as a dependent measurement of scale.

Directions for future research

Large-scale studies have been conducted to determine causal factors of teacher attrition (Boe et al., 1998; Ingersoll, 2001, 2003; Luekens et al., 2004). These nationally representative samples are highly generalizable and provide useful insight into the essential predictors of teacher turnover. However, these studies offered a very limited scope as to the moderating effect of subject area on teacher attrition. The earlier studies (Boe et al., 1998) suggested that teachers in the social studies have higher retention rates than other core subject area teachers (science, math, and English). Preliminary studies of teacher turnover implied that this trend might be changing (Luekens et al., 2004). The dearth of research on social studies educators has complicated the issue for researchers in the field. Incorporating large dataset analysis, educational researchers can ascertain which factors influence teacher turnover rates among social studies teachers and how the impacts of these factors differ across subject areas.

Conclusion

Empirical findings on social studies teacher characteristics are scarce and dated. In terms of teacher turnover within the disciplines of social studies, little empirical evidence has attempted to provide associative factors that affect attrition/retention rates. Demographically, these studies suggested that social studies practitioners were primarily White males (Leming, 1991; Risinger, 1981). Moreover, social studies teachers viewed salary, student discipline, and job status as major factors determining their job satisfaction (Bliss and Banks, 1994;

-

Leming, 1991; Nelson, 1981). A more detailed review of the causal factors for teacher retention revealed that age affected attrition among novices and those about to retire (Luekens et al., 2004). Minority teachers were more likely to stay in the field (Imazeki, 2004), though other studies might intimate otherwise (Cornbleth & Waugh; Willinsky, 1998). Studies of gender garnered mixed results (Mont & Rees, 1996; Stinebrickner, 1998). Salary and economic conditions contributing to compensation dominated the literature on teacher turnover (see Boardman & Darling-Hammond, 1983; Stinebrickner, 1998). However, the effect of salary perception within the context of social studies subject area varied (Bliss and Banks, 1994; Leming, 1991). The minority make-up of the school's student population affected teacher retention rates (Guarino et al., 2006). Among social studies teachers, the literature alluded to democratic principles of equality and morality (Kincheloe, 2001). Among organizational factors, teachers preferred transformative leadership to more authoritarian control (Bogler, 2001) and the effects of collegiality on teacher attrition varied from study to study (Harrell et al., 2004; Ma & MacMillan, 1993). Research of between subject differences noted that science and math teachers are more likely to leave the field. Conversely, the most recent survey data suggested that social studies teachers are more likely to leave than science teachers (Luekens et al., 2004).

The study of factors that contribute to social studies teachers leaving and staying offers an important analysis for policymakers and educational leaders. By understanding how social studies teachers differ in terms of their demographics, perceptions of school characteristics, leadership influences, and school culture with other key subject areas (math, science and English) educational leaders will better understand how to retain teachers in the subject area. Previous research has inferred that consistent attrition deludes the quality of education offered to learners (see Ingersoll 2001, 2003). If the nation's children are receiving

-

a sub-standard social education, then our legacy of democratic thinking and civic literacy is in peril. Investigating the identity of social studies teachers and its relationship to professional intention can better inform retention policy. Moreover, quantitative research in social studies-specific teacher turnover must incorporate a large-scale dataset (such as SASS) to provide greater generalizability and interpretive power to statistical findings. By developing an appreciation for the idiosyncrasies of the subjects and those who teach them, research in teacher turnover literature will be better able to serve educational professionals in various fields.

CHAPTER 3: RESEARCH METHODS

Purpose of the Study

The purpose of this study was to examine demographic and perceptive mechanisms among secondary social studies teachers that contribute to teacher retention and attrition. The conceptual model illustrated that factors grounded within four theories may contribute to a teacher's intention to stay or leave. Moreover, the corresponding research model suggested the possibility that social studies teachers differ in their perceptions and characteristics from other subject areas, and that these differences might affect their intention to leave or stay.

The Schools and Staffing Survey (2003-2004) was utilized as the dataset for this analysis. It is the nation's most comprehensive data source of teacher characteristics and professional perceptions. Selected measurements were extrapolated from the data and re-organized into aggregate factors for analysis. Utilizing logistic regression, three research models were suggested. Each following model builds upon the results of the previous one. In the final models, social studies teachers and their accompanying characteristics were analyzed separately in order to determine which effects significantly predict teacher retention and attrition.

Research Questions

Five major research questions were asked in this paper:

1. Who are secondary social studies teachers? How are social studies teachers different from the English, science, and math teachers?

-

2. What are the self-perceived intentions regarding retention and attrition for social studies teachers, and how are these self-perceived attention/attrition intentions different among social studies teachers and English, science, and math teachers?
3. What are the variables in the five factors contributing to teachers' intention regarding retention/attrition? Is there a difference in professional intention among social studies teachers and all other teachers when related variables were controlled for?
4. What is the association between the variables in the five factors and teachers' professional intention within social studies? How are the effects of these explanatory factors different for social studies teachers compared to teachers in other core subject areas?[4]
5. How do the significance and the magnitude of these explanatory variables vary in correspondence to social studies teachers' intention at ordinal levels[5] of contrast?

Methodology

Rationale for Methodology

The purpose of this study was to provide generalizable inferential statistic results exploring the intention of social studies teachers in terms of their attrition and retention in order to better implement educational policy that retains quality teachers. Quantitative analysis with data of a large national sample affords the greatest external validity (Howell, 2002). In addition, quantitative research design allows the researcher to control for various factors in order to isolate a single predictor of an observed phenomenon (Newton & Rudestam, 1999). Moreover, the majority of previous research in teacher turnover has been

[4] Question 3 investigated predictors associated with teacher professional intent within the entire sample. Subject area was included as a dummy-coded indicator (see Table 4.13). Question 4 examined mechanisms of professional intent within each subject area subgroup (see Table 4.14).
[5] Absolute stay v. Absolute leave, Leave for another opportunity v. Definite leave, Stay until retirement v. Definite Leave, Stay until retirement v. Leave for another opportunity, Firmly stay v. Definite Leave, and Firmly stay v. Stay until retirement

-

conducted using quantitative methods (see Chapter 2). In order to build upon previous theoretical and research design, it is necessary to use similar methodology

Description of Schools and Staffing Survey 2003-2004

The data analyzed in this study was extrapolated from the 2003-2004 Schools and Staffing Survey (SASS). The survey is conducted by the National Center for Educational Statistics (NCES) at the request of the Department of Education in order to develop a comprehensive database of teacher and school-wide characteristics in both private and public settings (NCES, 2007). It is the largest and most comprehensive survey and corresponding data set in the nation. Schools are randomly selected and nationally representative.

The 2003-2004 Schools and Staffing Survey data has restricted-use privileges exclusively (NCES, 2007). In order to obtain a copy of the data from the National Center for Educational Statistics, a license was obtained from the federal Department of Education. This license permitted the researcher and his proxy (Dr. Xue Lan Rong at UNC-Chapel Hill) to access the data in a secured location. In addition, only the researcher and his proxy have the authorization to conduct any statistical analysis with the dataset.

Instrument

For the purposes of this study, data was extracted from the Public Teacher Questionnaire of the 2003-2004 school year (SASS-4A). The survey was comprised of eleven sections (NCES, 2007).

1. ”General Information” about the teaching status, experience, and professional history of the participant
2. “Class Organization” concerned information on class enrollment, organization of classes and subjects taught

-

3. “Educational Background” contained information of the academic degrees and teacher preparation programs of the participant
4. “Certification and Training” included information on licensure level, content certification, grades covered by certification. For novice practitioners, data was collected on perceptions and attitudes toward their teacher preparation programs, induction programs, and mentoring
5. “Professional Development” provided data on professional development activity and their effectiveness
6. “Resources and Assessment of Students” contained information on student characteristics, resources afforded to learners, and the utilization of assessment scores
7. “Working Conditions” provided information on the amount of hours worked
8. “Decision Making” provided data on teacher authority in staffing, fiscal issues, and perception of teaching matters
9. “Teacher Attitudes and School Climate” contained attitudinal data on teaching satisfaction, school safety, teacher collegiality and student issues
10. “General Employment Information” provided information on teacher salary, supplemental income, union membership, and demographics (gender, age, and race/ethnicity)
11. “Contact Information” asked for personal contact information in order to conduct follow up surveys for the subsequent Teacher Follow-Up Survey

Sampling of Schools

The 2003-2004 Schools and Staffing Survey (SASS 4A) developed a sampling frame using a pre-existing dataset, the Common Core of Data (CCD), provided by the National

-

Center of Educational Statistics and the US Census Bureau (NCES, 2007). This data is collected by the NCES from each state educational agency. At the time of survey implementation, 97,623 schools were included in the CCD. A SASS school is further defined as having more than one grade and providing classroom instruction. Homebound schools and Department of Defense schools are not included in the final sampling frame. After deletions, additions, and the collapsing of schools 87,764 traditional public schools, 2,309 charter schools, and 166 Bureau of Indian Affairs schools were eligible for the sample. The total number of school systems able to participate was 16,042. Schools within systems were broken down into workloads according to region, state, and county to be contacted by a field representative.

The Schools Staffing Survey utilized a stratified probability for sampling methodology (NCES, 2007). Bureau of Indian Affairs schools were automatically included (for the purpose of over-sampling due to its underrepresentation). Remaining institutions were stratified by state, district, and grade level. Incorporating 2000 Census data, district-coding stratum considered factors of city size, locale code, total enrollment, highest grade offered, and geographic adjusted zip code. Within each stratum, traditional schools were systematically selected using a probability proportionate to size algorithm. The measure of size used for schools was the square root of the number of full-time-equivalent teachers reported for each school or imputed during sampling frame creation. By choosing the school first and not the district, the sample avoids clustering of data within the particular region, district, or state. Therefore, some states had a higher number of schools within the sample, but were proportionately less to the total state sampling frame (i.e. California's 357 sampled schools is only 4.10 % of its sampling frame, South Carolina's 173 sampled schools is 15.31 % of its sampling frame).

-

Sampling of Teachers

Within the selected sample of schools, teachers were selected from a roster provided to NCES (NCES, 2007). Schools provided the name, experience level (new or experienced), teacher status (full or part-time), race/ethnicity (White, Black, Hispanic, Asian Pacific Islander, American Indian/Alaskan Native), and subject matter taught. Each sample of teachers was stratified by race and experience (allowing for over-sampling of American Indians). Goals were to include at least 1600 Indian/Alaskan teachers and to select a minimum of one and a maximum of 20 teachers per school. Self-weighted design was implemented to minimize variance of teacher estimates per school stratum. Three to eight teachers per school were needed to meet reliability requirements. The new/experienced teacher sample size was chosen to equalize the teacher weights with a school stratum. School sample was selected proportional to the square root of the number of teachers in the school (inverse). An equally weighted teacher sample within a school's stratum was obtained by selecting t_i (number of teachers selected per school).

As follows: $t_i = W_i * T_i(C/Y)$

Where:

W_i = the school weight for school *i*. (inverse selection prob.)

T_i = is the number of new and experienced teachers in school *i,*

C = is the average cluster size in the grade level (7.5 for secondary)

Y = is the simple average of the number of teachers over all schools within the school stratum.

Teachers were allocated to the new/experienced strata in the following manor:

$t_{ni} = (A*T_{ni}*t_i)/(T_{ei}+A*T_{ni})$ New teachers

$t_{ei} =(T_{ei}*t_i)/(T_{ei}+A*T_{ni})$ Experienced teachers

-

T_{ni} is the number of new teachers in a school

T_{ei} is the number of experienced teachers in a school

A is the over-sampling factor for new teachers (1.0 in public schools--was determined not to be a sampling issue)

For American Indian/Alaskan Native the equation was revised to compensate for over-sampling. To avoid overburdening schools, sampled schools with more than 20 teachers the number for selected Asian/Indian teachers were reduced proportionately. Among the public schools 53,188 teachers were selected of which 1,435 were American Indian/Alaska Native.

In addition, the sampling frame was weighted according to regional specification. Respondents from underrepresented states and regions (i.e. Southern United States) received greater weight to avoid data nesting (NCES, 2007). Common Core Data (CCD) was utilized in order to determine appropriate weighting estimates. The actual sample might differ from the desired sample because CCD data used to derive the sampling frame was from 2001 (two years prior to the data collection of SASS). The constraints of including at least one teacher and no more than twenty from a given school might slightly alter the sampling results (NCES, 2007). [6]

Validity of Survey Instrument

Data quality was examined using a variety of reviews in order to determine consistency (NCES, 2007). This investigation included an examination of the individual responses, pattern of response, and summary statistics for variables to ensure internal consistency. Key variables were analyzed for distribution and relationship (via cross-tabulation). Census Bureau investigators verified that each item in the instrument had the

[6] American Indian/Native Alaskan respondents were removed from the study. Therefore, variables were weighted exclusively by state and region specification.

-

appropriate number of responses if skip instructions were followed correctly. Quality checks and corrections were made in cases where edit specifications were not met. Frequency counts of unweighted records for every variable were made. Out of range values inconsistent with item responses were identified and corrected appropriately. In addition, a series of univariate to multivariate cross-tabulations were obtained and compared to previous SASS data. These test statistics were utilized in order to determine if observed data was within a reasonable estimate of previous data collection—allowing for circumstantial change (i.e. random fluctuations in variance or population growth). Distributions and relationships were consistent with expectations.

Item Reliability

Response Variance

In order to calculate item reliability among SASS survey items, the National Center for Educational Statistics conducted reinterviews of participants (NCES, 2007). The reinterviews allowed NCES to measure response variance for specific items that were suspected of compromised item reliability. Reinterview instruments were designed to measure characteristics and perceptions similar to the original SASS instrument. Reinterviews were cross-checked with the participants' SASS survey responses.

To measure the item response variance, "index of inconsistency" and "gross difference rate" were employed (NCES, 2007). These tests analyze variance levels among categorical and ordinal data items. Pearson's correlation coefficient was utilized to determine reliability among continuous variables. Among public school teachers, 763 reinterviews were conducted with a response rate of 58%. In Appendix A, results of the reinterview reliability tests are given. Questions were grouped into seven categories: general information, class organization, educational background, certification and training,

-

professional development, resources/assessment of students, and working conditions. Low variance level (low priority) is associated with a variance of less than 20%. Moderate variance (usually not problematic) represents variance levels between 20 and 50%. High variance levels (highly problematic) are defined as levels over 50% (NCES, 2007). Low variance indicates that the participant's reinterview responses were similar to SASS item responses. High variance implies that the reinterview instrument and SASS item responses do not correspond. Consequently, increased variance suggests that the survey instrument might not accurately measure teachers' perception.

Overall, 80% of the items showed low to moderate variance levels (see Appendix A). Among categories germane to the current study, resources/assessment of students and working conditions were the only questions with a majority of high variance responses. Therefore, it was concluded that the SASS 4A survey was a sufficient instrument of measurement for research.

Data Collection

The National Center of Educational Statistics (2006) began the process of data collection through advanced postcard mailings to schools nationwide in August and September of 2003. Follow-up phone calls were placed to schools that failed to reply to the postcard mailings. Then, consenting schools supplied a roster of teachers that was run through the SASS sampling program. This program provides a random sample of teachers within that given school. The US Census Bureau delivered questionnaires to schools in October of 2003. In order to guarantee that surveys were distributed to all the teachers within each selected school, field representatives administered the survey to teachers. Phone interview follow-ups were conducted when necessary. By drawing upon nationally

-

representative sample, the survey attempted to maintain external validity (remain generalizable).

Response Rate for Public School Teachers

The overall response rate for public school teachers was 75.7 % (NCES, 2006). A more detailed analysis was conducted by state and the three primary reporting characteristics (i.e. school level, urbanicity, and enrollment). Overall response rates for Vermont were below the national response rate and the District of Columbia was 50.0 %. Among individual items, response rates below 85.0% were examined. SASS analysts concluded that non-response rates and non-response to items would not contaminate the data or perpetuate bias.

Sample Characteristics

The data for this research were extracted from the U.S. Department of Education's Schools and Staffing Survey (SASS) in 2004. Because public schools comprise more than 80% of the U.S. teaching force, data from the Public School Teacher Questionnaire was utilized in this study. The Department of Education disseminated this survey across the United States to 91,340 schools representing four regions: Northeast, South, Midwest, and West. In total, 43,239 public school teachers took part in the survey and 8,989 full-time high school teachers in social studies, math, science, and English were used to form a sub-dataset for data analysis in this study. Subjects who did not fit within the parameters of the study were not included (i.e. elementary school teachers).

Table 3.1 reports the basic subject area descriptive statistics for the high school teachers who are in the sample. Among the 8,989 high school teachers, 26.6% are English teachers, the largest group of a high school content area. Social studies (23.3%) and science (23.8%) are the two smaller content areas among the major high school subjects.

-

Table 3.1[7]
Subject Area Frequencies

Subject Area	Frequency	
Math	26.3%	(2363)
Science	23.8%	(2143)
English	26.6%	(2387)
Social Studies	23.3%	(2096)
	100.0%	(8989)

Excluded and Missing Data

Respondents who reported "undecided" for professional intent (n=298--see Chapter 4, Table 4.11) were excluded from logistic regression analyses in order to preserve the research model. In various descriptive analyses, results showed that respondents failed to answer a number of demographic questions or were excluded (n=266--see Chapter 4, Table 4.3). A portion of participants also failed to respond to a number of degree-status items (n=37--see Chapter 4, Tables 4.7 and 4.8). However, in the logistic regression analyses, missing data was assigned a value in proportion to the sampling frame (NCES, 2007). This procedure is standard among census data such as the Common Core Data (CCD) utilized in this study.

Variable Selection

From Section 10 of the SASS dataset, demographic variables of race, gender, age, years in teaching, and region of school were included. Demographic variables of race, gender, age, and region were re-coded as dummy variables. Race was recoded with "White" being the reference group. Gender was recoded with "Female" being the reference group. The variable "regions" was recoded with "South" being the reference group.

[7] Sampling weights for subject area descriptive statistics were not included because weighting was limited to regional identification

-

Variable selected from section 4 included licensure acquired, certification program, and national board certification. Each of these variables were recoded with "non-certified" and "non-national board certified" as the respective reference variables. Among "Educational Background", variables of degrees obtained (Masters and Bachelors) were dummy coded with "no Masters" and "non-educational Bachelors as the reference variables. Among subject area indicators, "social studies" was utilized as the comparison variable (see Table 4.13). "Decision Making" measures included teachers' perceived influence in leadership, discipline structures, and curriculum development. "Teacher Attitudes and School Climate" measures comprised of perceptions of leadership (operationalized as the principal) style, leadership communication, leadership views on discipline, and student behavior (violence, drug use, alcohol use, tardiness, and absenteeism). For more details regarding how the independent variables were coded, see Appendix B. Moreover, explanatory variables of work satisfaction and test anxiety were included.

From survey sections, variables regarding characteristics of teachers and schools were combined, dummy coded, and/or dichotomized to match the theoretical model proposed. Teacher perception measurements of organization, leadership, class size, collegiality, student discipline, and teacher satisfaction were scaled using a 4 point Likert-type scale: 1-Strongly Agree, 2-Agree, 3-Disagree, 4-Strongly Disagree. Likert scales provide ordinal data, which often fails to meet the assumptions of normal distribution (Howell, 2002; Newton and Rudestam, 1999). Composite scores of these Likert-type variables help to normalize the predictors' distribution and allow for more accurate statistical analysis. In addition, it is an accepted precedent among educational researchers using SASS data (see Ingersoll 2001, 2003).

-

In order to develop a composite index of measurement for each of these explanatory variables (see Appendix B), an aggregate score was compiled from survey items to develop a more comprehensive predictor. For example, within the domain of Leadership & Organizational Structure, teacher perception of leadership was calculated as the aggregate results of teacher-selected individual Likert measurements of principal communication (*The principal knows what kind of school he/she wants and has communicated it to the staff*), principal dialogue (*The principal lets staff members know what is expected of them*), administrative behavior (*The school administration's behavior toward the staff is supportive and encouraging)*, and special needs support (*I am given the support I need to teach students with special needs*). These measurements are combined to provide a singe score of teacher perception of leadership style with a minimum score of 4, a maximum score of 16, and a range of 12. Subsequent variable combinations were constructed for collegiality within the domain of professional satisfaction. A complete chart detailing variable criteria is included in Appendix B. In the subsequent section, validity and reliability of these items is examined.

In order to measure school wide characteristics, NCES generated variables were included in this study. The number of students with Individual Education Plans (IEP) per teacher, the percentage of minority students enrolled in the school, and the percentage of free and reduced lunch students at the school were extrapolated from the dataset. The aforementioned theoretical framework suggested that these variables would significantly impact social studies teachers' professional intentions.

The dependent variable, teacher's intention as measured by the Schools and Staffing Survey, was measured at several levels. Teacher intention to stay or leave the field was extrapolated from a measurement variable that asked the following question:

-

How long do you plan to remain in teaching?

1. *As long as possible*
2. *Until I am eligible for retirement*
3. *Will probably continue unless something better comes along*
4. *Definitely plan to leave teaching as soon as I can*
5. *Undecided at this time*

This dependent variable was recoded. First, subjects who selected "undecided" were eliminated from the study (n=298). Then, it was dichotomized into a binomial variable: stayers (As long as possible, until requirement) versus leavers (will probably continue unless something better comes along, definite leave). It was further analyzed as an ordinal variable comparing teacher intention to stay or leave at all four levels. Teacher intention was analyzed by level of comparison (i.e. stay as long as possible v. leave at retirement, stay as long as possible v. definite leave, leave at retirement v. will continue unless something better comes along).

Content validity, construct validity, and internal consistency for composite variables

Three of the predictors utilized in this study (leadership perception, discipline structure, and collegiality) were constructed based upon theoretical foundations. The following section provides a detailed description of the theoretical (content) validity of these items. In addition, a confirmatory factor analysis was conducted for each of the composite variables to measure construct validity. Finally, the study utilized *Crombach's Alpha* in order to determine the internal consistency of scale for each of the explanatory items.

Leadership Perception

According to a study conducted by Blasé (1987), leadership orientation was a significant contributor to a teacher's work perspective. In a 2-½ year study of 75 high school

-

teachers, the researcher concluded that specific leadership qualities were linked to teacher effectiveness and sociocultural well being within a school environment. Specifically, he noted that administrative support, clear expectations, willingness to delegate authority, and special needs support were important factors in maintaining high leadership perceptions among staff. Conducting a path analysis of teachers' leadership perceptions, Anderman and colleagues (1991) found similar results. From their findings, they concluded that principal recognition, inclusion in school responsibilities, and the promotion of an instructional climate were positively associated with teacher commitment and job satisfaction. The "leadership perception" predictor represented an aggregate of four Likert-type measurements from the SASS data set: *The principal lets staff members know what is expected of them, the administration's behavior toward the staff is supportive and encouraging, the principal knows what kind of school he/she wants and communicates it to the staff, I am given the support I need to teach students with special needs.* The selection of these items was based upon the aforementioned theoretical foundations.

A confirmatory factor analysis was conducted on leadership perception using Mplus 4.0. Considering the data used in this study was ordinal and normality could not be assumed, *Weighted Least Squares* (*WLS*) was chosen as the estimator of effects for both leadership and subsequent analyses (Bollen, 1989). Analysis revealed inflated *chi-square* results (see Table 3.2). However, Comparative Fit Index (*CFI*) results indicated that the model was a sufficient fit (>.95). These findings were further confirmed by a Root Means Squared Analysis (*RMSEA)* below the excepted level of .05. Each of the factor loadings was significantly associated with the construct (see Table 3.3). Parameter estimates suggested that the item, "the principal lets staff member know what is expected of them," had the largest effect and

-

greatest overall reliability within the model. From this analysis, the researcher concluded that the composite item "leadership perception" had adequate construct validity.

In order to test the internal consistency of these constructed items (or see how they serve as a measurement for a latent construct) *Cronbach's Alpha* (α) was employed. *Cronbach's Alpha* is a coefficient that measures the inter-correlation of items within a single construct (Cronbach, 1951). The greater the correlation approaches to 1.0, the higher the item reliability. For the latent construct "leadership perception," the reported *Cronbach's Alpha* was .769. These results suggest that the item construct was internally consistent.

Discipline Structure

Similar to leadership perception, perception of discipline structure is associated with administrative and organizational determinants. In this study, discipline structure is defined as the leadership's ability to maintain a school-wide management plan. Previous studies of teacher perceptions of administrative leadership indicated that teacher support during conflicts and consistent enforcement of rules were associated with a strong school management plan (Anderman, 1991; Blasé, 1987; Colvin & Kameenui, 1993). Therefore, the two items selected for "discipline structure" (*my principal enforces school rules for student conduct and backs me up when I need it and rules for student behavior are consistently enforced by teachers in this school)* sufficiently represent the constructed variable. Factor analysis was not appropriate for "discipline structure" because the latent construct was loaded onto two measured variables. According to Bollen (1989), a latent factor loaded onto two indicators must be conditioned to another latent construct. Because discipline structure did not correlate with another factor, construct validity analysis incorporating confirmatory factor analysis was not utilized.

Internal consistency tests of this item suggested minimal reliability (α = .628).

-

Collegiality

The latent construct "collegiality" was based upon a previous theoretical factor. In an earlier study, Hausman (2001) posited that collegiality significantly contributed to teacher commitment level. This study operationalized collegiality by combining four items: *I can go for days in the school without talking to anyone about my teaching, Teachers regularly share teaching ideas or materials, Teachers in this school belong to a team which works well together, and Teachers here are encouraged to turn to each other for help* (α = .780). In the present research study, "collegiality" was measured using similar items (see Appendix B). Confirmatory factor analysis was conducted with *Weighted Least Squares* (*WLS*) as the estimator. Goodness of fit indexes exhibited large baseline *chi-square* results, but sufficient model fit according to *CFI* and *RMSEA* estimates (Table 3.2). Factor loadings indicated that each of the parameters were statistically significant. The item representing staff cooperation was associated with the largest effect on the collegiality construct (Table 3.3). However, the item representing shared beliefs (see Appendix B) accounted for the most variance in collegiality. Based on these results, the composite item "collegiality" was determined to have sufficient construct validity. Lastly, Cronbach's Alpha analysis determined that the items were internally reliable for the construct
(α = .701).

-

Table 3.2
Goodness of Fit Indexes for Tests of Construct Validity (n=8989)

Latent Variable	χ^2 (*df*)	*CFI*	*RMSEA*
Leadership Perception	20367.11 (6)	.99	.03
Collegiality	9807.2 (3)	.99	.01

Table3.3
Standardized Parameter Estimates and t-values for Leadership Perception and Collegiality Models (n=8989)

Factor	Item	Factor Loading (t-value)	R-Squared (Reliability)
Leadership Perception			
	Supportive	.80*	.64
	Communicative	.86 (105.26)	.74
	Special Ed. Support	.41 (37.65)	.17
	Princ. expectations	.88 (109.523)	.78
Collegiality			
	Staff Cooperation	.94*	.40
	Shared Beliefs	.63 (43.82)	.89
	Recognition	.62 (43.50)	.39

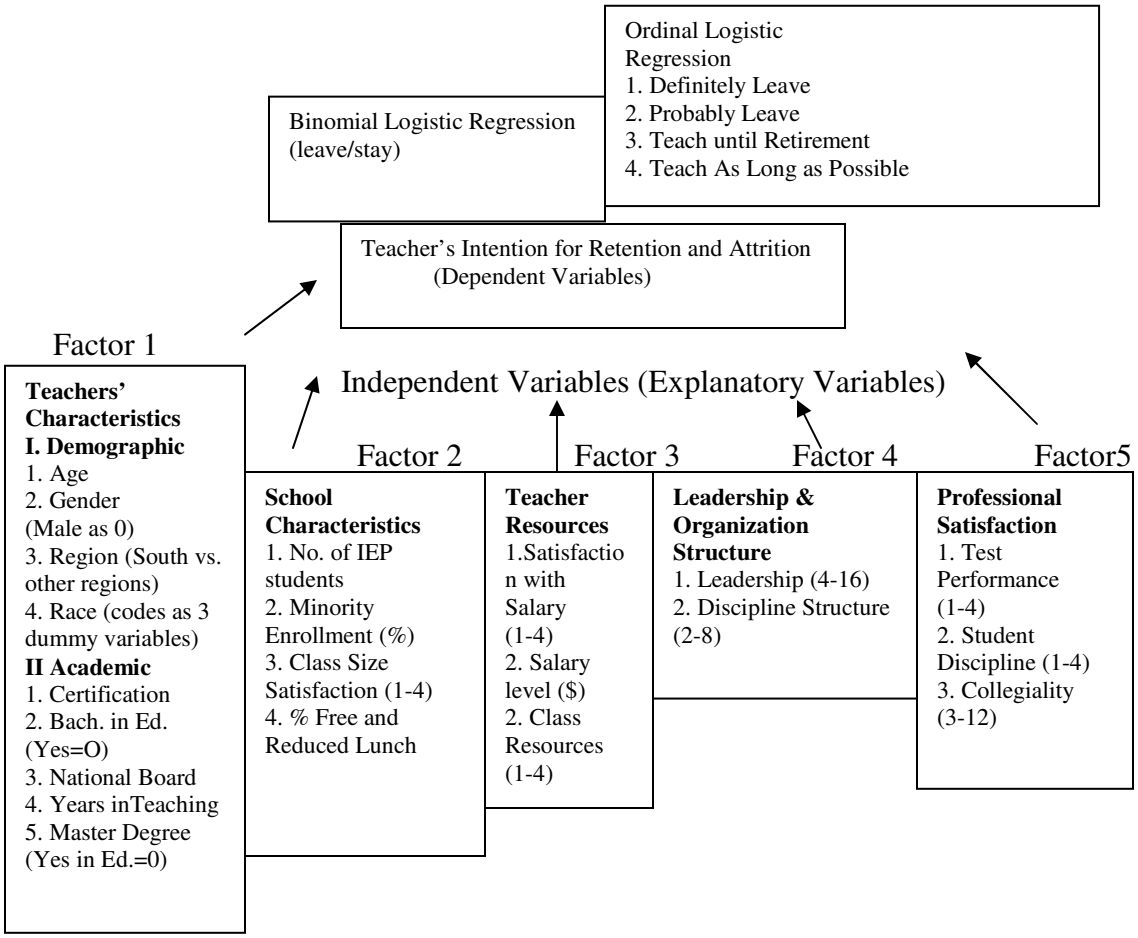
* indicates a parameter fixed at 1.0 in the original solution

Statistical Model and Data Analysis

The following model provides a visual reference to the research methodology conducted.

-

Figure 3.1
Statistical Model



Five major steps for data analysis were taken in addressing the five research questions:

Step 1. Descriptive statistics in terms of teacher's demographic and academic characteristics as well as the school characteristics were presented for all teachers as well as for teachers across the four major content areas to answer Research Question 1.

Step 2. Descriptive statistics in terms of teachers' self-perceived intention regarding retention/attrition were presented for all teachers as well as for teachers across the four major content areas to answer Research Question 2.

Step 3.

-

Step 3.1. Descriptive statistics of teachers' professional perceptions were presented in terms of teacher resources (*Satisfaction with salary* & *Satisfaction with class resources*), leadership and organizational structure (*Leadership* & *Discipline structure*), and professional satisfaction (*Testing anxiety*, *Student behavior management*, and *Collegiality*). These descriptive statistics included the mean, standard derivation, and range for total scores of each subcategory as well as the mean, standard derivation, frequency, and range for each individual item within the subcategories. These measurements of central tendency were presented for all teachers as well as for teachers across the four major content areas to answer part of Research Questions 3.

Step 3.2. A full model of binary logistical regression for all teachers was conducted with explanatory variables in five major areas and a dichotomized dependent variable on intention (leave/stay) to answer Question 3. In addition to the five factors, indicators of subject area were included with social studies as the reference category.

Step 4. A full model of binary logistical regression will be conducted separately within social studies, science, math and English teachers with explanatory variables in five major areas and a dichotomized dependent variable on intention (leave/stay) to answer Question 4. Analyzing separate models for the four separate subgroups (math, science, English, and social studies) provided more easily interpretable results compared to dummy variables (Chiswick & DebBurman, 2004).

In addition to determining the odd increase for each of the subject areas, the percentage of probability increase was calculated for the social studies model. These results allowed for a more intuitive understanding of the findings. The following equation allows for change in probability to be measured (Garson, 2008):

$5.5 * \text{Exp}(B_0) = \text{Exp}(z)$

-

$P_0 = Exp(z)/(1 + Exp(z))$

$P_0 - .846$ = % change in probability of intending to stay

Whereas:

5.5 = the odds of staying among social studies teachers

$Exp(B_0)$ = change in odds associated with explanatory variable

Exp(z) = adjusted odds of staying associated with explanatory variable

P_0 = adjusted probability of staying associated with explanatory variable

.846 = probability associated with original odds of staying among social studies teachers

Step5. Full-model multinomial regressions were conducted exclusively for social studies teachers with explanatory variables from the five major factors and multi-level dependent variables (definitely leave, probably leave, teaching until retirement, and teaching as long as possible) to answer Question 5.

Rationale for Logistic Regression Analysis

Logistic regression was utilized in order to analyze the mechanisms that contribute to teacher attrition and retention among subject areas, specifically social studies teachers. This statistic is designed to analyze data in which the independent variables (teacher perception of leadership style, student discipline, etc.) are continuous variables or categorical but dummy coded (i.e. teacher demographics) and the dependent variable (Intent to Stay or Leave) is discrete or categorical (Howell, 2002; Newton and Rudestam, 1999; Pregibon, 1981).

Previous researchers in the area of teacher turnover have employed logistic regression as a method of determining the effects of teacher characteristics and perceptions on teacher retention and attrition (see Ingersoll, 2001). Unlike linear regression, logistic regression does not place strict restrictions on the independent variable. It enables researchers to determine whether or not an event or phenomenon not measured in a continuous variable is regressed

-

upon a non-continuous independent variable. The dependent variable (y) is re-calculated as a logarithm; Log $\pi_i/(1-\pi_i)$ (Pregibon, 1981). In the process of standardization, the Log $\pi_i/(1-\pi_i)$ is re-calculated into an odds ratio; log 0_i. The resulting equation (DeMaris, 1992) is the following:

Log $\pi_i/(1-\pi_i) = \log 0_i = \alpha + \beta_1$(teacher perception1) + β_2(teacher demographic1)….+ β_0

This simplistic representation of the research model suggests that the odds of intention to stay or leave are affected by teacher perception and teacher demographics. In the full equation, all measurable variables would be represented.

The use of the odds ratio, log $0_{i,}$ enables the researcher to determine the odds of leaving or staying for a particular effect (i.e. independent variable). Hypothetically, if the odds for staying or leaving among social studies teacher demonstrated a statistically significant odds ratio of 1.442 for salary satisfaction, these findings would suggest that the odds of staying increase by 44% for each unit increase in salary measurement.

By incorporating logistic regression as a method of analysis, researchers can avoid the restrictions placed by linear regression. Moreover, it provides a powerful analysis of effects that can be meaningfully interpreted.

Goodness-of-Fit

Goodness-of-fit determines whether the parameters of the predicted (theoretical) model and the measured model are a statistically reliable fit (Hosmer & Lemeshow, 2000). The closer the measured values are to the predicted values, the greater the fit. In order to test for the structural reliability of the model, the researcher utilized the *Hosmer and Lemeshow test of goodness-of-fit.* Incorporating *chi-square* as a test statistic, *p*-values greater than .05 suggest that the model fails to reject the null hypothesis (the theoretical model) and has a statistically significant goodness-of-fit. In the current study, tests were conducted on each of

-

the binary logistic models and the ordinal logistic models. Results from each of the tests indicated a significant goodness-of-fit except for the comparison of stay until retirement social studies teachers versus those who are definitely leaving (see Table 3.4).

-

Table 3.4
Goodness-of-Fit Indices by Logistic Regression Model

Model Type	*Hosmer-Lemeshow Chi-Square*	*df*	*p*-value
Full Model	4.685	8	.791
Math Teacher (subgroup)	6.406	8	.602
Science Teacher (subgroup)	10.119	8	.257
English Teacher (subgroup)	4.839	8	.775
Social Studies (subgroup)	12.050	8	.149
Leave for opport. v. Definite Leave (ordinal)	3.020	8	.933
Stay until retire v. Definite Leave (ordinal)	19.433	8	.013
Stay until retire v. Leave for opport. (ordinal)	11.834	8	.159
Firm stay v. Definite leave (ordinal)	7.084	8	.528
Firm stay v. Stay until retirement (ordinal)	8.004	8	.429

-

Table 3.5
Proportion of Variance Contributed by the Model

Model Type	Cox & Snell R Square	Nagelkerke R Square
Full Model	.090	.152
Math Teacher (subgroup)	.095	.162
Science Teacher (subgroup)	.104	.168
English Teacher (subgroup)	.106	.180
Social Studies (subgroup)	.080	.140
Leave for opport. v. Definite Leave (ordinal)	.173	.281
Stay until retire v. Definite Leave (ordinal)	.046	.119
Stay until retire v. Leave for opport. (ordinal)	.064	.085
Firm stay v. Definite leave (ordinal)	.166	.250
Firm stay v. Stay until retirement (ordinal)	.078	.104

The coefficient of determination (R^2) is utilized in regression models to determine the amount of variability contributed from the model (Howell, 2002). The coefficient is

-

measured on a scale of 0.0 to 1.0. If a hypothetical regression model reports an R^2 of .12, then the explanatory variable(s) contribute approximately 12% of the variance for the dependent variable. Unlike *OLS* regression, logistic regression models do not utilize an R^2 statistics to determine the amount of variance within the dependent variable contributed by model predictors (Hosmer and Lemeshow, 2000). However, *Cox and Snell R square* and *Nagelkerke R square* provide comparable results. It should be noted that the *Nagelkerke pseudo R square* is a more accurate interpretation of the traditional regression coefficients associated with *OLS* regression. These tests for each of the models are reported in Table 3.5.

Ordering of variables within the model

As previous research have intimated (see Harrell, et al., 2004; Imazeki, 2005, Ingersoll, 2001; Luekens, et al, 2004; Mont & Rees, 1996; Stinebrickner, 1998), salary levels are consistently noted as the most substantial reason for a teacher's intention to leave or stay. Therefore, concurrent with earlier models, this study identified "salary perceptions" and "salary level" as the first variable entered within the model. Among non-pecuniary predictors, leadership and discipline structure (associated with leadership) were entered next in the model. Bogler (2001) and Imazeki (2005) determined leadership effects to have significant impact on teacher attrition levels. Moreover, studies of social studies teachers have suggested that educator satisfaction is linked to perceptions of principal efficacy (Bliss & Banks, 1994). In two separate studies, Lankford et al. (2002) and Falch and Strøm (2005) noted the importance of school level ecological determinants. Therefore, variables of student discipline, student demographics (special education, urbanicity, class size) were included next in the model. By the nature of their content area, social studies teachers are aware of the social and economic structure of educational institutions. The inclusion of these variables elucidated perceptions of school environment among (and between) teachers of core subject

-

areas. Finally, among teacher perceptions, collegiality, test anxiety and teacher resources were included. Research on teacher collaboration has produced few quantitative studies. However, theories have been posited (see Darling-Hammond, 2003; Luekens et al., 2004) as to the veracity of a collegial staff. The inter-disciplinary nature of the social studies suggests that they are likely to view collegiality as an important component of job satisfaction and professional intent. The increased requirements of *No Child Left Behind* have placed additional testing burdens on secondary education teachers (Certo & Fox, 2004). Within core subjects such as social studies, high stakes testing has come to be used as a gauge for teacher effectiveness. Therefore, the variable "test anxiety" was included in this study. The model posits that teachers within the core subject areas will be more likely to associate higher testing pressure with a decrease in intention to stay. Finally, access to instructional material is a necessity in the teaching profession (Gritz & Theobald, 1996; Lankford, 2002). Hence, it was included within the logistic model.

Teacher characteristics were entered secondary in this model. Gender has shown to have confounding results in determining whether a teacher will leave or stay (Adams, 1996; Stinebrickner, 1998). By utilizing a larger dataset (SASS 4A), this model hoped to better understand how gender functions into a teacher's intention to leave or stay within the field. Race was entered next into the model. Previous studies have indicated that Black teachers are more likely to stay in the teaching profession than White teachers (Murnane et al., 1991; King, 1993). Among social studies teachers, the research posits that this trend might be reversed. Curriculum within the social sciences tends to be Euro-centric; thereby alienating and disassociating non-White educators (Willinsky, 1998). Among characteristic variables, age has proven to be a significant predictor on likelihood of attrition. Previous studies indicate that the youngest and the oldest teachers are more likely to leave the field (Luekens

-

et al., 2004). Therefore, variables of teacher "age" and "years teaching" were included. Lastly, teacher credential variables were incorporated. Teachers holding regular certification and advanced degrees are more likely to leave teaching according to earlier analysis (see Adams, 1996 and Harrell, Leavell, van Tassel, & McKee, 2004). Conversely, National Board certified teachers are more likely stay (Goldhaber, Perry, & Anthony, 2004). Between subjects comparisons of these credential variables are lacking. This study hoped to determine how these licensure criteria differ among the core subjects.

Limitations to the Analysis

The use of large data set analysis provides statistically powerful results due to the large sample sizes (Howell, 2002). In addition, this dataset exhibited stronger external validity than smaller datasets. The Schools and Staffing Survey (2003-2004) is the largest cross-sectional sample of teachers in the United States (NCES, 2007). It provides large amounts of data regarding teacher demographics and professional perceptions. However, in its sampling process, it fails to take into account the biases of self-selection. Teachers who contribute to the sample may choose to volunteer for reasons outside the realm of analysis in this study. Moreover, practitioners who are more likely to leave the profession might be less inclined to volunteer for the study; thereby creating internal validity biases.

Conclusion

The purpose of this study was to analyze the demographic characteristics and professional perceptions among social studies teachers compared to teachers in other core subject areas (math, science, and English). Unlike previous attempts at determining retention patterns among teachers, this study specified subject area nuances that might contribute to a teacher's decision to leave or stay within the field. Utilizing a logistic regression model (see Figure 3.1), the research design hoped to determine how teacher characteristics and

-

perceptions differ between social studies and other core subjects. Moreover, the study sought to ascertain within group differences among social studies educators in their intention to leave or stay. The findings from this study will help school administrators and educational policy leaders better develop programs that might curtail the growing teacher attrition problems plaguing the United States school system.

CHAPTER 4: RESULTS AND ANALYSIS

Introduction

The purpose of this study was to determine the relationships between the teacher characteristics and professional satisfaction variables with social studies teachers' intentions to leave or stay in the profession. Table 4.1 provides a detailed description of how each of the five research questions will be answered in this chapter.

Table 4.1
Chapter 4 Organization

Page No.	Section	Analytical Methods	Research Question No.	Research Question Answered
67	Part I	Descriptive Statistics	Question 1	Who are Secondary S.S. teachers? How do they differ from English, math, and science teachers?
78	Part II	Descriptive Statistics	Question 2	What are the intentions regarding retention and attrition for social studies teachers, and how are these attention/attrition intentions different among social studies teachers and English, science, and math teachers?
81	Part III Subsection A	Descriptive Statistics	Question 3A	What are the variables in the five factors contributing to teachers' intention regarding retention/attrition?
85	Part III Subsection B	Binomial Logistic Regression (Teacher Characteristics)	Question 3B	Is there a difference in professional intention among social studies teachers and other teachers when related variables were controlled for?

-

87	Part III Subsection C	Binomial Logistic Regression (School Characteristics)	Question 3B	Is there a difference in professional intention among social studies teachers and other teachers when related variables were controlled for?
87	Part III Subsection D	Binomial Logistic Regression (Teacher Resources)	Question 3B	Is there a difference in professional intention among social studies teachers and other teachers when related variables were controlled for?
87	Part III Subsection E	Binomial Logistic Regression (Leadership and Organizational Structure)	Question 3B	Is there a difference in professional intention among social studies teachers and other teachers when related variables were controlled for?
88	Part III Subsection F	Binomial Logistic Regression (Professional Satisfaction)	Question 3B	Is there a difference in professional intention among social studies teachers and other teachers when related variables were controlled for?
88	Part III Subsection G	Binomial Logistic Regression (Subject Area)	Question 3B	Is there a difference in professional intention among social studies teachers and other teachers when related variables were controlled for?
90	Part IV Subsection A	Binomial Logistic Regression (Teacher Characteristics) Within Core Subject Areas	Question 4	What is the association between the variables in the five factors and teachers' professional intention within social studies? How are the effects of these explanatory factors different for social studies teachers compared to teachers in other core subject areas?
91	Part IV Subsection B	Binomial Logistic Regression (School Characteristics) Within Core Subject Areas	Question 4	What is the association between the variables in the five factors and teachers' professional intention within social studies? How are the effects of these explanatory factors different for social studies teachers compared to teachers in other core subject areas?

-

92	Part IV Subsection C	Binomial Logistic Regression (Teacher Resources) Within Core Subject Areas	Question 4	What is the association between the variables in the five factors and teachers' professional intention within social studies? How are the effects of these explanatory factors different for social studies teachers compared to teachers in other core subject areas?
93	Part IV Subsection D	Binomial Logistic Regression (Leadership and Organizational Structure) Within Core Subject Areas	Question 4	What is the association between the variables in the five factors and teachers' professional intention within social studies? How are the effects of these explanatory factors different for social studies teachers compared to teachers in other core subject areas?
93	Part IV Subsection E	Binomial Logistic Regression (Professional Satisfaction) Within Core Subject Areas	Question 4	What is the association between the variables in the five factors and teachers' professional intention within social studies? How are the effects of these explanatory factors different for social studies teachers compared to teachers in other core subject areas?
94	Part IV Subsection F	Percentage of Probability Change Among Social Studies Practitioners	Question 4	What is the association between the variables in the five factors and teachers' professional intention within social studies? How are the effects of these explanatory factors different for social studies teachers compared to teachers in other core subject areas?
97	Part V Subsection A	Stay vs. Leave (Ordinal Logistic Regression)	Question 5	How do these explanatory variables vary (in terms of significance and size of effect) in correspondence to social studies teachers' intention at ordinal levels of contrast?
98	Part V Subsection B	Leave for Opport. v. Definite Leave (Ordinal Logistic Regression)	Question 5	How do these explanatory variables vary (in terms of significance and size of effect) in correspondence to social studies teachers' intention at ordinal levels

-

				of contrast?
99	Part V Subsection C	Stay Until Retire vs. Definite Leave (Ordinal Logistic Regression)	Question 5	How do these explanatory variables vary (in terms of significance and size of effect) in correspondence to social studies teachers' intention at ordinal levels of contrast?
100	Part V Subsection D	Stay Until Retire v. Leave for Opport. (Ordinal Logistic Regression)	Question 5	How do the significance and the magnitude of these explanatory variables vary in correspondence to social studies teachers' intention at multi-levels of contrast?
102	Part V Subsection E	Firmly Stay v. Definite Leave (Ordinal Logistic Regression)	Question 5	How do the significance and the magnitude of these explanatory variables vary in correspondence to social studies teachers' intention at ordinal levels of contrast?
103	Part V Subsection F	Firmly Stay v. Stay Until Retire (Ordinal Logistic Regression)	Question 5	How do the significance and the magnitude of these explanatory variables vary in correspondence to social studies teachers' intention at ordinal levels of contrast?

Part I: Results for Question 1

Who are secondary S.S. teachers? How do they differ from English, math, and science teachers?

This section provides descriptive statistics regarding teachers' subject areas, gender, race, age, year in teaching, region of residence, receiving undergraduate degree in education, receiving Masters degree, state teaching licensure status, and National Board Certification status for all secondary teachers and teachers across subject area.

Subject Area

From the Schools and Staffing Survey dataset (03-04), 8,989 teachers were selected for this study (see Table 4.2). Participants were cataloged into one of four secondary (9-12) subject areas: social studies, math, science, or English. The largest group teachers

-

represented in the sample were English teachers (n= 2387, 26.6%). The math teacher contingent was the second largest group (n= 2363, 26.3%). Science teachers made up approximately 23.8% (n=2143) of the sample. Secondary social studies practitioners accounted for the final 23.3% (n=2096) of the selected sample.

Table 4.2
Teachers by Subject Area

Subject Area	Frequency	
Math	26.3%	(2363)
Science	23.8%	(2143)
English	26.6%	(2387)
Social Studies	23.3%	(2096)
	100.0%	(8989)

Gender

Representative of other teacher demographical studies, females were the majority of the total sample (n=4728, 52.6%) compared to males (n=4261, 47.4%). However, gender dominance varied across subject area (see Table 4.11). Among social studies practitioners, males comprised approximately two-thirds of group (n=1347, 66.9%). A similar, yet not as pronounced, trend is found among male science teachers (n=1116, 53.6%). Between the two largest groups sampled, math and English, the females hold a substantial majority. Most notably, females represent 76.8% (n=1704) of the English teacher group and 54.6% (n=1247) of the Math teacher group.

Race

The Schools and Staffing Survey (SASS) identified four different racial groups: White, Black, Asian, and American Indian. For the purposes of this study, American Indian teachers were removed from the study because they were less than 2% of the entire sample. In addition to these census descriptives of race, SASS asked participants if they identified

-

themselves as Hispanic (yes/no). From this item, the National Center for Educational Statistics (NCES) cross-listed race with Hispanic identification. The resulting variable, constructed by the NCES listed ten racial groups (i.e. White non-Hispanic, White Hispanic, Black non-Hispanic, Black Hispanic). Analysis of these descriptives showed that all of the Hispanic groups, except for White Hispanic, were not substantially represented in the sample (only 33 teachers, less than 1% of the total sample, identified themselves as either Hispanic Asians or Hispanic Blacks). Therefore, among the Hispanic demographic group, only Hispanic teachers who also identify themselves as Whites were included in this study (see Rong & Pressile, 2008). Therefore, this study operationalized race in four distinct categories: Asian (non-Hispanic), Black (non-Hispanic, Hispanic (White Hispanic), and White (non-Hispanic).

Within the selected sample (see Table 4.3), White teachers represented the majority of cases (n=7875, 89.8%). Black teachers were the largest minority group (n=447, 5.0%). Hispanic educators contribute approximately 3.2% (n=214) to the sample. Asian secondary educators comprised the smallest minority group (n=187, 2.1%).

Racial demographics across subject areas yielded interesting findings. A larger proportion of the teachers sampled in math and science were Asian (3.3% and 2.8% respectfully) compared to social studies (1.1%). Black teachers were most represented in science (5.6%), followed closely by social studies (5.5%). Whites were more prevalent in English (91.6%) and social studies (90.9%) than in math (89.3%) and science (89.4%). Hispanics were more likely to be identified as math teachers (2.9%) than science teachers (2.3%).

-

Table 4.3
Race by Subject Area

Subject Area Race	Math	Science	English	Social Studies	Total
Asian	3.3%	2.8%	1.3%	1.1%	2.1%
	(75)	(58)	(31)	(23)	(187)
Black	4.7%	5.6%	4.7%	5.5%	5.0%
	(110)	(117)	(109)	(111)	(447)
Hispanic	2.9%	2.3%	2.4%	2.6%	3.2%
	(60)	(47)	(55)	(52)	(214)
White	89.3%	89.4%	91.6%	90.9%	89.8%
	(2049)	(1865)	(2127)	(1834)	(7875)
Total	100.0%	100.0%	100.0%	100.0	100.0%
	(2294)	(2087)	(2322)	(2020)	(8723)[1]

[1] 66 cases were removed from this study, including 33 cases were self-identified as Hispanic Asians and Hispanic Blacks and 233 cases failed to respond to the race question.

Age

Descriptive analysis of teachers' age revealed that the mean age of educators in this sample was approximately 42.6 years (see Table 4.4). In addition, the standard deviation of age for sample was approximately 11.1 years. These findings suggested that the majority of the teachers represented in this study were between the ages of 31.5 years and 53.7 years. Across subject areas, the standard deviation of teacher age remained approximately consistent across groups. However, the mean age of English teachers was over one year older than the mean age of social studies and math practitioners (42.2 years).

-

Table 4.4
Teacher Age by Subject Area

Subject Area	Math	Science	English	Social Studies	Total
Mean Age	42.2	42.7	43.3	42.2	42.6
SD	11.0	10.8	11.5	11.0	11.1
N	2363	2143	2387	2096	8989

Years In Teaching

Descriptive statistics indicated that the mean years in fulltime teaching of the sample was 13.7 years with a standard deviation of 10.3 (see Table 4.5). These figures suggest that the majority of teachers in this study have between 3.4 and 24.0 years of fulltime teaching experience. Cross-group comparisons revealed that the mean years in teaching did not substantially vary according to subject.

Table 4.5
Mean Years In Teaching by Subject Area

Subject Area	Math	Science	English	Social Studies	Total
Mean Years Teaching	13.7	13.5	14.0	13.8	13.7
N	2363	2143	2387	2096	8989
SD	10.1	10.2	10.5	10.3	10.3

Region

The SASS dataset designated teachers in one of four regions (follows the coding by the US Bureau of the Census). Participants were labeled as teaching in the Northeast, Midwest, West, or South (see Table 4.6) at the time of survey. Descriptive analysis revealed that over one-third of the teachers worked in Western schools (n=3425, 38.1%). However, the sample was weighted in order to provide a more nationally-representative teacher pool

-

(see Chapter 3 for details). These weights revealed that though teachers in the western United States most frequently responded to the survey, their weighted sample proportion was 18.4%. Teachers in the Northeast represented the smallest region of the study (n=1363, 15.2%). Yet, their weighted proportion of the sample was 21.8%. Approximately a quarter of the teachers in the sample worked in the South (n=2157, 24.0%). Adjusted percentages indicated that Southern teachers received the highest proportion weighted proportion (37.4%). Less than a quarter of the teachers were from the Midwest (n=2044, 22.7%). These percentages hold consistent with the inclusion of variable weights (22.4%). Among subject area, regional representation remained consistent. The only notable exception is the larger percentage of Western teachers in both math (39.1%) and social studies (40.6%). Variable weighting adjusted for these discrepancies (see Table 4.6).

-

Table 4.6
Regional Representation by Subject Area[8]

Subject Area	Math	Science	English	Social Studies	Total
Region					
Northeast					
%	14.8%	16.4%	15.2%	14.2%	15.2%
n	(350)	(352)	(364)	(297)	(1363)
Weighted %	25.6%	26.6%	24.5%	23.3%	21.8%
Midwest					
%	23.0%	24.5%	22.5%	20.8%	22.7%
n	(545)	(526)	(536)	(437)	(2044)
Weighted %	26.6%	25.3%	26.2%	21.9%	22.4
West					
%	39.1%	35.9%	37.0%	40.6%	38.1%
n	(923)	(770)	(882)	(850)	(3425)
Weighted %	24.8%	22.8%	26.7%	25.8%	18.4%
South					
%	23.1%	23.1%	25.3%	24.4%	24.0%
n	(545)	(495)	(605)	(512)	(2157)
Weighted %	27.1%	21.3%	25.9%	25.7%	37.4%
Total					
%	100.0%	100.0%	100.0%	100.0%	100.0%
n	(2363)	(2143)	(2387)	(2096)	(8989)
Weighted %	100.0%	100.0%	100.0%	100.0%	100.0%

Degree in Education

Among all the teachers, over two-thirds (n=6250, 69.8%) have their Bachelor's degree in education and less than a third have their undergraduate degrees in areas other than education. Thirty-seven respondents did not respond to this question. Across subject areas, social studies (n=1515, 72.7%) and math (n=1721, 73.2%) were more likely to have an undergraduate degree in education. Science teachers were least likely to have a Bachelor's degree in education (n=1329, 62.2%).

[8] In subsequent regression models, cases were weighted in order to provide a more accurate analysis.

-

Table 4.7
Bachelors in Education Identification by Subject Area

Subject Area	Math	Science	English	Social Studies	Total
Bachelor in Ed.					
Yes	73.2%	62.2%	70.9%	72.7%	69.8%
	(1721)	(1329)	(1685)	(1515)	(6250)
No	26.8%	37.8%	29.1%	27.3%	30.2%
	(630)	(809)	(693)	(570)	(2702)
Total	100.0%	100.0%	100.0%	100.0%	100.0%
	(2351)	(2138)	(2378)	(2085)	(8952)[1]

[1]37 cases missing

Masters Classification

Over half of the sampled teachers did not have a Masters degree (n=4590, 51.3%). Among teachers with a Masters degree, the larger group had a Masters degree in an education-specific field (n=3636, 40.4%). Less than 10% of the participants had a Masters in their subject area (n=726, 8.1%). Thirty-seven teachers in this study did not respond to the item (see Table 4.8).

Of the groups in this study, science teachers were most likely to have a Masters degree in education (n=912, 42.7%) and they were also most likely to have their Masters in their subject area (n=216, 10.1%). In comparison, social studies teachers were least likely to have a Masters degree in their subject area (n=146, 7.0%). Both math and social studies teachers were more likely not to have a Masters degree (53.1% and 53.0% respectively).

-

Table 4.8
Masters Classification by Subject Area

Subject Area / Masters Classification	Math	Science	English	Social Studies	Total
Masters in Ed.	39.8% (936)	42.7% (912)	40.0% (952)	40.1% (836)	40.4% (3636)
Masters in Subject Area	7.1% (166)	10.1% (216)	8.3% (198)	7.0% (146)	8.1% (726)
No Masters	53.1% (1249)	47.2% (1010)	51.6% (1228)	53.0% (1103)	51.3 % (4590)
Total	100.0% (2351)	100.0% (2138)	100.0% (2378)	100.0% (2085)	100.0% (8952)[1]

[1]37 cases missing

State Certification

The SASS survey identified six different forms of licensure. These items were collapsed into three categories in this study: full licensed, probationary, and no license (see Table 4.9). The majority of teachers (n=7924, 88.2%) were fully licensed. Approximately a tenth of the teachers were labeled probationary (n=955, 10.6%). A small minority of teacher did not have any recognized license in the state they worked (n=120, 1.2%).

Subject area analysis revealed that social studies teachers had the highest percentage of fully licensed teachers (90.3%) and the lowest percentage of non-licensed teachers (0.8%) represented in the sample. Conversely, science teachers had the lowest percentage of licensed (85.8%) and non-licensed (1.6%) practitioners. Probationary licenses were also higher among science teachers (12.6%) as well as math and English teachers (11.8% and 9.2% respectively) than social studies (8.9%).

-

Table 4.9
State Certification by Subject Area

Subject Area State Cert.	Math	Science	English	Social Studies	Total
Fully Licensed	86.7% (2048)	85.8% (1839)	90.0% (2145)	90.3% (1892)	88.2% (7924)
Probationary License	11.8% (280)	12.6% (269)	9.2% (219)	8.9% (187)	10.6% (955)
No License	1.5% (35)	1.6% (35)	1.0% (23)	0.8% (17)	1.2% (110)
Total	100.0% (2363)	100.0% (2143)	100.0% (2387)	100.0% (2096)	100.% (8989)

National Board Certification

Among the teachers in this study, approximately one-tenth had received their National Board Certification (n=1056, 11.7%). The majority of the educators in this study were not Nationally Board of Certified (n=7933, 88.3%). Subject area investigation indicated English teachers had a higher percentage that received National Board Certification (12.9%) than the other groups. The social studies, science, and math groups had approximately one to two percent less certified teachers than English (see Table 4.10).

-

Table 4.10
National Board Certification by Subject Area

Subject Area	Math	Science	English	Social Studies	Total
National Board Certification.					
Certified	11.0%	11.7%	12.9%	11.4%	11.7%
	(260)	(250)	(308)	(238)	(1056)
Not Certified	89.0%	88.3%	87.1%	88.6%	88.3%
	(2103)	(1893)	(2079)	(1858)	(7933)
Total	100.0%	100.0%	100.0%	100.0%	100.0%
	(2363)	(2143)	(2387)	(2096)	(8989)

Part II: Results for Question 2

What are the self-perceived intentions regarding retention and attrition for social studies teachers, and how are these self-perceived attention/attrition intentions different among social studies teachers and English, science, and math teachers?

In this section, the descriptive statistics will be provided to report teachers' intention across the subject areas. The Schools and Staffing Survey (SASS) 03-04 measured teachers' professional intention with a five point Likert-type scale. This study removed the undecided cases in an initial screening of the data. The remaining four levels were: definite leave, leave for another opportunity, stay until retirement, and stay as long as possible (see table 4.11). For all subject areas, the largest percentages of teachers were those who indicated that they would stay as long as possible (n=4122, 47.4%). Over one-third of the cases selected stay until retirement (n=3383, 38.9%). Approximately 13.3% (n=1159) specified that they would leave for a better job opportunity. Finally, 3.7% of the sample expressed an interest to leave the profession immediately (n=325). If the item is collapsed into two dichotomized levels (leave/stay), then approximately 17% of all the teachers in the study are intended leavers and approximately 83% are intended stayers. The resulting odds of staying were 4.9 to 1.0.

-

When teachers' intentions were examined across the subject areas, social studies teachers were more likely to stay as long as possible (48.3%) compared to English and science practitioners. However, math teachers were most likely to stay as long as possible (48.8%) than social studies teacher. In terms of forecasting retirement, social studies teachers were the most likely to stay until their retirement (40.5%) compared to teachers in other subject areas. Science and math teachers were most likely to leave for better employment opportunities (14.9% and 13.3% respectively). Of both English and social studies teachers in this study, approximately one-eighth (12.6%) in each group indicated that they were considering other job opportunities. Finally, social studies teachers were the least likely to intend to definitely leave the profession (2.8%). Science and English teachers (4.4% and 4.3%) were most likely to exhibit definitely leave intentions.

Dichotomization of the intention levels by subject level revealed differentiating odds ratios. Among math teachers, 16.7% of the teachers were labeled as intending to leave. Conversely, 83.3% of the teachers were labeled intending to stay. The corresponding odds of staying ratio was 5.0 to 1.0. Approximately, 19.3% of the science teachers intend to leave opposed to the 80.7% that intend to stay. The odds of a secondary science teacher intending to stay were approximately 4.2 to 1.0. The results of the English teachers mirrored the larger sample findings. An estimated 16.9% of the teachers intended to leave compared to 83.1% who intend to stay. Odds ratios for an English teacher staying were 4.9 to 1. Finally, among social studies practitioners, 15.4% of the sample contemplated leaving compared to 84.6% intending to stay. The associated odds ratio of social studies teachers' intention to stay was approximately 5.5 to 1.0. These results indicated that in comparison to the other subject areas, the odds of staying were most favorable among social studies practitioners.

-

Table 4.11
Professional Intent by Subject Area

Professional Intention			Subject Area				Total
			Math	Science	English	Social Studies	
Definite Leave	GENDER	Male	1.3% (30)	2.3% (48)	1.1% (25)	1.7% (34)	1.6% (137)
		Female	2.1% (48)	2.1% (43)	3.2% (75)	1.1% (22)	2.2% (188)
	Total		3.4% (78)	4.4% (91)	4.3% (100)	2.8% (56)	3.7% (325)
Leave for Opportunity	GENDER	Male	6.7% (155)	7.2% (150)	3.5% (81)	8.5% (172)	6.4% (558)
		Female	6.5% (148)	7.7% (161)	9.1% (210)	4.1% (82)	6.9% (601)
	Total		13.3% (303)	14.9% (311)	12.6% (291)	12.6% (254)	13.3% (1159)
Stay until retirement	GENDER	Male	17.1% (391)	43.2% (444)	9.4% (217)	27.3% (549)	18.4% (1601)
		Female	21.7% (495)	40.6% (356)	28.8% (665)	13.2% (266)	20.5% (1782)
	Total		38.8% (886)	38.4% (800)	38.1% (882)	40.5% (815)	8.9% (3389)
Stay as long as possible	GENDER	male	21.8% (498)	24.5% (510)	13.3% (308)	32.3% (649)	22.6% (1965)
		female	26.2% (598)	20.7% (431)	34.8% (806)	16.0% (322)	24.8% (2157)
	Total		48.8% (1096)	45.2% (941)	48.2% (1114)	48.3% (971)	47.4% (4122)
Total	GENDER	male	45.4% (1037)	53.6% (1116)	23.2% (609)	66.9% (1347)	47.3% (4109)
		female	54.6% (1247)	46.3% (966)	76.8% (1704)	33.1% (665)	52.7% (4582)
	Total		2284	2082	2313	2012	8691[a]

[a] 298 cases missing that reported "undecided" professional intentions

-

Part III: Results for Question 3

Question 3A: *What are the variables in the five factors that may potentially contribute to teachers' intention regarding retention/attrition?*

Part I of Chapter 4 provided descriptive statistics of the demographic characteristics associated with all participants in this study as well as the participants across the subject areas. Along with teacher characteristics, four additional factors were constructed from a theoretical framework derived from research literature regarding teacher turnover issues. The following section will present descriptive analysis of measured variables within each of these four factors.

The "school characteristics" factor included four measured variables: the number of students with IEPs (individual education plans) taught by the teacher, percentage minority enrollment at the school, satisfaction with class size, and percentage of students who qualify for free and reduced lunch. Table 4.12 offers results from the descriptive analysis of these variables. Among all teachers, the mean number of IEP-dependent students per secondary practitioner was 10.7. Science and English teachers had mean statistics similar to the overall sample mean. Math teachers averaged one less IEP student than the general mean. However, across subject comparisons showed that math teachers averaged two less IEP students than social studies teachers.

The mean percentage of within-school minority enrollment is 35.6% (see Table 4.12). Math teachers in this study worked in schools with a mean of 33.3% minority students. The average minority enrollment among English and science teachers was 34.3% and 35.7% respectively. Social studies practitioners tended to work in schools with a higher non-White presence (36.6%). The mean percentage of students with free and reduced lunch among the entire sample was 32.2%. Across subject area investigation suggested no apparent variation

-

between groups. Class size satisfaction was a 4-point Likert-type question whereby 1 is least satisfied and 4 is most satisfied. The mean class size satisfaction for the entire sample was 2.8. Subject area comparisons yielded no sufficient differences, though social studies teachers indicated the lowest satisfaction level in terms of class size.

Three measured predictors supported the "teacher resources" factor: salary amount, salary satisfaction, and class resources. Analysis of mean salary amount determined that the average salary for the entire sample was approximately $41,560.50 (see Table 4.12). Across subject areas, science teachers had the highest average pay ($41,979.10). Social studies teachers reported an averaged approximately $400 dollars less than the Science teachers. English teachers reported the lowest mean salary (approximately $41,326.70) and the math teachers reported the second lowest mean salary. In addition to the actual salary level, the study also measured participant's satisfaction level regarding the salary they earned. Similar to class size, salary satisfaction was measured using the same 4-point Likert-type scale. The mean salary satisfaction for all teachers in this study was 2.2. Investigation across subgroups indicated no difference in mean salary satisfaction, though the salary satisfaction level for math and science teachers were slightly higher than English and social studies teachers. Class resources (4-point Likert-type scale) measured the level of teacher satisfaction with availability and quality of instructional resources. The mean satisfaction level for class resources was 3.1. Among the core subject areas, mean levels did not substantially vary, though the math teachers had a slightly higher satisfaction level in class resources than other teacher subgroups.

The "leadership and organizational" factor was measured with two variables: leadership perception and discipline structure. Leadership perception combined four Likert-type questions (see Codebook in the Appendix B). The resulting range was 4 to 16. The

-

mean leadership perception score for the entire model was 12.6 (see Table 4.12). Among the subgroups, there were no apparent differences in mean scores. Discipline structure was constructed from two Likert-type scales. The corresponding range of scores for this variable was 2 to 8. In the general sample, the mean score was 5.8. Mean scores did not differ considerably among the core subject areas.

The final factor, "professional satisfaction" consisted of three explanatory variables: testing efficacy, student discipline, and collegiality among staff. Testing efficacy sought to measure the anxiety associated with standardized testing. Like similar perception measurements, it functioned as a 4-point Likert-type item. The higher a practitioner scores, the more likely teachers are not to worry about standardized testing results. Among all teachers in the study, the mean score for testing efficacy was 2.0. Across subject areas, there were no substantial differences. Student discipline, "the level of student misbehavior in this school interferes with my teaching," measured how teachers perceive student behavior in the classroom. Higher Likert-type scores are associated with greater satisfaction. The mean score for student behavior among all teachers was 2.8. Across the subject area, there were no noted differences in perception of student behavior. Collegiality was measured combining three Likert-type variables (see Appendix B --the Codebook). The corresponding range of scores was 3 to 12. The mean collegiality score of all teachers in this study was 9.0. Among the subject cohorts, there were no distinguishable differences in means. However, the math teachers enjoyed the most collegiality (9.1) and social studies teachers indicated the least collegiality.

-

Table 4.12
Descriptive Statistics of Explanatory Variables by Subject Area

Subject Area		Math	Science	English	Social Studies	Total
Explanatory Variable (range)						
School Characteristics						
Number of IEPs (0-500)	*M*	9.7	10.3	10.6	12.2	10.7
	SD	(15.0)	(12.1)	(18.1)	(16.6)	(15.7)
Minority Enrollment % (0-100)	*M*	33.3	35.7	34.3	36.3	35.6
	SD	(34.2)	(34.4)	(34.1)	(33.8)	(34.1)
Class Size Satisfaction (1-4)	*M*	2.9	2.8	2.8	2.7	2.8
	SD	(1.0)	(1.0)	(1.0)	(1.0)	(1.0)
Free and Reduced Lunch % (0-100)	*M*	32.6	32.4	31.7	32.4	32.3
	SD	(24.9)	(25.4)	(24.9)	(24.9)	(25.1)
Teacher Resources						
Salary $ (0-100000)	*M*	41456.4	41979.1	41326.7	41516.0	41560.5
	SD	(12001.9)	(11978.3)	(11842.2)	(12071.8)	(11970.0)
Satisfaction with Salary (1-4)	*M*	2.3	2.3	2.2	2.2	2.2
	SD	(1.0)	(1.0)	(1.0)	(1.0)	(1.0)
Class Resources (1-4)	*M*	3.2	3.1	3.1	3.1	3.1
	SD	(1.0)	(1.0)	(1.0)	(1.0)	(1.0)
Leadership & Organizational Structure						
Leadership (4-16)	*M*	12.8	12.6	12.6	12.6	12.6
	SD	(2.4)	(2.5)	(2.5)	(2.7)	(2.5)
Discipline Structure (2-8)	*M*	5.9	5.8	5.9	5.8	5.8
	SD	(1.4)	(1.5)	(1.5)	(1.5)	(1.5)
Professional Satisfaction						
Testing Efficacy (1-4)	*M*	2.0	2.0	2.1	2.0	2.0
	SD	(1.0)	(1.0)	(1.0)	(1.0)	(1.0)
Student Discipline (1-4)	*M*	2.8	2.8	2.8	2.8	2.8
	SD	(1.0)	(1.0)	(1.0)	(1.0)	(1.0)
Collegiality (3-12)	*M*	9.1	9.0	9.0	8.9	9.0
	SD	(1.8)	(1.8)	(2.0)	(1.9)	(1.9)

n=8988

-

Question 3B: *Is there a difference in professional intention among social studies teachers and other teachers when related variables were controlled for?*

In order to determine how the aforementioned explanatory variables were associated with teachers' professional intentions, binomial logistic regression was employed. The criterion variable (professional intent) was dichotomized into two levels: stay or leave. Independent variables were included in the model based upon the theoretical framework focusing on teacher turnover issues. Unlike *ordinary-least squares* regression, logistic regression models are not limited to a continuous dependent variable. The dichotomized criterion variable is re-calculated as an odds ratio (see Chapter 3 for specific details). Consequently, the model's standardized coefficients (β) are associated with a change in the odds (Exp (B)). In this study, the logistic models measured the changes in the odds of intending to stay in teaching. For example, if a hypothetical independent variable was associated with an Exp (B) of 1.572. Then, the odds of staying would increase by approximately 57% for each unit of the independent variable. Conversely, an Exp (B) of 0.427 suggests that the odds of staying decrease by approximately 57% for each unit of the independent variable. It should be further noted that the cases in this sample were weighted to provide more accurate (and generalizable) results. For more information on the rationale and process of weighting variables refer to Chapter 3.

<u>Question 3B-Subsection B. Binomial Logistic Regression (Teacher Characteristics)</u>

Table 4.13 provided the results of the full binary logistic model among for all teachers. The teacher characteristics factor consisted of demographic and academic mechanisms associated with a practitioner's intention to leave or stay. Among the demographic characteristics, the significant gender effect (female as the reference category) indicated that male teachers were associated with an 11% increase in the odds of staying in

-

teaching compared to their female counterparts ($p<.001$). Older teachers were more likely to stay in teaching as opposed to younger educators. The model suggested that a teacher's odds of staying increased by approximately 5% for each year of age. Analyses of teaching region (South as the reference category) yielded significant results. The odds of intending to stay increased by over 25% for teachers in the West and Midwest compared to teachers in Southern states. The odds of staying were double for teachers in the Northeast than their counterparts in the South. The race indicator suggested that the odds of staying in teaching decrease among teachers in minority groups. Odds of staying dropped by approximately 19% for Black practitioners compared to White. Asian and Hispanic teachers were associated with an approximate 30% decrease in the odds of intending to stay.

In terms of the effectiveness of certification on the retention of teachers, academic variables implied mixed results (see Table 4.13). Having a Bachelor's degree in education increased the odds of intending to stay by approximately 31%. Advanced degree status had a positive impact on teacher retention. Practitioners with a Masters degree in education were associated with an increase of 10% in the odds of staying compared to teachers with no Masters degree. Acquiring a Masters degree in one's subject area was associated with a 17% increase in the odds of intending to stay. Interestingly, teachers with licensure were associated with a decrease in odds of staying. Having a probationary license was related to a 44% decrease in the odds of staying. Fully licensed teachers indicated a 53% decrease in the odds of staying compared to non-licensed practitioners. Results confirmed the positive effects of receiving National Board certification on teachers' intention. The odds of intending to stay increased by approximately 16% for certified practitioners compared to their counterparts. Teacher longevity (years teaching) suggested a slight, yet significant, increase in the odds of staying.

-

Question 3B-Subsection C. Binomial Logistic Regression (School Characteristics)

Four variables were utilized to measure the school characteristics (see Table 4.13). The number of students with Individual Education Plans (IEPs) slightly decreased the odds of staying. In addition, the odds of intending to stay decreased as the percentage of free and reduced lunch eligibility increased in the participants' schools. Conversely, higher the percentage of minority enrollment slightly increased the odds of staying. The model did not find class size satisfaction to be a significant determinant of intention to leave or stay.

Question 3B-Subsection D. Binomial Logistic Regression (Teacher Resources)

Among non-teacher characteristic variables, salary satisfaction was the most effective mechanism for determining intention to leave or stay in the full model (see Table 4.13). The odds of staying increased by 38% for each unit of salary satisfaction. These figures suggest that from the lowest salary satisfaction to the highest (1-4) there was a 114% increase in the odds of staying. The actual salary level was a significant predictor of intention to leave or stay. A $1000 increase in salary was associated with a 1% increase in the odds of intending to stay (see footnote, Table 4.13). Availability of instructional resources indicated a 6% increase in odds of intending to stay per unit. Consequently, the odds of staying increase by 18% from the lowest level of resource availability to the highest.

Question 3B-Subsection E. Binomial Logistic Regression (Leadership and Organizational Structure)

Teachers who perceived greater admiration for their school's leadership style were more likely to intend to stay in the profession. The leadership predictor was associated with a 10% increase in the odds of staying (see Table 4.13). Teachers highly satisfied with leadership were linked to a 120% increase in odds compared to the least satisfied. On the

-

other hand, satisfaction with leadership discipline structure was associated with a slight decrease in the odds of intending to stay.

Question 3B-Subsection F. Binomial Logistic Regression (Professional Satisfaction)

Greater teacher collegiality related to an 8% increase in the odds of staying per unit change. From the lowest to highest perception of collegiality, the odds of intending to stay increased by 48%. Better student discipline was associated with a 25% increase in the odds of staying per unit of measurement. Compared to teachers who indicated the least satisfaction of the student behavior, teachers who indicated the most satisfaction were linked to a 75% increase in the odds of intending to stay. Teacher testing efficacy was associated with a 4% decrease in the odds of staying per unit measured.

Question 3B-Subsection G. Binomial Logistic Regression (Subject Area Comparison)

In this model, a social studies classification was used as the comparison category. Findings indicated that teachers in other core subject areas were less likely to intend to stay in teaching compared to social studies teachers. The odds of intending to stay decreased by 18% for math practitioners compared to social studies teachers. Among English teachers, odds decreased by 22%. Science teachers were the most likely to intend to leave compared to social studies educators. The odds of staying deceased by over 28% for science teachers compared to social studies.

-

Table 4.13
Predictors of Professional Intent Among Secondary Teachers (all core subject areas)

X	B	SE	Wald.	df	Exp (B)
Salary Satisfaction	.322	.006	3317.619	1	1.380***
Salary Level ($$)[9]	.000	.000	335.806	1	1.000***
Leadership Perception	.092	.003	1125.301	1	1096***
Discipline Structure	.-.032	.005	46.409	1	.968***
Perception of Stud. Disc.	.221	.005	1638.831	1	1.247***
Resource Availability	.054	.006	87.036	1	1.055***
Collegiality	..073	.003	459.039	1	1.076***
Testing Efficacy	-.038	.005	50.937	1	.963***
Minority Enrollment	.002	.000	99.689	1	1.002***
Class size Satisfaction	-.002	.005	.126	1	.998
Years Full-time Teaching	.002	.001	4.514	1	1.002*
Teacher Age	.053	.001	5418.199	1	1.054***
No. of IEP students	-.002	.000	26.972	1	.998***
No. of Free/Reduced	-.001	.00	30.286	1	.999***
Gender(Male)	.104	.010	101.512	1	1.109***
Race			472.545	3	
Race(Asian)	.-.444	.033	185.288	1	.641***
Race(Black)	-..209	.020	103.847	1	.812***
Race(Hispanic)	-.385	.023	277.389	1	.680***
National Board (Yes)	.146	.015	93.692	1	1.157***
State Certified			651.466	2	
State Certified (Full)	-.752	.053	201.652	1	.471***
State Certified (Prob.)	-.416	.054	59.828	1	.660***
Masters			95.969	2	
Masters(education)	.093	.011	65.255	1	1.097***
Masters(outside educ.)	.156	.021	56.635	1	1.169***
Bachelor in Ed. (yes)	.272	.011	622.347	1	1.313***
Region			2352.653	3	
Region(Northeast)	.814	.017	2351.961	1	2.257***
Region (Midwest)	.233	.013	298.348	1	1.262***
Region (West)	.246	.015	275..062	1	1.279***
Subject			562.050	3	
Subject (Math)	-.196	.014	186.494	1	.822***
Subject (Science)	-.335	.014	537.474	1	.715***
Subject (English)	-.246	.015	285.248	1	.782***

n = 8691
Note: For the coding of factors, please see Appendix B: the Variable Codebook
* p < .05, *** p<.001

[9] Exp(B) for Salary Level = 1.00001

-

Part IV: Results for Question 4

What is the association between the variables in the five factors and teachers' professional intention within social studies? How are the effects of these explanatory factors different for social studies teachers compared to teachers in other core subject areas?

The subsequent section will provide a cross-subject area comparative analysis of teachers' professional intentions. Specifically, it will show how the mechanisms for professional intention differ between social studies and the other core subjects. Similar to the previous model, logistic regression analysis was implemented.

Question 4-Subsection A. Binomial Logistic Regression (Teacher Characteristics) Within the Core Subject Area

Demographic variables indicated variation in influence across subject areas (see Table 4.14). Gender had a much larger impact on a teacher's professional intention among social studies teachers compared to other subject areas. Among gender indicators, the odds of staying increased by 32% for male social studies teachers. In comparison, the odds of staying increased by 8% for male math teachers. For every year older, the odds of intending to stay increased by 6% among social studies teachers. Math, science, and English practitioners showed an increase of between 4% and 7% for every year taught. Across all subject areas, teachers in the South had smaller odds of intending to stay. Social studies educators in West schools were associated with a 50% increase in the odds of staying compared to the South. Moreover, they experienced a 2.8 (280%) increase in the odds of staying if they worked in the Northeast region compared to the South. Among indicators of race, math and social studies teachers were the only teacher subgroups that showed significant decreases in the odds of intending to stay across minority distinctions. Black and Hispanic social studies teachers were the least likely to stay of the core subject areas. Being

-

Black decreased the odds of staying by approximately 51% compared to White social studies teachers. Hispanic teachers experienced a 52% decline in the odds of staying compared to White practitioners in the field. However, being Black science teacher increased the odds of staying by 13%.

Among academic predictors, having a Bachelor's degree in education increased the odds of staying by 83% for social studies teachers. This degree distinction increased the odds of staying by only 29% for math teachers and even less (13%) for science teachers. Masters degree results varied substantially across the core subjects. For math and English practitioners, having a Masters degree in education increased the odds of intending to stay by approximately 30% and 24% respectively. A Masters in education decreased the odds of staying by 19% for social studies practitioners. Conversely, for social studies teachers the odds of intending to stay doubled (200%) if they had received a Masters in their discipline. The odds declined by 15% for math teachers who have a content-specific Masters degree. In terms of certification criteria, licensure was not significantly associated with intention to leave or stay among social studies teaches. For the other core subject areas, probationary and full licensed teachers demonstrated a decrease in the odds of intending to stay compared to non-licensed teachers. While state certification was not significant among social studies practitioners, National Board certification increased the odds of staying approximately 45%. For science teachers, the odds of staying decreased by 17% for teachers who had National Board certification. Years of fulltime teaching were associated with a decline in the odds of intending to stay for social studies, math, and science teachers. For English teachers, the odds of staying increased by 2% for each year of teaching.

<u>Question 4-Subsection B. Binomial Logistic Regression (School characteristics) Within Core Subject Areas</u>

-

Among measured variables within the school characteristics factor, the number of students with an IEP slightly decreased the odds of intending to stay for English and social studies teachers (see Table 4.14). Science teachers indicated a greater likelihood of intending to stay as the number of IEP students increased. The variable was not statistically significant within the math subject area. Surprisingly, minority enrollment percentage was positively associated with increased odds of staying for social studies, English, and math practitioners. The science group indicated a decrease in the odds of staying as the percentage of minority students within the school increased. The odds of staying decreased by approximately 12% for each unit of classroom size satisfaction among social studies teachers. Math teachers experienced a slight decrease in the likelihood of staying as classroom size increased. Conversely, the odds of staying increased for science teachers. Social studies teachers were slightly more likely to stay as the percentage of free and reduced students increased. Math and English teachers experienced a decrease in the odds of intending to stay per unit increase in free and reduced lunch students.

Question 4-Subsection C. Binomial Logistic Regression (Teacher Resources) Within Core Subject Areas

Satisfaction with salary was associated with increased odds of staying across subject areas. However, the percentage of odds increase varied between groups (see Table 4.14). Math and science teachers indicated increases of 53% and 50% respectively. Social studies teachers signified an increase of 30% per unit increase in salary satisfaction. Salary level (in US dollars) was associated with a slight increase in the odds of intending to stay per unit among math and science teachers. Specifically, $1000 increase in salary was associated with a 0.5 % increase in the odds of staying for math teachers and a 3% increase in the odds of staying among science practitioners (see footnote Table 4.14). Among English and social

-

studies teachers, salary level was not a statistically significant mechanism of professional intention. Resource availability was statistically significant for all of the groups. For social studies teachers, resource availability was associated with an increase of 14% per unit increase. From the lowest level of resource availability to the highest level (1-4), the odds of intending to stay increased by approximately 42%. In comparison, English practitioners experienced a 14% decrease in the odds of intending to stay with per unit increase of satisfaction.

Question 4-Subsection D. Binomial Logistic Regression (Leadership and Organizational Structure) Within Core Subject Areas

For social studies, English, and science practitioners, teacher perception of leadership in school was a significant mechanism of teachers' intention to stay or leave (see Table 4.14). Within science and English teacher subgroups, the positive impact of leadership on teachers' staying intent was slightly more substantial (13% and 20%) per unit leadership. Among social studies educators, one unit increase in school leadership signified a 6% increase in the odds of staying. From the lowest level of leadership (4) to the highest (16), the odds of intending to stay increased by 72%. Discipline structure of the school was not a significant mechanism of professional intention for social studies teachers. However, math teachers were more likely to stay as discipline structure satisfaction increased. In comparison, English and science teachers were less likely to intend to stay as discipline satisfaction increased.

Question 4-Subsection E. Binomial Logistic Regression (Professional Satisfaction) Within Core Subject Areas

Increased perceived testing efficacy slightly raised the odds of intending to stay among math practitioners. Conversely, increased testing efficacy (or lack of standardized

-

testing curriculum) was associated with a decrease in the odd of intending to stay among social studies teachers. An increased testing efficacy variable indicated a 12% decrease in the odds of intending to stay. Similarly, English teachers were associated with a 10% decrease in the odds of staying for each unit of perceived test efficacy increase. The student behavior variable was positively associated with increased intention to stay. Social studies teachers experienced a 15% increase in the odds of intending to stay. From the lowest (1) to the highest (4) possible level of student discipline perception, the odds of intending to stay for social studies teachers increased by approximately 45%. Among other core subject areas, the student discipline mechanism demonstrated a greater increase in the odds of intending to stay. The odds of staying increased by approximately 44% for English teachers and 27% for math teachers with each unit increase in perceived efficiency. Finally, collegiality was statistically significant within each of the subject area. Social studies teachers indicated a 4% increase in the odds of staying per unit of collegiality. From the lowest collegiality level (3) to the highest (12), social studies teachers experienced an approximate 36% increase in the odds of staying. Among the other core subjects, the impact of collegiality was more apparent. For example, math teachers indicated an odds increase of 11% per unit of collegiality.

Question 4-Subsection F. Percentage of Probability Change Across Predictors Among Social Studies Practitioners

An additional analytical step was taken in order to intuitively interpret the associations between the independent variables and social studies teachers' professional intent. Among significant predictors, odds ratios were converted into a percentage change in the probability of staying (see Table 4.14). Probability results allow the researcher to make

-

directed statements regarding the likelihood of an event. See Chapter 3 for a more detailed explanation of change in probability is calculated.

These results illustrated that the probability of staying increases among various variables of leadership, resource, and professional satisfaction. Most notably, per unit increases in salary satisfaction, resource availability, and student discipline were associated with a greater likelihood of staying. Degree classification indicated that Bachelors in education and Masters in social sciences were associated with a higher probability of staying. In addition, probability analysis revealed that minority status substantially decreases that likelihood of staying. Regionally, social studies teachers outside the Southern United States showed a greater probability of staying.

-

Table 4.14
Predictors of Intention to Stay or Leave by Subject Area (Odds Ratios)

Subject Area	Math	Science	English	Social Studies	Change in Probability of staying among SS[a]
X	Exp (B)	Exp (B)	Exp (B)	Exp (B)	
Salary Satisfaction	1.531***	1.506***	1.244***	1.296***	3%
Salary Level ($$)[10]	1.000***	1.000***	1.000	1.000	
Leadership Perception	1.000	1.125***	1.199***	1.057***	1%
Discipline Structure	1.031***	.924***	.932***	.999	
Student Discipline	1.268***	1.174***	1.439***	1.147***	2%
Resource Availability	1.214***	1.039***	.856***	1.135***	2%
Collegiality	1.105***	1.084***	1.083***	1.038***	1%
Testing Efficacy	1.077***	.984	.900***	.882***	-2%
Minority Enrollment	1.003***	.988***	1.003***	1.006***	1%
Class size Satisfaction	.930***	1.235***	1.012	.880***	-2%
Years Full-time Teaching	.933***	.995*	1.022***	.994*	-1%
Teacher Age	1.068***	1.055***	1.042***	1.062***	1%
No. of IEP students	1.001	1.008***	.998***	.993***	1%
Free/Reduced	.996***	1.000***	.994***	1.002***	1%
Gender(Male)	1.076***	1.057*	1.131***	1.322***	3%
Race					
Race(Asian)	.534***	1.093	.340***	.749*	-4%
Race(Black)	.760***	1.126*	.966	.491***	-12%
Race(Hispanic)	.519***	1.014	1.048	.476***	-12%
National Board (Yes)	.963	.830***	1.378***	1.454***	4%
State Certified					
State Certified (Full)	.470***	.422***	.496***	.812	
State Certified (Prob.)	.665***	.642***	.792*	.884	
Masters					
Masters(education)	1.303***	1.175***	1.240***	.810***	-3%
Masters(outside educ.)	.852***	.920*	1.385***	2.011***	7%
Bachelor in Ed. (yes)	1.286***	1.125***	1.200***	1.833***	6%
Region					
Region(Northeast)	3.812***	1.596***	1.790***	2.765***	9%
Region (Midwest)	1.088***	1.147***	1.496***	1.385***	4%
Region (West)	1.503***	1.222***	1.083*	1.500***	5%
N	2284	2082	2313	2012	

n= 8691, 298 cases excluded for listing "undecided" for professional intent
* p < .05, *** p<.001
[a]see Chapter 3 (p, 55), equation for change in probability (Garson, 2008)

[10] Exp(B) for Math teachers = 1.000005. Exp(B) for Science teachers = 1.00003

-

Part V: Results for Question 5

How do the significance and the magnitude of these explanatory variables vary in correspondence to social studies teachers' intention at multi-levels of contrast?

In order to provide a more contextual understanding of how social studies teachers conceptualize professional intention, ordinal logistic regression analysis was employed. In this model, professional intention was dichotomized at six separate levels. Table 4.15 provides the results of this analysis. At the first level, the social studies practitioners' intention was dichotomized into leave/stay (see previous models). At the second level, the odds investigated were the ratio of leaving for another opportunity compared to definitely leaving. At the third level, intention was defined as the odds of staying until retirement compared to definitely leave. The fourth level analyzed definitely stay as opposed to definitely leave. The fifth level analyzed the stay until retirement compared to leave for another opportunity. The final level investigated firmly stay compared to stay until retirement. This allowed for a more thorough investigation into the effects of the factors that contribute to social studies teachers' professional intentions.

<u>Question 5-Subsection A. Stay vs. Leave (coded as 2 vs. 1 respectively)</u>

This model was used for comparison of social studies and other core subject areas (see Table 4.14 and Table 4.15). As noted previously, teacher characteristics suggested that the odds of intending to stay decrease for minority teachers compared to Whites. In addition, having a Masters degree in a social studies-specific area increased the odds of intending to stay. Conversely, having a Masters in education decreased the odds of staying. Being male lowered the odds of staying compared to females. Salary satisfaction, student discipline, and

-

availability of resources were among the most substantial workplace determinants of professional intent among social studies teachers.

Question 5-Subsection B. Leave for Another Opportunity vs. Definitely Leave (coded as 2 vs. 1 respectively)

This model investigated the odds of leaving for another opportunity compared to definitely leaving (regardless of work or personal concerns). Among the teacher characteristics, being male raised the odds of leaving for an opportunity by 26% (see Table 4.15). Teachers' race characteristics suggested that being Asian decreased the odds of leaving for another opportunity compared to definitely leave by 91% compared to White social studies teachers. Conversely, Black social studies teachers were associated with a 470% increase in the odds of leaving for another opportunity compared to a definitely leave. Teacher age was not identified as a significant predictor in this model. Regional classification indicated that social studies teachers in the Northeast and Midwest were less likely (decrease in odds) to leave for another opportunity compared to teachers in the South.

Certification did not significantly affect the odds of leaving for another opportunity. However, having a Bachelor's degree in education improved the odds of leaving for another opportunity as opposed to definitely leave by over 300%. Having a Masters degree in either education or a social studies content area decreased the odds of leaving for another opportunity. Teacher longevity mechanisms suggest that for every year a social studies teacher worked in the profession the odds of leaving for another opportunity as opposed to definitely leaving declined by approximately 10%. Among school characteristics, IEPs per teacher and minority enrollment did not significantly impact the odds. Increased percentage of students eligible for free and reduced lunch slightly lowered the odds of leaving for

-

another opportunity. Class size satisfaction raised the odds of leaving for another opportunity compared to definitely leave by approximately 58%.

Among teacher resources variables, the odds of leaving for another opportunity compared to definitely leave improved by 77% for each unit increase of salary satisfaction. Enhancement in salary level led to slight increases in the odds of leaving for another opportunity. Availability of resources indicated a decrease in the odds of staying by approximately 17% for each unit of measure. Social studies teachers who were satisfied with their leadership were associated with a drop in the odds of leaving for another opportunity as opposed to definitely leaving. Social studies teachers with a greater sense of collegiality experienced a 7% rise (per measurement unit) in the odds of leaving for another opportunity. Discipline structure, student discipline and testing efficacy were not significant in this model.

Question 5-Subsection C. Stay Until Retirement v. Definitely Leave (codes as 2 vs. 1 respectively)

Gender indicators suggest that male social studies teachers were associated with a 74% increase in the odds of staying until retirement compared to definitely leaving (see Table 4-15). Asian social studies practitioners signify an 82% drop in the odds of staying until retirement compared to definitely staying. In comparison, the odds rose by 7.2 times for Hispanic social studies teachers compared to White teachers. Older practitioners were associated with an improvement in odds of 2% for every year teaching. As with the previous model, certification was not a significant mechanism in determining the odds of staying until retirement compared to definitely leaving. Holding a Bachelor's degree in education doubled the odds of staying until retirement. A Masters degree in education decreased the odds of intending to stay by approximately 60%. However, a Masters degree in subject area quadrupled the odds of staying until retirement as opposed to leaving. National board

-

certified social studies practitioners experienced a 200% enhancement in the odds of staying until retirement. The model suggested that as social studies teaching tenure increased, the odds of staying until retirement decreased. Social Studies practitioners outside of the Southern United States were more likely to stay until retirement. Most notably, teachers in the West were associated with a five-time increase of the odds of staying until retirement compared to Southern teachers.

Among the school characteristics, increased IEP students led to a decrease in the odds of staying until retirement. Moreover, larger minority enrollment indicated a slight raise in the odds of staying until retirement. The percentage of free and reduced lunch eligible reduced the odds of staying until retirement. Satisfaction with class size led to a 27% increase in the odds of intending to stay until retirement ready.

Social studies teachers satisfied with their pay were associated with a 78% improvement in the odds of intending to stay until retirement. Per unit actual salary contributed a tiny raise in the retirement odds. Teacher resource availability indicated a 6% increase in the odds of staying until retirement. Leadership did not significantly contribute to the odds of staying. One unit increase in discipline structure perceptions decreased the odds of staying until retirement by 14%. Conversely, the discipline of the students enlarged the retirement odds by 45% for each unit of the predictor. Collegiality of social studies practitioners slightly increased the odds of staying until retirement. Increased testing efficacy was associated with a 25% decline in the odds of staying until retirement.

Question 5-Subsection D. Stay Until Retirement vs. Leave for Another Opportunity (codes as 2 vs. 1 respectively)

Within this model, being a male social studies teacher raised the odds of staying until retirement compared to leaving for another opportunity by 34% (see Table 4-15). Being a

-

minority social studies practitioner decreases the odds of staying until retirement. Most notably, being Black teachers reduced the odds of retirement by 81% compared to being White teachers. Being older teachers increased the odds of staying for retirement as opposed to leaving for other opportunities by approximately 7% per year of age. Teaching social studies in the Northeast improved the odds of staying by over 2.5 times compared to teach in the South. Certification status was not significant in determining the odds of staying until retirement. Having a Bachelor's degree in education increased the odds of intending to stay until retirement by approximately 59% for social studies teachers. Furthermore, having a Masters degree in either content area or education was associated with an elevation in the odds of staying until retirement compared to leaving for another opportunity. Similarly, National Board certification increased the odds of staying until retirement among social studies teachers. Years fulltime teaching enlarged the odds of staying until retirement by approximately 4% per year in the profession.

The number of IEP designated students was not a significant predictor for the odds of staying until retirement. Increased minority enrollment percentages indicated a slight increase in the odds of staying until retirement. Increased the satisfaction of class size was associated with a 13% decrease in staying until retirement compared to leaving for another opportunity. An increase in the percentage of eligible free and reduced lunch students somewhat raised the odds of intending to stay until retirement.

Salary satisfaction improved the odds of retirement by approximately 34% among social studies teachers. Instructional resource availability increased the odds of retirement intention by over 12%. Satisfaction with school leadership elevated retirement odds by 6% per unit of measurement. On the other hand, satisfaction with discipline structure was associated a slight reduction in the odds of staying until retirement. Collegiality and minimal

-

student discipline issues contributed to an increase in the odds of staying until retirement. Greater testing efficacy suggested an 11% decrease in the odds of staying until retirement compared to leaving for another opportunity.

Question 5-Subsection E. Firmly Stay vs. Definitely Leave (codes as 2 vs. 1 respectively)

In the fifth model, the researcher sought to determine how the aforementioned mechanisms contributed to the odds of staying as long as possible (firmly staying) compared to definitely leaving. This analysis calculated the odds from extremes of the professional intention measurement (see Table 4.15). The odds of definitely staying rose by 70% for male social studies teachers compared to females. Black and Hispanic practitioners substantially increased the odds of intending to stay. Notably, Hispanic categorization improved the odds of firmly staying by eleven times. Conversely, being identified as Asian decreased the odds of staying as a social studies teacher by approximately 74%. Every year of age increased the odds of firmly staying compared to definitely leaving by 4%. Regionally, teachers outside of the Southern states were more likely to firmly stay. Specifically, practitioners from the West raised the odds of staying by over 5 times. Certification did not significantly contribute to professional intention. Having a Bachelor's degree in education increased the odds of firmly staying by approximately 280%. Having a Masters degree in education significantly decreased the odds of firmly staying by 59%. In contrast, the odds of firmly staying quadrupled among social studies teachers with content area Masters. As with previous analyses, National Board certification increased the odds of intending to stay. Teacher experience (in years) slightly decreased the odds of firmly staying. Among school characteristics, the number of IEP students and minority enrollment slightly reduced the odds of firmly staying. In addition, increased percentage of free and reduced eligible students

-

lowered the odds of firmly staying. Class size satisfaction raised the odds of firmly stay by approximately 33%.

Professional perception mechanisms revealed that salary satisfaction increased the odds of firmly stay (compared to definite leave) by approximately 97%. Raise in actual salary level per unit also slightly improved the odds. Resource availability was not significant in terms of affecting the odds. Each unit increase in leadership perception raised the odds of firmly staying by approximately 11%. However, discipline structure of the school was not a significant predictor. Positive student behavior increased the odds of firmly staying by 60% for each unit of measurement. Testing efficacy decreased the odds of firmly staying by 18%. Collegiality was not a significant explanatory variable in this model.

Question 5-Subsection F. Firm Stay vs. Stay until Retirement (codes as 2 vs. 1 respectively)

This final model investigated the mechanisms contributing to the odds of firmly staying compared to stay until retirement. Among social studies teachers, these two categories were the most often selected in the sample. By understanding the subtle differences that contribute to this distinction, one may be able to better understand the teacher characteristics associated with social studies teacher retention.

The gender indicator suggested that being male decreased the odds of intending to firmly stay (compared to stay until retirement) by 14% (see Table 4.15). Black and Asian social studies teachers raised the odds of firmly staying (186% and 36% respectively). Teacher's age slightly increased the odds of firmly staying. Compared to Southern teachers, being from the Midwest or the West lowered the odds of staying past retirement. Having a full state license decreased the odds of intending to firmly stay by approximately 65%. Holding a Bachelors degree in education slightly raised the odds of firmly staying among social studies practitioners. Masters degree in education designates decreased the odds of

-

firmly staying by approximately 15%. Being a social studies teacher with National Board certification increased the odds of firmly stay by 22%. Years in fulltime teaching slightly lowered the odds of intending to firmly stay. The number of IEP students and percentage of free and reduced lunch marginally lowered the firmly stay odds. However, the increase of percentage of minority student enrollment raised the odds. Class size satisfaction increased the odds of firmly stay by 9% per unit of measurement.

Salary satisfaction increased the odds of firmly stay by approximately 7%. Salary level also raised the odds. Resource availability was not a significant explanatory variable in this model. Within the Leadership and Organization Structure factor, leadership and discipline structure significantly elevated the odds of firmly stay (5% and 8%) per unit of measurement. Perception of student discipline and testing efficacy slightly raised the odds of firmly stay compared to stay until retirement. Conversely, collegiality among social studies teachers lowered the odds of firmly stay compared to stay until retirement.

-

Table 4.15
Predictors of Professional Intent (within context) among Social Studies Teachers

Professional Intention	Absolute Stay v. Absolute leave	Leave for opport. v. Definite leave	Stay until retirement v. Definite leave	Stay until retirement v. Leave for opport.	Firmly stay v. Definite leave	Firmly stay v. Stay until retire
Indicators	Exp(B)	Exp(B)	Exp(B)	Exp(B)	Exp(B)	Exp(B)
Salary Satisfaction	1.296***	1.770***	1.784***	1.340***	1.977***	1.071***
Salary Level ($$)	1.000	1.000***	1.000***	1.000***	1.000***	1.000*
Leadership Perception	1.057***	.965*	1.009	1.057***	1.113***	1.046***
Discipline Structure	.999	1.027	.863***	.924***	.968	1.080***
Perception of Stud. Disc.	1.147***	1.191***	1.445***	1,007***	1.599***	1.043***
Resource Availability	1.135***	.828***	1.062*	1.121***	.947	.991
Collegiality	1.038***	1.069***	1.037*	1.062***	.989	.974***
Testing Efficacy	.882***	1.038	.753***	.888***	.815***	1.023***
Minority Enrollment	1.006***	.999	1.005***	1.004***	1.013***	1.005***
Class size Satisfaction	.880***	1.579***	1.270***	.825***	1.326***	1.086***
Years Full-time Teaching	.994*	.897***	.979***	1.042***	.936***	.968***
Teacher Age	1.062***	.994	1.024***	1.065***	1.039***	1.010***
No. of IEP students	.993***	1.001	.985***	.998	.978***	.997***
No. of Free/Reduced	1.002***	.991***	.994***	1.006***	.990***	.995***
Gender(Male)	1.322***	1.261***	1.737***	1.335***	1.700***	.865***
Race						
Race(Asian)	.749*	.093***	.176***	.760*	.263***	1.363***
Race(Black)	.491***	4.744***	.929	.193***	3.029***	2.860***
Race(Hispanic)	.476***	5.887***	7.926***	.274***	11.401***	.922***
National Board (Yes)	1.454***	1.278*	2.185***	1.261***	1.962***	1.215***
State Certified						
State Certified (Full)	.812	.000	.000	1.164	.000	.354***
State Certified (Prob.)	.884	.000	.000	.910	.000	.818
Masters						
Masters(education)	.810***	.748***	.603***	1.127***	.412***	.852***
Masters(outside educ.)	2.011***	.312***	4.025***	1.775***	4.140***	1.018
Bachelor in Ed. (yes)	1.833***	3.124***	2.173***	1.590***	2.807***	1.033
Region						
Region(Northeast)	2.765***	.763*	2.023***	2.513***	1.949***	.996
Region (Midwest)	1.385***	.819*	1.313***	1.564***	1.594***	.708***
Region (West)	1.500***	8.773	4.989***	1.120*	5.153***	.945*

* p < .05, *** p<.001

-

Conclusion

The purpose of this study was to investigate the demographic and professional mechanisms that contribute to secondary social studies teachers' professional intentions regarding leave or stay in the teaching occupation. The subsequent five research questions and corresponding results provided a detailed analysis of social studies teacher characteristics in comparison to other core subject area teachers. Then, it compared the theoretically established explanatory variables across content area. Finally, this chapter provided a contextual understanding of how these mechanisms contributed to social studies teachers' professional intentions at various levels. These results indicated that social studies practitioners differed from other teachers in both their characteristics and how they view their likelihood of staying in the teaching occupation. The final chapter of this study synthesizes the results, interprets the findings and makes recommendations in terms of how these findings can be used to retain a quality social studies teaching force.

CHAPTER 5: DISCUSSION AND IMPLICATIONS OF RESULTS

In this chapter, the major results from this study will be synthesized and discussed. Recommendations will be made on how these findings can ameliorate teacher retention efforts for social studies practitioners. Implications of this study also propose policy change for local education leaders, school administration, and social studies teacher education.

Summary and Discussion of Results

The purpose of this study was to determine which professional and demographic mechanisms contributed to social studies teachers' intention to leave or stay. Five research questions were developed and analyzed in order to investigate this phenomenon. The first two questions presented descriptive statistics of social studies teachers compared to other core subject areas. Questions 3 through 5 implemented logistic regression in order to examine the associations between the explanatory variables and teachers' professional intentions. The previous chapter provided the results of this analysis. In the subsequent sections, main findings for each of these questions are discussed.

Summary and Discussion of Question 1

The descriptive statistics yielded interesting findings for Question 1, "Who are secondary social studies teachers? How do they differ from English, math, and science teachers?" Among social studies teachers in the sample, 66.9% of the subgroup was male, the highest percentage of male teachers among all content areas. Conversely, approximately 23% of the English teacher subgroup was male. These results replicated previous findings (see Leming, 1991; Ochoa, 1981) that suggested that the social studies subject area is a male-dominated field. However, this model gave little indication as to why the subject area lacks

-

female practitioners. Risinger (1981) posited that males view social studies as a "stepping stone" toward career advancement such as school administrators, local or state governmental officials, or career politicians. For example, male social studies teachers frequently move into leadership positions later in their educational profession. This career path places them in alignment for district level considerations (i.e. superintendent). One might suggest that the phenomenon of majority male social studies teachers is associated with professional aspirations.

Among variables of race, approximately 91.0% of the social studies teachers in this study were categorized as White. Math and science teachers had a greater proportion of minority practitioners represented in their subgroups. This finding implies that social studies teachers attracted a less diverse group of candidates compared to other subject areas. Ironically, one of the tenants of social studies education is to promote diversity (NCSS, 2007). While the National Council for the Social Studies (NCSS) prides itself an advocate of multiculturalism and a representative worldview-curriculum, the disciplines fail to attract a substantial number of teachers of color as well as a higher percentage of women.

No Child Left Behind (2001) has mandated that a "highly-qualified" teacher should instruct each student. *NCLB* defines "highly-qualified" as a teacher who has post-secondary discipline-specific content knowledge. In order to examine how social studies teachers meet the criteria of these standards, three variables were included in this model (Bachelor of education identification, Masters Degree category, and certification level). Approximately, 72.7% of all social studies teacher in this study had a Bachelor's degree in education. Conversely, 62.2% of the science practitioners held an undergraduate certificate in education. Within the subgroups, social studies teachers were among the least likely to have a Masters degree (53.0%), but they were second most likely to have a Masters in education (40.1%).

-

Social studies teachers who achieved advanced degrees tended to seek advanced professional knowledge. These results suggest that social studies teachers are more likely to meet the local and state qualification for licensure. Of the core subject areas, social studies teachers were the most likely to be fully certified (90.3%). Conversely, science practitioners are the least likely to have full certification (85.8%). Previous studies indicated that teachers who are fully certified in their content area have more classroom success than teachers lacking certification (Darling-Hammond, 2008). These findings suggest that social studies teachers are among the most competent and professionally prepared instructors in their schools.

Summary and Discussion of Question 2

Question 2 (What are the self-perceived intentions regarding retention and attrition for social studies teachers, and how are these self-perceived attention/attrition intentions different among social studies teachers and English, science, and math teachers?) examined professional intention level across subject area. Not surprisingly, among the total sample, the majority of the teachers decided to stay as long as possible. However, across subject area, differences in professional intent were apparent. Social studies teachers were the most likely to stay until retirement (40.5%) and the second most likely to stay as long as possible (48.3%). When stay and leave were dichotomized, the odds of staying among social studies teachers were 5.5 to 1. Science teachers were the least likely to stay as long as possible (45.2%) and had the least favorable odds for staying (4.2 to 1). Surprisingly, math teachers were the most likely to stay as long as possible (48.8%) and had the second highest odds of staying (5.0 to 1).

These results offered unique insight into teacher turnover theory with regard to subject area. Previous studies suggested that math practitioners are more likely to pursue more lucrative careers due to the high demand for their skill-set and subject knowledge

-

(Guarino et al., 2006; Lachman & Diamant, 1987). The intention to stay associated with math teachers suggests a change in the labor market that might contribute to the lack of job leverage associated with a math degree. The current uneasiness of the technology industry and the importation of a foreign high-tech workforce may have minimized the demand for individuals in this field (Gongloff, 2007). These findings support previous theory that the social studies subject area attracts individuals who are dedicated to social and democratic advocacy (Kincheloe, 2001; NCSS, 2007). Schools and teaching provide an excellent forum for these ideals. As previously mentioned, social studies teachers do not have the competitive job skills desired in a modern service-industry society (Guarino et al., 2006). Limited in occupational options, they are more likely to stay in teaching.

Summary and Discussion of Question 3

Question 3 asked, "What are the variables in the five factors that may potentially contribute to teachers' intention regarding retention/attrition? Is there a difference in teachers' intention among social studies teachers and other teachers when the other related variables were controlled for?" In order to determine which variables were associated with professional intention, a weighted binary logistic regression model was constructed for the entire sample. Within the "teacher characteristics" factor, male teachers were associated with an 11% increase in the likelihood of staying compared to women. These results contradict previous studies (Lachman & Diamant, 1987; Stinebrickner, 1998). However, Weiss (1999) posited that modern American women have greater career choices in life than thirty year ago. With respect to changes in the feminist perspective, 21st century women are more likely to choose careers in business, medicine, or law and are less dependent on traditional careers in teaching and nursing.

-

Not surprisingly, age and years teaching were associated with an increase in the odds of intending to stay. Earlier research (see Ingersoll, 2001; Ingersoll, 2003) has confirmed this phenomenon. One may posit that the reasoning behind their association is mutually exclusive. Unwilling to lose status, pension, or benefits, older teachers are less likely to move into a different occupational field. Teachers with more classroom experience are less likely to leave (after several years) due to their abundant experience in this occupation and perceived commitment to this profession. Regional location was a statistically significant indicator of professional intention. Within the model, teachers in the West, Midwest, and Northeast were associated with an increase in the odds of staying compared to teachers in the Southern United States. Union efficacy has traditionally remained weak in this part of the nation. Lack of collective barging resulted in lower salaries. In congruence, less satisfactory working conditions may contribute to the differences in professional commitment across regions (American Federation of Teachers, 2008).

The variables associated with the "school characteristics" factor reflected previous scholarship (Falch & Strøm, 2004; Guarino et al., 2006; Ingersoll, 2003; Johnson, Berg, & Donaldson, 2001). This study found that the number of IEP students and percentage of free and reduced lunch was associated with a slight decrease in the odds of intending to stay. These findings indicated that schools' ecological characteristics could have an important impact on teacher turnover. Consequently, school policy that regulates these institutional variables was a substantial contributor to the retention and attrition of classroom practitioners.

Of the "teacher resource" variables, salary was the most effective mechanism for determining professional intention within the full model. One unit satisfaction with salary was associated with a 38% increase in the odds of staying. Moreover, actual salary level

-

was significantly linked to staying. These findings further support the "supply and demand" theory that teachers have to weigh the opportunity costs of their jobs versus the rewards (i.e. salary) in determining whether or not to leave or stay (Boardman et al., 1983; Stinebrickner, 1998). More importantly, they imply that policies directed toward increasing teacher pay will have a positive effect on teacher commitment levels even after controlling for various demographic and professional mechanisms.

Among variables within "leadership and organizational structure," leadership perception was associated with an increase in the odds of intending to stay. Positive leadership perception was linked to greater teacher commitment. These findings mirror previous models that explored the relationship of school administration and teacher turnover (see Bogler, 2001). However, positive perceptions of school discipline structure indicated increased odds of intending to leave. These confounding results suggested that teachers do not appreciate being micro-managed from a classroom management perspective. While practitioners are more likely to commit to school environments with receptive leadership, strong school level discipline structure may undermine individual pedagogical practices and classroom management philosophy.

Within the "professional satisfaction" factor, student discipline and collegiality among staff was linked to an increase in the odds of staying. As previous studies have implied (see Harrell et al. 2004; Luekens et al., 2004), student behavior problems can push practitioners out of the profession. Therefore, findings that suggest positive perceptions of student behavior increase the likelihood of staying in teaching are not difficult to interpret. In terms of collegiality, teachers who work together are more likely to support each other through difficult situations and elevate self-efficacy levels (Darling-Hammond, 2003).

-

Findings that collegial teachers have higher commitment levels follow previous research studies (Luekens et al., 2004).

This study included a variable, teacher-testing efficacy, not common in previous studies of teacher turnover. This measurement sought to determine how one's job security was tied into the satisfaction of their students' testing results. Higher levels of perception were associated with strong job security/little testing pressure. Low levels of perception were associated with low job security/high testing pressure. These findings indicated that as the levels of testing efficacy increased, the odds of intending to stay decreased. Results from this measurement contradicted previous theory that suggested that increased testing pressure would elevate anxiety and attrition levels (Certo & Fox, 2002). Therefore, one must explore additional theories to explain this phenomenon. It is possible that the increased presence of high-stakes testing over the last decade has contributed to a conditioning of acceptance of the testing reality among practitioners. Instead of pushing teachers out of the profession, increased standardization and testing may have legitimized their subject areas and provided concise professional goals for practitioners to follow. In addition, state and local assessments are often associated with monetary rewards for schools and teachers that meet assigned benchmarks (Hargrove et al., 2004). Further research is needed to determine if there are mediating variables that contribute to this phenomenon.

Among subject area indicators, math, science, and English practitioners are more likely to intend to leave teaching compared to social studies practitioners. As stated previously, teachers within these fields have job skills perceived as more attractive by business and medical fields. They are more likely to leave for other job opportunities (Guarino et al., 2006). However, social studies teachers are more likely to view their profession as a civic-responsibility (Kincheloe, 2001: Ochoa, 1981). In a qualitative study of

-

American high schools, Talbert and McLaughlin (1994) found that social studies teachers carried a "service" mentality toward their teaching. These more altruistic job expectations might explain why social studies educators are less likely to leave compared to more "technical" fields such as math and science. In order to parse out the differences between social studies teachers and their colleagues, the next section provides results from comparative logistic regression models to determine how demographic and professional mechanisms contribute to teacher commitment on a subject-specific basis.

Summary and Discussion of Question 4

Results from Question 4 (What is the association between the variables in the five factors and teachers' professional intention within social studies? How are the effects of these explanatory factors different for social studies teachers compared to teachers in other core subject areas?) indicated that the mechanisms associated with teacher professional intent varied across subject area. Among demographic variables, a gender indicator revealed that the odds for staying increased among male social studies teachers compared to females. Weiss (1999) contended that female attrition is due to increased job opportunities for women. However, one could suggest that the inherent chauvinism of social studies curriculum may deter women educators from the subject area. Noddings (2001) proposed that women play a minimal role in the social education propagated in most American high schools. Moreover, women are often viewed as secondary heroes or idiosyncratic footnotes in a male-dominated canon. Unable to connect to the curriculum, woman teachers lack the commitment levels to endure the profession. The research findings presented in this study compliment these theories. However, future research is necessary in order to better determine the motivation behind women's decision to leave as opposed to the higher rate of retention among men.

-

Unlike the main model, the social studies subgroup displayed contradictory effects regarding teacher age and years of experience. Controlling for years teaching, older teachers are more likely to stay. Previous teacher turnover literature suggests that older teachers are more likely to leave when experience is controlled (Luekens et al., 2004). These results imply a "graying" of the social studies workforce. Unable to maintain a stable, young workforce, social studies education will continue to be marginalized by both administration and students alike. Interestingly, years experience decreased the odds of intending to stay. Controlling for age, experienced teachers were more likely to leave social studies. These findings reflect previous theory, which insinuated that social studies practitioners often move into positions of school leadership and administration (Risinger, 1981).

Most disturbing among the demographic indicators, minority social studies teachers were associated with a substantial decrease in the odds of intending to stay compared to their White counterparts. In order to determine why minorities are less likely to stay in social studies compared to the White male majority of the social studies teacher demography, one must also explore the nature of the social studies curriculum. History taught in American high schools is typically Euro-centric (Cornbleth & Waugh, 1995). Minority contribution to the "grand narrative" is often minimal or superficial. Disassociation is complimented by an "us" versus "them" mentality (Willinsky, 1998). Non-white history is viewed from afar as "exhibitionism." As a result minority children are unable to find their place and identity within the curriculum. Unable to relate to the content, they reject it. Therefore, one may speculate that minority social studies practitioners are less likely to enter or remain in teaching. Unable to relate to or fully endorse the standard curriculum as adults, they lack the desire to perpetuate a culturally myopic course of study.

-

Though the national standards for social studies advocate diversity (NCSS, 2007), classrooms across the country are unable to retain teachers of color within the disciplines. King (1993[b]) and Rong and Preissle (1997) argue that minority teachers provide a perspective of teaching that promotes and justifies education among minority children. In addition, the presence of minority teachers helps White students develop socially acceptable attitudes toward race (King, 1993[b]). In order to legitimize the concept of racial equality and democratic principles, the American social studies workforce should be more representative of the nation's diversity.

Unlike the other subject areas, social studies practitioners with a Masters in education indicated a decrease in the odds of intending to stay. Conversely, social studies teachers who have a subject-specific Masters were linked to an increase in the odds of staying. These results imply that social studies teachers with a content knowledge background are more committed to their profession. Masters in education programs often include non-social studies majors who have met the pre-requisite requirement for licensure. Teachers with minimal content knowledge will lack the self-efficacy and competency to remain in teaching indefinitely. Previous studies have confirmed that under-prepared teachers are more likely to leave teaching (Darling-Hammond, 2008). Future research should investigate the differences between social studies and non-social studies candidates who enter Masters in education programs. From this analysis, one might better understand these contradictory findings among social studies teachers with advanced degrees.

School characteristic variables yielded some interesting findings. The odds of intending to stay decreased as the number of students with individual education plans (IEPs) increased. These findings support results in previous studies that posited that teachers are less likely to remain teaching in environments with large numbers of special needs children

-

(Falch & Strøm, 2004). Yet, contrary to previous studies on teacher turnover (Boyd et al., 2005), the odds of staying for social studies teachers increased as the percentage of minority students enrolled and the percentage of free and reduced lunch student increased. These findings denote that social studies teachers are more likely to work in school environments with diverse, low socio-economic populations.

Why are social studies teachers willing to work (and stay working) in such environments? Social studies practitioners are more likely to be concerned with societal issues and have a sense of social responsibility. This perspective contributes to "big picture thinking" (Bigelow & Peterson, 2002; Kincheloe, 2001). In addition, service is a part of the democratic agenda of social studies education (Wade, 1995). These service-learning pedagogies often take a social justice slant. Therefore, social justice becomes an inherent component of the curriculum for many practitioners. They view their teaching position as more than a content specialist, but as an advocate of participatory democracy. This civic-mindset contributes to the increased number of practitioners intending to remain in highly diverse, poorer schools. However, further studies are necessary in order to contexualize the interpretation of these findings.

Of the salary predictors, salary satisfaction contributed less to the change in odds of intending to stay among social studies teachers compared to other core subjects. Actual salary level was not a significant explanatory variable in the model. These findings re-emphasize the need to explore the service mentality pervasive among social studies teachers (Talbert & McLaughlin, 1994). The current research findings indicate that there is a dimensional aspect of social studies instruction not measured in the model. One may suggest that dominate perspectives of service-learning and participatory democracy influence practitioners' financial motivations. Future research should investigate how social justice

-

theoretically mediates salary perspectives associated with social studies teachers' intention to leave or stay.

Practitioners within the field who intended to stay indicated a more favorable perspective of principal leadership. Social studies teachers have an acute sense of democratic system and an understanding of the sociological effects of organizational systems (Bigelow & Peterson, 2002; Leming, 1991). Previous research has indicated that teacher professional commitment is linked to principal leadership (Nelson, 1981). These results further sustain theory that suggests that organizational leadership is an essential predictor of social studies teachers' career intentions. Yet, contradictory to earlier studies, social studies practitioners in the current research model who had a favorable school discipline plan were not more likely to stay in teaching. Kincheloe (2001) argued that social studies teachers were isolated professionally and academically in accordance to the nature of their subject matter. Due to the multifarious branches of learning within the field and content-specific standardization, teachers are less likely to engage in collaboration. This professional segregation encourages a sense of independence. Thus, macro-level management plans, while beneficial at the school level, might stifle the occupational freedom afforded many social studies teachers. Further research is warranted to investigate this trend.

In an earlier study, Bliss and Banks (1994) posited that student behavior (discipline) was the most effective indicator of teacher retention. While the current model does not draw such conclusions, findings indicate that discipline interests are significant predictors of career intentions. As previously noted, the nature of the social science disciplines provides practitioners with a perspective of the student lives not inherent in other fields. Social studies teachers are often very active members of the school and local community (Kincheloe, 2001; Leming, 1991). They remain acute to the sociological, psychological, and political mindset

-

of a school's student population. Therefore, positive student interaction with peers, faculty, and instruction contributes to the increased likelihood of intending to stay.

Contrary to theoretical predictions (Certo & Fox, 2002), less testing pressure was not associated with an increase in professional intent. On the contrary, social studies teachers who perceived less testing pressure were associated with a decrease in the odds of intending to stay. These results are surprising considering the abundance of literature that suggests that high-stakes testing contributes to teacher burnout and eventual attrition (Hargrove et al., 2004). In order to explain these effects, one must understand the relationship between social studies and standardized testing. Social studies has often been marginalized in favor of other core subject areas, particularly math, science and English. Previous federally sponsored programs, America 2000 and Goals 2000, emphasized the importance of history, civics, and geography (Evans, 2004). Yet, no mention is made of social studies. Leming (1991) asserted that social studies teachers are sensitive to their low subject area status. However, current *No Child Left Behind* (2001) legislation has emphasized testing for social studies at the secondary level. One may argue that increased testing may enhance social studies teachers' subject area position within the school and surrounding community.

Studies at the elementary school level have suggested that social studies remains marginalized and untested among a majority of school systems (see Heafner et al., 2007). However, these studies have implied that increased assessment might call attention to the subject area. It appears that the same argument might be applied to social studies at the secondary level. Further research on high-stakes testing and its perceived effects on social studies practitioners is necessary.

-

Summary and Discussion of Question 5

In order to better investigate social studies teachers' professional intentions at multiple levels, ordinal logistic regression models were constructed. Four distinct trends were established in the analyses. First, Black and Hispanic teachers were more likely to leave teaching for other job opportunities. Previous research on teacher turnover theorized that minority teachers, especially African American women, more frequently remained in the profession because of its "white collar" stigmatization (Murnane et al., 1991). Current findings suggest that minority teachers no longer view teaching as the sole path toward middle class status. Additional job prospects in other industries attract minority practitioners with higher pay, better working conditions, and greater opportunity for advancement. Coupled with a curriculum that fails to identify with the minority teacher/learner (Cornbleth & Waugh, 1995), non-White social studies practitioners are apt to leave the profession in search of more appealing career routes.

Second, the odds of staying past retirement decrease among male social studies teachers compared to females. While the dichotomized leave or stay odds ratio implied that men are more likely to stay in social studies compared to women, the odds of definitely staying versus stay until retirement indicate that males are less likely than females to definitely stay. Consequently, why are women in the field more likely to stay past retirement? Previous gender studies of turnover implied that the profession is accommodating to the domestic duties traditionally associated with women (Murnane et al., 1991). The schedule of teaching allows women to provide for the household while simultaneously maintaining a career. Conversely, men are the traditional income providers of the American household. By leaving at retirement, male teachers draw a pension and can pursue second careers. As Risinger (1981) concluded in earlier research, male social studies

-

teachers are likely to use the profession as a catalyst toward school leadership positions. Further research is necessary to determine if men leave teaching at retirement in order to move into different school roles or to find work in private industry.

The results imply good news for the National Board of Professional Teaching Standards (NBTS). Analysis of social studies teachers revealed that National Board-certified teachers increased the odds of staying at all levels of professional intent. It is important to note that salary (often an incentive for certification) has been controlled for in this model. Further research would help ascertain what mediating variables are associated with National Board status and teacher retention. The certification process's emphasis on content area knowledge, suggested in previous research as a predictor for teacher retention (Darling-Hammond, 2008), might contribute to their intention to stay. Regardless, this study illustrates that Nationally Board-certified social studies teachers exhibit loyalty and advocate for their profession.

Finally, the dichotomized stay/leave model indicated that increased testing efficacy was associated with a decrease in the odds of stay. However, the ordinal logistic results illustrated that decreased testing pressure (testing efficacy) was associated with an increase in the odds of definitely staying as opposed to staying until retirement. Hargrove and colleagues (2004) contended that high-stakes testing exacerbates anxiety and exhaustion among faculty. One might conclude that social studies teachers are unlikely to remain teaching under such strenuous circumstances past their pension eligibility.

Results from this study have substantial implications among the four major theories discussed in Chapter 2. The *occupational sociocultural theory* claimed that demographic and school level characteristics influence a teacher's decision to leave or stay. Contrary to previous studies, minority social studies teachers were less likely to intend to stay compare to

-

White teachers. Moreover, the odds of social studies teachers staying increased as the proportion of minority and free/reduced lunch students increased. Future attempts to sociologically rationalize teacher turnover should take into account subject area differences. The *supply and demand theory* emphasized basic economic principles as the impetus for teacher retention/attrition. Though salary satisfaction mechanisms were significantly associated with teacher intent, the level of impact varied across subject area. Among social studies respondents, actual salary level was not a significant predictor of teacher intent. These findings suggest that monetary compensation is not a blanket panacea for teacher attrition. Results from this study confirmed previous studies interpretation of the *organizational structural theory*. Secondary practitioners within core subject areas are more likely to intend to stay if principal leadership is responsive to the needs of the faculty. Finally, the *professional satisfaction theory* posited that peripheral characteristics of the schooling culture could significantly influence teacher behavior. Social studies respondents who perceived increased collegiality and favorable student discipline indicated an intention to stay in teaching. However, findings illustrated that decreased testing pressure was associated with a decrease in the odds of staying. These findings contradict previously held beliefs regarding the impact of high stakes testing on teacher turnover. Future research should examine the role of standardized testing in secondary social studies classrooms. Specifically, researchers need to determine how curriculum-generated assessment influences teachers' perceived job status.

Implications and Policy Recommendations

From the discussion and interpretation of the results, this study presents policy and practice recommendations at three levels of the American public educational system. At the state/district level, suggestions will be presented in order to retain and recruit social studies

-

teachers. School level recommendations will address institutional and leadership qualities necessary for maintaining a stable and successful social studies faculty. Within the pre-service teacher education paradigm, pedagogy and advocacy for diversity will be addressed.

State/district-level recommendations

The good news is that social studies teachers are less likely to leave compared to other core subject area practitioners. The bad news is that they are among the least diverse group of instructors at the school. Previous studies imply that students of color are less likely to identify with a social studies curriculum that fails to provide minority leadership in the classrooms (King, 1993[b]). This poses a dual problem for recruiting and retaining minorities in the disciplines. First, course material traditionally associated with social studies maintains a distinctively Euro-centric theme (Cornbleth & Waugh, 1995; Willinsky, 1998). Lacking connection to the curriculum, minority students fail to take interest in the subject; thereby eliminating potential candidates. Moreover, social studies teachers of color are less likely to remain teaching a standardized curriculum that does not resonate with their own cultural identity. This phenomenon creates a substantial disparity between the number of minority school children and the number of minority social studies teachers. Consequently, Black, Hispanic, and Asian youths may be less likely to appreciate and take part in democratic process. The result perpetuates the racially hegemony prevalent in the American voting process whereby candidates continue to cater to the nation's dominate voting base—white, middle class America.

In order for schools to produce a diverse, civic-minded, and conscientious voting population of responsible and productive citizens, school systems need to actively recruit minority social studies teachers. If leaders in the field champion multiculturalism, then social studies classrooms should reflect the race and ethnicity of the United States.

-

Moreover, state and local school officials should develop a more inclusive curriculum that shifts away from a singular, Western worldview and celebrates the differences (and connections) that help shape our social perspective.

In congruence with this proposal, the research indicates that men are substantially dominant within the field. Women maintain a superficial position in the social studies curriculum (Noddings, 2001). A masculine curriculum holds little interest to women who cannot identify their place or relevance in the content matter. Consequently, school and state job fairs continue to be over run by males. To promote a more gender-balanced social studies contingent, school leaders need to address the issues within the curriculum. Curriculum revision and recruitment strategies are necessary in order to promote social sciences among women.

Previous studies have intimated that salary increases have a significant effect on the level of teacher retention (Mont & Rees, 1996; Stinebrickner, 1998). However, these studies have failed to take into account subject-specific demographics and perceptions of teaching. The current study illustrates that while salary remains an important predictor of teacher intention, other professional and demographic mechanisms significantly contribute to occupational commitment. Results indicate that social studies teachers are concerned with school level perceptions outside of pecuniary concerns. Previous attempts at a one-size-fits-all mentality of retention are inappropriate for the retention of teachers in various subject areas. District and state leaders should hire school-level administration that emphasizes democracy, flexibility, and social awareness. Local communities seeking to recruit and retain social studies practitioners should actively collaborate with schools in order to solidify a public conscience to the curriculum.

-

Results from this study concluded that National Board certification led to increased intention to stay at all levels. As mentioned previously, future research should investigate the association between teacher retention and NBTS. States and local school systems should continue to provide support to National Board candidates. In states such as North Carolina, teachers enrolled in the process receive a stipend to pay for their application, professional leave to prepare materials, and a substantial raise in salary upon successful completion of the program. Consequently, North Carolina has the highest number of National Board Certified teachers in the nation (see NBTS, 2007). States and local school boards should enact similar incentives to enhance the number of National Board-certified social studies practitioners.

The effect of high-stakes testing on the career intentions of social studies practitioners deserves closer examination. Findings in this study indicate that less testing pressure is associated with a decrease in teacher commitment. State and local leadership should not hastily assume that these results conclusively endorse state-mandated assessment and the obligatory prescriptive curriculum. While one may theorize that testing legitimizes the often-marginalized subject areas such as social studies, additional research is warranted to determine the relationship between standardization and commitment within the field.

School-level recommendations

Social studies teachers are concerned with social and organization perspectives. This line of thinking is attributed to the nature of their curriculum and discipline backgrounds (Bigelow & Peterson, 2002). In order to retain practitioners in the field, school leaders need to exhibit a flexible, shared leadership style. Results from the dissertation indicate that social studies practitioners are more likely to remain in teaching if the principal communicates effectively, allows faculty to take on administrative responsibility, and supports the staff. In school leadership, this type of administrator is referred to as a Type Y personality

-

(McGregor, 1960). These leaders work with subordinates in order to develop a workplace atmosphere that emphasizes teamwork. Type Y individuals empathize with their staff and create a workplace environment tailored to the needs of faculty. The twenty-first century principal needs to develop a similar leadership style. Social studies teachers are more likely to remain in teaching if they feel that administration support principals of democracy and equality.

Results from this study show that social studies teachers are more likely to remain teaching in schools that have higher minority and lower socioeconomic populations. Previous investigation into social studies revealed that teachers within the field often have an inherent sense of social justice (Kincheloe, 2001; Wade, 1995). While these findings are a positive indication of teachers' motives, schools should continue to promote and provide for teachers working in learning institutions with predominately poor, minority children. Previous studies have determined that practitioners will leave schools that lack resources, faculty support, and adequate facilities (Boyd et al., 2005). In order to retain social studies teachers, school-level leaders need to make available up-to-date teacher materials, a collegial support, and a safe working environment.

Teacher education-level recommendations

Findings in this study conclude that social studies teachers with a subject-specific Masters degree increase the odds of staying. Conversely, practitioners with a Masters in education decrease the odds of staying. Social studies education programs should seek to investigate these discrepancies. Previous research suggests that teacher with command of the content knowledge are well equipped for instruction and less likely to leave (Darling-Hammond, 2008). Barton and Levstik (2003) argue that social studies teachers are better prepared through content-specific pedagogy. Advanced teacher education programs should

-

demand candidates to have extensive knowledge of the social sciences. Moreover, social studies methods courses need to emphasize conceptual pedagogical practices such as historical investigation and action research. By training teacher candidates in the importance of empirical investigation, they are more likely to retain teachers who have a mastery of the subject matter. In addition, they develop instruction that challenges students to think critically about the curriculum.

An essential responsibility of social studies educators is an advocacy for participatory democracy (Kincheloe, 2001). Results from this study have shown social studies teachers to be more likely to work in difficult-to-staff schooling institutions. Social studies education programs and methods courses have a responsibility to promote civic-minded instruction and social justice theory. Teaching salaries remain non-competitive across the country; especially in the lowest socioeconomic sectors. In order to attract individuals to social studies teaching, candidates have to inherently believe in the purpose of their profession. Endorsing themes of equity, diversity, and tolerance will positively influence teachers to remain in traditionally difficult environments. Teacher preparation programs should include an urban/rural education component to help future practitioners adjust to teaching in low socioeconomic areas.

As previously mentioned, issues of student discipline are significant predictors of a social studies teacher's professional intent. Practitioners who understand the socio-cultural background of their students and utilize these idiosyncrasies in their practice connect student experience to the discipline. Pre-service social studies programs should emphasize culturally relevant pedagogy (Ladson-Billings, 1995). Instruction that critically examines issues of diversity engages student interest. Coincidentally, classroom management issues of behavior and apathy are minimized.

-

Lastly, in order for schools to hire and retain from a more diverse pool of social studies applicants, social education programs need to up date recruiting methods and analyze the nature of the curriculum from a critical lens. The lack of multiculturalism among social studies faculty in American public schools is a systemic issue. Results from this study show that an overwhelming majority of teachers in the field are White males. It is not reasonable to single out school districts hiring practices as the lone culprit. Teacher education programs should put more effort into the recruitment and training of minority and female candidates. Math and science programs frequently provide minority scholarships to enhance diversity. Social sciences deserve similar treatment. By providing a more representative prospective teacher pool, schools are more likely to hire a more diverse faculty.

From a curriculum perspective, social studies methods courses need to critically examine race, or lack thereof, present in the curriculum. Rains (2006) argues that the majority of curriculum discussion consists of a pre-social studies reality. In other words, social education is concerned with the context and content of the discipline. Instead, Rains (2006) proposes "post-social studies" investigation. Methods courses should focus on how the curriculum and subsequent instruction affects minority students' perceptions of identity and belonging. Examination of pedagogical effects contributes to reflective practice. By adopting this theoretical framework, social studies methods programs can better prepare practitioners by encouraging the use of progressive pedagogy and inclusive curriculum materials at the high school level. In helping learners find themselves in the curriculum, social studies practitioners foster an interest and appreciation of the content. Consequently, they encourage more minority involvement in social studies education.

-

Limitations of the Study and Lines of Future Research

This dissertation utilized both descriptive and inferential statistics in order to examine the association between social studies teacher identity traits and professional intentions. Incorporating logistic regression, the study found significant associations between the explanatory variables and the criterion variable of teacher intent. School ecology variables (number of IEP students, percentage minority, and percentage free/reduced lunch) were employed to control for school effects. However, cases in this study were nested within schools and districts. Nesting of data produces autocorrelation, a violation of the independence of errors assumption (Kennedy, 2003). Logistic regression models with nested data may bias estimators and mislead significance testing. In order to account for the between-school effects, educational researchers often make use of multilevel analysis such as Hierarchical Generalized Linear Modeling (*HGLM).* Multi-level modeling allows researchers to conceptualize research designs at several complimentary levels (Raudenbush & Bryk, 1986). Future research should incorporate *HGLM* or another multi-level analysis in order to more accurately examine mechanisms of teacher turnover.

Sample size is an important component for determining the validity of quantitative research. Small, non-random samples present a problem in determining the generalizability of results. On the other hand, regression equations utilizing a large sample size may contribute to inflated regression coefficients (Garson, 2000). In the current study, a large, randomized sample was utilized for regression analyses (n=8691). Results concluded that a large number of the explanatory variables in each of the models were statistically significant. While these findings suggest that the research design complimented the theoretical construct, a more appropriate analysis would have employed cross-validity of the regression coefficients (Pedhazur, 1997). Cross-validation requires the researcher to analyze random

-

subgroups of a given sample and compare the regression coefficients. Variance in results indicates that a given predictor variable might not be significantly associated with a given criterion variable. Future analysis of large-scale SASS data should employ these techniques.

This non-experimental study investigated the association between social studies teachers' professional perceptions and occupational intent. Results from this analysis present future research opportunities along diverse methodological lines. Findings indicated that minority social studies teacher identity decreased the odds of intending to stay compared to White teachers. However, the subgroup divisions of race utilized in this study (White, Black, Hispanic, and Asian) restrict interpretations of racial and ethnic identity. A more detailed analysis is required to better understand the complexities of race in the teaching profession. The study suggested that social studies practitioners who teach in high minority and high free/reduced lunch environments are more likely to stay. Furthermore, the subgroup was more likely to remain in teaching if the pressures of standardized testing increased. Additional research should explore the nature of these associations. Ethnographical examination into the professional motivations behind non-White social studies teachers would contexualize these trends with anecdotal evidence.

Conclusion

This study sought to determine which demographic and professional mechanisms contributed to the social studies teachers' professional intention to leave or stay. In the process, social studies teachers' characteristics and perceptions were compared with math, science, and English practitioners. Logistic regression models indicated that the association between the explanatory mechanisms and teacher intent differed across subject area. Findings revealed that social studies teachers are among the most likely to stay, but lack substantial diversity. Moreover, school ecological components, principal leadership, and

-

other non-pecuniary perceptions were significant contributors of social studies teacher professional intent. These figures illustrate that teacher retention policy should take into account subject-specific dynamics. Finally, social education programs should update their recruitment and methodology in order to develop and retain practitioners who better reflect America's rich, multicultural traditions.

-

Appendix A

Response Variance and Item Reliability for SASS 2003-2004 Public School Teacher Survey[1]

Question Group	Total Questions Evaluated	High Response Variance	Moderate Response Variance	Low Response Variance
All Questions	30 (100%)	6 (20%)	15 (50%)	7 (30%)
General Information[a]	1 (100%)	0 (0%)	0 (0%)	1 (100%)
Class Organization[a]	2 (100%)	0 (0%)	0 (0%)	2 (100%)
Educational Background[a]	9 (100%)	0 (0%)	4 (44%)	5 (66%)
Certification and Training[a]	12 (100%)	(0%)	11 (92%)	1 (8%)
Professional Development	3 (100%)	3 (100%)	0 (0%)	0 (0%)
Resources and Assessment of Students[a]	1 (100%)	1 (100%)	0 (0%)	0 (0%)
Working Conditions[a]	2 (100%)	2 (100%)	0 (0%)	0 (100%)

[1] Table referenced from (NCES, 2007)
[a] Question Group relative to current study

-

Appendix B

Codebook for Variables

Variable Name	Factor	Range	Description (from SASS 4A codebook)	If reversed or combined	As Recorded in the Study
Age (birth year)	*Teacher Characteristic*	1913-1981	What year were you born?	No	Continuous
Gender	*Teacher Characteristic*	1 and 2	1=male 2-female	No	1=male Reference: female
Race	*Teacher Characteristic*	1, 2, 3, and 4	Teacher's Race and Ethnicity: Race * Hispanic Categorization	No	1=Asian (non-Hispanic) 2=Black (non-Hispanic) 3=Hispanic (White, Hispanic) Reference: White (non-Hispanic
Region	*Teacher Characteristic*	1, 2, 3, and 4	Census Region	Yes	1=Northeast 2=Midwest 3=West Reference: South
Certification	*Teacher Characteristic*	1, 2, and 3	Which of the following describes the teaching certificate that you currently hold?	Yes	1=Regular 2=Probationary Reference: No Certification
Bachelors in Education	*Teachers Characteristic*	1 and 2	Do you have a bachelor's in education?	No	1=yes Reference: no
Masters Degree	*Teachers Characteristic*	1, 2, and 3	Do you have a Masters degree?*Do you have a Masters degree in education?	Yes	1=Masters in Ed. 2=Masters in content area Reference: No Masters
National Board Certification	*Teacher Characteristic*	1 and 2	Are you a National Board certified teacher?	Yes	1=yes Reference: no

-

Years in Teaching	*Teacher Characteristic*	1-54	How many years have you been fulltime teaching in public schools teaching?	No	Continuous
No. of IEP students	*School Characteristic*	0-500	Of all the students you teach at this school, how many have an IEP?	No	Continuous
Minority Enrollment	*School Characteristic*	0-100	Percentage of students in school who are of a racial/ethnic minority	No	Continuous
Free and Reduced Lunch	*School Characteristic*	0-1000	Percentage of enrolled students approved for the National School Lunch Program	No	Continuous
Class Size Satisfaction	*School Characteristic*	1-4	I am satisfied with my class size.	Yes	1=minimum 4=maximum
Salary Satisfaction	*Teacher Resources*	1-4	I am satisfied with my teaching salary	Yes	1=minimum 4=maximum
Salary Level	*Teacher Resources*	0-100000	During the current school year, what is your academic base teaching salary?	No	Continuous
Resource Availability	*Teacher Resources*	1-4	Necessary materials such as textbooks and supplies are available when needed to staff	Yes	1=minimum 4=maximum
Leadership Perception	*Leadership & Organizational Structure*	4-16	The principal lets staff members know what is expected of them. + The admin. behavior toward the staff is supportive and encouraging. + The principal knows what kind of school he/she wants and communicates it to the staff. + I am given the support I	Yes	4=minimum 16= maximum

-

			need to teach students with special needs.		
Discipline Structure	*Leadership & Organizational Structure*	2-8	My principal enforces school rules for student conduct and backs me up when I need it. + Rules for student behavior are consistently enforced by teachers in this school	Yes	2=minimum 8=maximum
Testing Efficacy	*Professional Satisfaction*	1-4	I worry about the security of my job because of the performance of my students on state and/or local tests	Yes	1=maximum worry 4=minimum worry
Student Discipline	*Professional Satisfaction*	1-4	The level of student misbehavior in this school interferes with my teaching	Yes	1=maximum interference 4=minimum interference
Collegiality	*Professional Satisfaction*	3-12	*There is a great deal of cooperative effort among staff members. + Most of my colleagues share my beliefs and values. + In this school, staff members are recognized for a job well done*	Yes	3=minimum 12= Maximum
Professional Intention	*Dependent Variable*	1-4	*How long do you plan on teaching*	Yes	*1=Leave as soon as possible* 2=Will continue until something better comes along 3=Stay until retirement 4=Stay as long as I am able

-

REFERENCES

Adams, G. (1996). Using a Cox regression model to examine voluntary teacher turnover. *Journal of Experimental Education, 64*(3), 267-285.

American Federation of Teachers (2008). Survey and analysis of teacher salary trends 2004. Retrieved from http://www.aft.org/research/downloads/2004StateRankings.pdf.

Anderman, E.M., Belzer, S. & Smith, J. (January, 1991). Teacher commitment and job satisfaction: the role of school culture and principal. Paper presented at the meeting of the American Educational Research Association, Chicago, IL.

Barton, K.C. & Levstik, L.S. (2003). Why don't more history teachers engage students in interpretation? *Social Education, 67*(6), 358-363.

Berry, B. (2004). Recruiting and retaining "high quality teachers" for hard to staff schools. *NASSP Bulletin, 88*(638), 5-28.

Bigelow, B. & Peterson, B. (2002). *Rethinking Globalization: Teaching for Justice in an Unjust World.* Milwaukee, WI: Rethinking Schools Press.

Blasé, L.J. (1987). Dimensions of effective school leadership: the teacher's perspective. *American Educational Research Journal, 24*(4), 589-610.

Bliss, D. & Banks, D. (1994). *Characteristics of Secondary Social Studies Teachers: An Update of Ochoa's 1981 Report* (Report No. NCRTL-SO027272). Oneonta, NY: SUNY College at Oneonta. (ERIC Document Reproduction Service No. 409240).

Boardman, A., Darling-Hammond, L., & Mullins, S. (1982). A framework for analysis of teachers' demand and supply. *Economics of Education Review, 2*(2), 127-155.

Bogler, R. (2001). The influence of leadership style on teacher job satisfaction. *Educational Administration Quarterly, 37*(5), 662-683.

Boe, E., Bobbit, S., Cook, L., Barkanic, G. & Maislin, G. (1998). *Teacher turnover in Eight Cognate Areas: National Trends and Predictors.* Philadelphia, PA: Center for Research and Evaluation in Social Policy. (ERIC Document Reproduction Service No. 426991).

Bollen, K.A. (1989). *Structural Equations with Latent Variables.* New York: John Wiley and Sons.

Boyd, D., Lankford, H., Loeb, S., & Wyckoff, J. (2005). Explaining the short careers of high achieving teachers in schools with low performing students. *American Economic Review, 95*(2), 166-171.

Certo, J. L. & Fox, J. E. (2002). Retaining quality teachers. *The High School Journal, 86*(1), 57-75.

-

Chiswick, B. & DebBurman, N. (2004). Educational attainment: analysis of immigrant generation. *Economics of Education Review, 23*(4), 361-373.

Colvin, G. & Kameenui, E.J. (1993). Reconceptualizing behavior management and school-wide discipline and general education. *Education & Treatment of Children, 16*(4), 361-381.

Cornbleth, C.. & Waugh, D. (1995). *The Great Speckled Bird*. New York: St. Martin's Press.

Cronbach, L. J. (1951). Coefficient alpha and the internal structure of tests. *Psychometrika, 16(*3*)*, 297-334.

Darling-Hammond, L. (2003). Keeping good teachers: Why it matters, what leaders can do. *Educational Leadership, 60*(8), 6-13.

Darling-Hammond, L. & Sykes, G. (2003). Wanted: a national teacher supply policy for education: the right way to meet the "highly qualified teacher" challenge. *Educational Policy and Analysis, 11*(23), 1-57.

Darling-Hammond, L. (2008). We need to invest in math and science teachers. *The Chronicle of Higher Education*, December 21, 2007, B20.

Demaris, A. (1992). *Logit Modeling: Practical Applications (Series: Quantitative Applications in the Social Sciences).* London: Sage Publications.

Evans, R. (2004). *The Social Studies Wars*. New York: Teachers College Press**.**

Falch , T. and Strøm, B. (2004). Teacher turnover and non-pecuniary factors. *Economics of Education Review, 24*, 611-631.

Garson, G.D. (2008). Logistic Regression: Statnotes, from North Carolina State University. Retrieved from http://www2.chass.ncsu.edu/garson/PA765/logistic.htm

Goldhaber, D., Perry, D., & Anthony, E. (2004). The National Board for Professional Teaching Standards (NBPTS) process: who applies and what factors are associated with NBPTS certification. *Educational Evaluation and Policy Analysis, 26*(4), 259-280.

Gongloff, M. (2004, January 19). US jobs jumping ship. Retrieved September 17, 2007 from http://money.cnn.com/2003/07/22/news/economy/jobless_offshore/index.htm.

Guarino, C. M., Santibãnez, L. and Daley, G. A. (2006). Teacher recruitment and retention: A review of the recent empirical literature. *Review of Educational Research*, *76*(2), 173-208.

Grissmer, D. & Kirby, S. (1997). Teacher Turnover and Teacher Quality. *Teachers College Record, 99*(1), 45-56.

-

Gritz, R. M. & Theobald, N.D. (1996). The effects of school district spending priorities on length of stay in teaching. *The Journal of Human Resources, 31*(3), 477-512.

Hansen, B. (2001). Should states ease certification standards? *CQ Researcher*, *11*(28), 633-656.

Hargrove, T., Walker, B L., Huber, R. A., Corrigan, S. Z.& Moore, C. (2004). No Teacher Left Behind: Supporting teachers as they implement standards-based reform in a test-based education environment. *Education, 124*(3), 567-572.

Harrell, P., Leavell, A., van Tassel, F.& McKee, K. (2004). Not Teacher Left Behind: Results of a five-year study of teacher attrition. *Action in Teacher Education, 26*(2), 47-59.

Heafner, T. L., O'Connor, K. A., Good, A. J., Passe, J., Byrd, Rock, T. S.P., Oldendorf, & Croce, E. (2007). Fact or fiction: Is social studies "history" in North Carolina public schools? *Social Studies Research and Practice, 2*(3), 502-509.

Hausman, C.S. (2001). Sustaining teacher commitment: the role of professional communities. *Peabody Journal of Education, 76*(2), 30-51.

Hosmer, D.W. & Lemeshow, S. (2000). *Applied Logistic Regression.* 2nd Edition. New York: John Wiley & Sons, Inc.

Howell, D. C. (2002). *Statistics Methods for Psychology.* Pacific Grove, CA: Duxbury.

Imazeki, J. (2004). Teacher salaries and teacher attrition. *Economics of Education Review, 24*, 431-449.

Ingersoll, R. M. (2001). Teacher turnover and teacher shortages: An organizational analysis. *American Educational Research Journal, 38*(3), 499-534.

Ingersoll, R. M. (2003). *Is There Really a Teacher Shortage*? Research report co-sponsored by Center for the Study of Teaching and Policy and the Consortium of Policy and Research in Education. Seattle, WA: University of Washington.

Johnson, S. M., Berg, J. H. & Donaldson, M. L. (2005). Who stays in teaching and why: A review of the literature on teacher retention. Cambridge, MA: Harvard Graduate School of Education, Project on the Next Generation of Teachers.

Kennedy, P. (2003). *A Guide to Econometrics* (5th Edition). Cambridge, MA: MIT Press.

Kincheloe, J. L. (2001) *Getting Beyond the Facts: Teaching Socials Studies/Social Sciences in the Twenty-first Century.* New York, NY: Peter Lange.

-

King, S. H. (1993[a]). Why did we choose teaching careers and what will enable us to stay? Insights from one cohort of the African American teaching pool. *The Journal of Negro Education, 62*(4), 475-492.

King, S.H. (1993[b]). The limited presences of African-American teachers. *Review of Educational Research, 63*(2), 115-149

Kozol, J. (1991). *Savage Inequalities.* New York: Crown Publishers.

Lachman, R. & Diamant, E. (1987). Withdrawal and restraining factors in teachers' turnover intentions. *Journal of Occupational Behaviour, 8*, 219-232.

Lankford, H., Loeb, S. & Wyckoff, J. (2002). Teacher sorting and the plight of urban schools: a descriptive analysis. *Educational Evaluation and Policy Analysis*, *24*(1), 37-62.

Leming, J., Ellington, L., Porter-Magee, K. (2003). *Where Did Social Studies Go Wrong?* Available at http://www.edexcellence.net/doc/ContrariansFull.pdf.

Leming, J. S. (1991). Teacher characteristics and social studies education. In J.P. Shaver (Ed.), *Handbook of Research on Social Studies Education,* (pp. 222-236). New York: MacMillan.

Luekens, M., Lyter, D. M. & Fox, E. E. (2004). Teacher attrition and mobility: Results from the Teacher Follow-Up survey, 200-2001. *Education Statistics Quarterly*, *6*(3), 1-10.

Ma, X. & MacMillan, R. B. (1993). Influences of workplace conditions on Teachers' Job Satisfaction. *The Journal of Educational Research*, *93*(1), 39-47.

MacDonald, D. (1999). Teacher attrition: a review of the literature. *Teaching and Teacher Education, 15*, 835-848.

McGregor, D. (1960). *The Human Side of Enterprise.* New York: McGraw-Hill Co.

Mont, D. & Rees, D. (1996). The influence of classroom characteristics on high school teacher turnover. *Economic Inquiry, 34*(1), 152-167.

Murnane, R.J., Singer, J.D., Willett, J.B., Kemple, J.J.,& Randall, J.O. (1991). *Who Will Teach? Policies that Matter.* Cambridge, MA: Harvard University Press.

National Board for Professional Teaching Standards. (n.d.) Retrieved July 17, 2007. from http://www.nbpts.org/.

National Center for Educational Statistics (2006). *Characteristics of Schools, Districts, Teachers, Principals, and School Libraries in the United States: 2003-04 Schools and Staffing Survey* . Created in 2006 under the direction of the U.S. Department of Education.

-

National Center for Educational Statistics (2007). *Documentation for the 2003-2004 Schools and Staffing Survey* (NCES 2007-337). Washington, DC: US Department of Education.

National Council for the Social Studies (2007). Mission statement. Retrieved from http://www.ncss.org.

Nelson, L. R. (1981). Social studies teachers: Their view of the profession. *Social Education, 45*(6), 418-420.

No Child Left Behind Act. (2001). Retrieved from http://www.ed.gov/policy/elsec/leg/esea02/beginning.htm#sec1

Noddings, Nel. (2001). Social studies and feminism. In E.W. Ross (Ed.). *The Social Studies Curriculum: Purposes, problems, and possibilities.* (pp. 163-177). Albany, NY: SUNY Press.

Ochoa, A. S. (1981). A profile of social studies. *Social Education, 45*(6), 401-404.

Osborne, Jason W. (2000). Prediction in multiple regression. *Practical Assessment, Research & Evaluation*, 7(2). Retrieved March 28, 2008 from http://PAREonline.net/getvn.asp?v=7&n=2 .

Pedhazur, E. J. (1997). *Multiple regression in behavioral research.* Harcourt Brace: Orlando, FL.

Podgursky, M., Monroe, R., & Watson, D. (2004). The academic quality of public school teachers: an analysis of entry and exit behavior. *Economics of Education Review, 23*(5), 507-518.

Pregibon, D. (1981). Logistic regression diagnostics. *The Annals of Statistics. 9*(4), 705-724.

Raudenbush, S. & Bryk, A.S. (1986). A hierarchical model for studying school effects. *Sociology of Education, 59*(1), 1-17.

Rains, F. V. (200). The color of social studies: A post-social studies reality check. In E.W. Ross (Ed.). *The Social Studies Curriculum: Purposes, problems, and possibilities* (third edition). (pp. 137-156). Albany, NY: SUNY Press.

Risinger, C. F. (1981). The social studies teacher: A personal profile. *Social Education, 45*(6), 405-411.

Rong, X. L. & Preissle, J. (1997). The continuing decline in Asian American teachers. *American Educational Research Journal, 34*(2), 267-293.

Shadish, W., Cook, T., & Campbell, D. (2002). *Experimental and Quasi-Experimental Designs for Generalized Causal Inference.* Boston: Houghton Mifflin.

-

Schwartzbeck, T.D., Price, C.D., Redfield, D, Morris, H., and Hammer, P.C. (2003). *How are rural school districts meeting the teacher quality requirements of No Child Left Behind?* Charleston, WV: Appalachia Educational Laboratory.

Shen, J. (1997). Teacher Retention and Attrition in Public Schools: Evidence from SASS91. *Journal of Educational Research, 91*(2), 81-88.

Singh, K. & Billingsley, B. S. (1996). Intent to stay in teaching. *Remedial and Special Education, 17*(1), 37-47.

Stinebrickner, T. R. (1998). An empirical investigation of teacher attrition. *Economics of Education Review, 17*(2), 127-136.

Stockard, J. & Lehman, M.B. (2004). Influences on the satisfaction and retention of 1st-year teachers: The importance of effective school management. *Educational Administration Quarterly, 40*(5), 742-771.

Talbert, J.E. & McLaughlin, M.W. (1994). Teacher professionalism in local school contexts. *American Journal of Education, 102*(2), 123-153,

Taylor, D. L. & Tashakorri, A. (1995). Decision participation and school climate as predictors of job satisfaction and teachers' sense of self-efficacy. *Journal of Experimental Education, 63*(3), 217-230.

Wade, R.C. (1995). Developing active citizens: Community service learning in social studies teacher education. *Social Studies, 86*(3), 122-128.

Weiss, E. (1999). Perceived Workplace Conditions and First-Year Teachers' Morale, Career Choice Commitment, and Planned Retention: A Secondary Analysis. *Teaching and Teacher Education, 15*(8), 861-879.

Willinsky, J. (1998). *Learning to Divide the World: Education at Empire's End.* Minneapolis, MN: University of Minnesota Press.