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UNIVERSITY OF CALIFORNIA
RIVERSIDE

Let's Stay Together
A Case for Special Education Teacher Retention

A Dissertation submitted in partial satisfaction
of the requirements for the degree of

Doctor of Philosophy

in

Education

by

Sandra Lee Robinson

March 2010

Dissertation Committee:

Dr. Douglas Mitchell, Chairperson
Dr. Sharon Duffy
Dr. George Marcoulides

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The Dissertation of Sandra Lee Robinson is approved:

Committee Chairperson

University of California, Riverside

Acknowledgments

First and foremost, I want to thank my family. Your support and abiding love has made this project possible. Thank you Rob, my uncommon man. You are my rock, my muse, my joy. Thank you to my beautiful, smart, and incredible daughters, Alexandria and Jaclyn, you have taught me how to love. Thanks to my constant companion, Papas.

Thanks to my wonderful girlfriends, who through the years have restored my faith in goodness.

A special thanks to Dr. Douglas Mitchell, who believed this was possible.

Dedication

This project is dedicated to my students past, present, and future.

To you, the love of my life, this is you for.

ABSTRACT OF THE DISSERTATION

Let's Stay Together A Case for Special Education Teacher Retention

by

Sandra Lee Robinson

Doctor of Philosophy, Graduate Program in Education
University of California, Riverside, March 2010
Dr. Douglas Mitchell, Chairperson

The goal of this study is to identify those factors contributing to special education teacher (SET) turnover that can be directly amendable to intervention by the improved policy and practice at school sites. This study examines the turnover behavior of SETs by including variables clustered as teacher demographics, employment factors, and teacher perceptions of organizational conditions. The responses of SET stayers (teachers who remain on their school from the base year to year two of the survey), movers (teachers who moved from one school to another), and leavers (teachers who left the teaching profession) were compared to general education teachers (GET) in the same groups to identify variables that separated the subgroups.

The data for this research are the teacher reports contained in the Teacher Follow-up Survey (TFS) 2000-2001. This survey is the complement to the Public and Private School Teacher Questionnaire of the School and Staffing Survey (SASS, 1999-2000).

These surveys are sponsored by the U.S. Department of Education and were conducted by the U.S. Census Bureau. They were analyzed by the National Center for Educational Statistics (NCES). The teacher samples are weighted to produce national estimates. The sample of this study is 4,048 SETs and GETs (N = 4,080 weighted).

This study is unique to others whose focus is SET turnover in that it examines the distinct roles of elementary and secondary SETs. The school levels differ in school organization, academic rigor, and special education law. This study found that these differences appear to have an impact on retention behavior.

This study provides additional information to the current literature available to policymakers and administration regarding teacher retention to aid in the development of retention strategies that are SET specific.

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CHAPTER I

Introduction

The primary objective of the educational community is the academic achievement of all learners. Instruction provided by highly qualified teachers is a vital component of student achievement (Billingsley, 2004; Darling-Hammond, 2000; Ingersoll, 2001). Allen (2005) comments, “While many factors contribute to the successful education of children, there is a strong consensus among experts that the effectiveness of their teachers is the single most important educational determinant” (p.8).

The mandates of No Child Left Behind (NCLB) 2001, and the Individuals with Disabilities Educational Act (IDEA) 2004 require the educational community to provide disabled students with a free and appropriate public education in the least restrictive environment (Cortiella, 2006). These services are to be provided by highly-trained educators who have appropriate credentials. School systems often experience enormous difficulties in carrying out their responsibilities to students because of problems they encounter in recruiting and retaining adequate numbers of special education teachers (Cooley, 1995).

Consistently, studies have concluded that there is shortage of highly qualified teachers, but this shortage does not exist across all curricular areas; it is field specific. The fields of science, math, and special education are most consistently identified as experiencing the greatest teacher shortages (Billingsley, 2002; Boe & Gilford, 1992; Ingersoll, 2001). The shortage problem has serious implications for disabled students.

Inadequate educational experience, reduced achievement levels, and higher dropout rates for special education students can be some of the consequences of a lack of qualified teachers in the classroom (Darling-Hammond & Sclan, 1996). Recruiting teachers is only one aspect of the challenge for remaining in compliance with special education federal and state mandates, retaining highly qualified teachers are another.

Teacher retention research indicates that special educational teachers (SET) have a greater turnover rate than general education teachers (GET). Boe, Bobbitt, and Cook (1997) report that based on the results of the Teacher Follow-up Survey (TFS) of 1988-1989, SETs left the teaching profession at a greater rate than GETs (SETs = 8%, GETs = 6%). Additionally, SETs voluntarily transferred to a new school campus more frequently than their GET colleagues (SETs = 13%, GETs = 7%).

Allen (2005) indicates in his review of numerous studies regarding teacher retention that there is strong evidence that attrition is greater among secondary teachers than elementary school teachers. This study is unique from others whose focus is SET turnover in that it examines the distinct roles and responsibilities of elementary and secondary SETs and the impact organizational conditions have on the variance in turnover behavior of these teacher subgroups.

The theory of the organizational retention will be explored in this study to gain a more comprehensive knowledge of teacher retention. Scholars have acknowledged that schools are formal organizations (Bidwell, 1965). According to Scott (1981), organizations may be deemed as normative structures where collectives assemble to accumulate resources to pursue specific goals. Organizations, like schools, are created

and sustained based on the purposeful pursuit of goals. Organizational analysts indicate that the consequences of employee turnover vary among different types of employees and among different types of organizations. The impact turnover has on an organization is a result of the extent to which the organization is dependent on a particular type of employee and therefore becomes vulnerable to disruption when the employee leaves (Braverman 1974; Ingersoll, 2003). Ingersoll (2003) states that, “while schools in some ways resemble economic-production organizations, in other ways they resemble another kind of institution altogether—the family” (p.12). Schools, like families, are places where the presence of cohesion, communication, and a positive sense of community are important in effectively educating children (Ingersoll, 2003). Therefore, excessive teacher turnover can impede the school organization’s ability to meet its goals.

The Problem

Numerous studies indicate that SETs are at greater risk for turnover behavior than their GET colleagues (Billingsley, 2001, 2004; Brownell, Adams, Sindelar, & Waldron, 2006; Gersten, Keating, Yovanoff, & Harniss, 2001). Studies also conclude that secondary SETs are more likely than elementary SET to leave the profession (Anderson, Kutash & Duchnowski, 2001; Allen, 2005; Magiera et al., 2005). SET attrition raises serious questions about public education's ability to provide high-quality services in compliance with federal and state guidelines for disabled students. Although researchers have identified some variables associated with the turnover of special education teachers, there are concerns and inconsistencies within the research.

Researchers in the field of teacher retention have expressed the following concerns with current retention studies. First, they report that few retention studies utilize a large, comprehensive, sample of teachers throughout the nation for analysis (Ingersoll, 2003; Boe, Bobbitt, & Cook 1997; Billingsley, 2004; Stempien & Loeb, 2002). Second, many studies limit their examination of teacher turnover to attrition rather than also exploring voluntary school site migration (Billingsley, 2004; Cross & Billingsley, 1994; Singer, 1992; Westling & Whitten, 1996). Third, in some studies the retention behavior of employees is measured by their self reports of future professional plans rather than actual turnover behavior. Ingersoll (1997) and Boe, Bobbitt, and Cook (1997), believe that turnover is best measured by the actual employee behavior. Fourth, there are limited retention studies that include other variables in their analysis other than the individual characteristics of educators and schools and employment in predicting retention (Billingsley, 2004; Brownell, Smith, McNellis & Miller, 1997; Ingersoll, 2003).

Purpose of Study

The purpose of this study was to identify those factors contributing to SET turnover. To accomplish this, this study utilized data from a substantial representation of teachers throughout the nation for its analyses. It examined both aspects of turnover-teacher attrition and voluntary school migration. It provided provide data on the actual turnover behavior of teachers. This study included teacher demographics, employment, and the organizational conditions of schools as variables that potentially predict teacher turnover in its analyses. This study hopes to provide additional information to the current

literature available to policymakers and administration regarding retention to aid in the development of retention strategies that are SET specific.

Data

The data source for this research was the teacher reports contained in the Teacher Follow-up Survey (TFS) 2000-2001. This survey is the complement to the Public and Private School Teacher Questionnaire of the School and Staffing Survey (SASS, 1999-2000). The educators who completed the SASS survey were randomly selected to complete the TFS 2000-2001. These surveys were sponsored by the U.S. Department of Education and were conducted by the U.S. Census Bureau. They were analyzed by the National Center for Educational Statistics (NCES). The teacher samples are weighted to produce national estimates. The sample of this study was 4,048 SETs and GETs (N = 4,080 weighted).

Hypotheses

This study utilized the TFS data to conduct univariate and multivariate analyses to test the following hypotheses.

Hypothesis one. A greater proportion of Special Education Teachers (SETs) leave the teaching profession than General Education Teachers (GETs).

Hypothesis two. A greater proportion of SETs move from one school to another than GETs.

Hypothesis three. SET leavers and movers will be younger, and have a greater representation of white female teachers than GET leavers and movers.

Hypothesis four. SET leavers and movers will have less teaching experience, earn lower salaries, and have a greater representation of secondary teachers with alternative certification, who teach more frequently at urban schools than GET leavers and movers.

Hypothesis five. SET leavers are not as satisfied as GET leavers with administrative support, classroom autonomy, collaboration, appropriate student behavior, and influence regarding school wide policies and procedures on their campus.

Hypothesis six. Secondary SETs are not as satisfied as elementary SETs with administrative support, classroom autonomy, collaboration, appropriate student behavior, and influence regarding school wide policies and procedures on their campus.

Hypothesis seven. The reasons for leaving the profession will identify independent variables that reliably predict SET and GET membership.

Hypothesis eight. SET stayers have a lower level of commitment to the teaching profession than GET stayers.

Hypothesis nine. SET movers will have fewer household dependents than GET movers.

Hypothesis ten. SET leavers are better educated than either the SET stayers or SET movers.

Hypothesis eleven. The reasons for moving to a new school will substantially identify independent variables that reliably predict SET and GET membership.

A review of the current literature that included empirical research regarding teacher retention and organizational retention theory was conducted to obtain a greater understanding of dynamics of teacher turnover.

CHAPTER II

Literature review

Retention Studies

The literature on teacher retention is best reviewed with a critical eye. Billingsley (2004) states that, “Determining the extent to which teachers exit and rearrange themselves in the workforce requires careful follow-up study that is difficult, time-consuming, and costly—obvious drawbacks to studying teacher attrition” (p.4). There are two key questions this study addresses in comparing studies on retention. These questions are; how is teacher turnover defined and measured? And is the teacher sample appropriate for the goal of the study?

Studies define and measure teacher turnover in different ways. In some studies, teacher turnover is defined as teachers leaving the profession (Boe, Bobbitt, Cook, Whitener, & Weber, 1997; Plash & Piotrowski, 2006). In other studies, it is defined as teachers migrating from one school to another but remain in the profession (Miller, Brownell, & Smith, 1999). Many researchers combine these aspects of teacher turnover. Extreme caution must be used in comparing the samples of studies to ensure that the definition of teacher turnover the researcher is using is compatible across studies...

Organizational retention theory

Successful, stable organizations are able to retain experienced, productive employees who are committed to the organization. Many retention studies indicate that employee commitment is a predictor of increased employee retention, and hence creates a

more stable organization (Billingsley, & Cross, 1994; Currivan, 1999; Littrell, Porter, Steers, & Boulian, 1974). Mor Barak, Nissly, and Levin's (2001) research provides a meta-analysis of the 25 studies of the turnover of human service workers and concludes that as positions are evacuated and filled with inexperienced staff, the quality of service the organization provides is compromised. High turnover in child welfare agencies, where the relationship between the client and care providers is important in providing needed services, has a devastating effect on children (Mor Barak et al., 2001). Educators, like child welfare workers, provide a service to students aimed at enhancing their ability to become independent, successful adults. Studies have found that organizational conditions have an influence on the turnover of employees.

Organizational Conditions

The workplace conditions that are significant predictors for teacher turnover are satisfaction with supervisor support (Cotton & Tuttle, 1986; Currivan, 1999; Hom, et al., 1979; Hulin, 2002), employee autonomy (Halaby & Weakliem, 1989; Tschannen-Moran & Hoy, 2000), collaboration among colleagues (Cotton & Tuttle, 1986; Currivan, 1999; Hulin, 2002; Waters & Roach, 2006), cooperation within the organization (Bluedorn, 1982; Ferris & Kacmar, 1992; Ingersoll, 2001), and employee influence on organizational policies and procedures (Halaby & Weakliem, 1989; Tschannen-Moran & Hoy, 2000). Like public and private organizations, schools struggle with retaining employees (Ingersoll, 2001). This study proposes that the variables identified in organizational retention literature as significant predictors of retention, are also those variables that discriminate between SET stayers, movers, and leavers.

Administrative support. A myriad of studies find that administrative support has a direct effect on an employee's willingness to remain in his or her position (Cotton & Tuttle, 1986; Currivan, 1999; Weiss 1999). Boe et al., (1997) report that teachers who remained on their campuses were almost four times more likely to perceive that they had the support of their site administrator than those that left. Higher levels of administrative support are associated with the SET's greater job satisfaction and an increase in their commitment to provide services to special needs students (Billingsley & Cross, 1992; Singh & Billingsley, 1996).

Administration plays a pivotal role in the success of special education programs at every school site (Gersten et al., 2001; Plash & Piotrowski, 2006). Like GETs, SETs must provide standards based instruction to students. Unlike GETs, SETs must also provide consultative services to all GETs who provide instruction to special needs students. Administrators are a central figure in the promotion of collaboration between SETs and GETs (Lashley & Boscardin, 2003). In Gersten et al.'s, (2001) study of SET work place environments and retention, they find that support from the school site principal and fellow colleagues has a, "strong direct and indirect effect on virtually all critical analysis of teachers' working conditions" (p.557). In Westling and Whitten's (1996) study, SETs are more likely to stay when they receive adequate support from their administrators in the form of support with inclusion programs and general problem solving. More than any other teacher group, administrative support is a vital component of a new SET's commitment to remain at their school site and in the profession (Billingsley, 2004).

Weiss (1999) reports that “findings on first-year teachers confirm past research on teachers in general that shows supportive school leadership and teacher autonomy play a large part in shaping teachers’ attitudes toward teaching; and that teachers who control the terms of their work are more likely to feel both more effective in their teaching and more committed to the field” (p.865).

The term administrative support can be ambiguous. Within the literature, administrative support is not clearly defined. Defining support is difficult because support is comprehensive in nature and varied in type (Gold, 1996). In this sense, support is a global construct that has many dimensions. Littrell, Billingsley, and Cross (1994) examine aspects of administrative support and report that emotional support defined as displaying appreciation for teachers’ efforts, taking an interest in teachers’ work, and encouraging open communication were perceived by educators as the most important aspects of administrative support. They also find that instructional support which was demonstrated by administrators by providing needed materials, space, and ensuring adequate time for teaching and nonteaching duties associated with teaching, were positively associated with both job satisfaction and school commitment.

Appropriate student behavior This variable is measured by the teacher’s perception of student behavior. Ball (1987) indicates that schools, like all other social organizations, are places where employees are expected to follow established policies and procedures. He believes that in order to understand the organizational workings of schools, the behavior of students within schools must be examined. Kukla-Acevedo (2009) argues that the association between student behavior and teacher attrition has been

given less attention in the literature than other possible predictors for retention like administrative support. The SASS identifies inappropriate student behavior as; tardiness, absenteeism, truancy, physical conflict, among students, robbery or theft, vandalism, possession of weapons, disrespect of teachers, unprepared to learn, apathy, and drug abuse. Research suggests that student misbehavior at school contributes to low teacher morale and increased teacher attrition (LeCompte & Dworkin, 1991; Lee, Dedrick, & Smith, 1991; Ingersoll, 2001; Shakespear et al., 2003).

Students' problem behaviors interfere with learning and teaching and are one causes of teacher frustration (Weiss, 1999). McLeskey, Tyler, & Flippin (2002) report that according to the Florida Office of Program Policy Analysis and Government Accountability report of 2009, student behavior is a significant contributing factor in teacher turnover. In the study, leavers indicate that the school they taught at before their exodus had a good deal of student discipline issues. In Lopes et al's.(2004), study of Portuguese educators (N = 430) where 79% are GETs and 21% are SETs they find that most teachers report that learning and behaviorally disordered special needs students placed high demands on general classroom management. GETs indicate that poor learners with disruptive behavior are difficult to manage and required additional time and resources. Educators agree that older students create more of a behavioral challenge than younger students. This study shows that although GETs accept the fact they are legally required to provide special needs students with educational opportunities, they believe that they are not meeting their educational needs. GETs and SETs believe that teaching

special needs students, who may combine learning problems with behavior challenges, requires the assistance of special education staff (Keefe et al., 2004).

Autonomy. In the literature on organizational and educational employee retention, employee autonomy and influence are correlated and are not often viewed as two different variables. In this study, a distinction between the two is made. According to the language in the SASS (1999-2000) and the TFS (2000-2001), autonomy refers to a teacher's perception of control within their classrooms, while influence refers to decision-making opportunities regarding school-wide policies and procedures. Autonomy is contained within the four walls of the SETs classroom, while influence is more global and encompasses the school community.

In the organizational retention literature, Currivan (1999) defines autonomy as the, "degree to which an employee exercises discretion over the performance of job tasks" (p.501). He found that autonomy, peer support, and a supervisor's support have a positive effect on the employees' willingness to keep ties to the organization. Classroom autonomy is associated with positive teacher outcomes. Teachers included in decision making regarding textbooks, instructional techniques, classroom discipline, and grading policies are more satisfied with their jobs (Schwab & Iwanicki, 1982). Ingersoll (2001) reports that there is a positive correlation between autonomy and retention in the profession and at their school sites in that the greater the teacher's perception of their opportunity to govern classroom activities, the more likely they are to remain in their current positions.

NCLB (2001) has placed many regulations on teacher practices and as a result, some educators believe they have diminished classroom autonomy (Stodden, Galloway & Stodden, 2003; Wills & Sandholtz, 2009). NCLB (2001) measures students' academic success by their performance on standardized assessments. These assessments have been labeled, "high-stakes" because of the federal and state financial support awarded schools based on the outcomes of these assessments. Some believe that high-stakes testing places, "an enormous pressure exerted on teachers to teach to the test, abandon their sense of creativity and autonomy in the classroom, ignore the specificities of children's lives and problems and, in general, be less attentive to the vast differences that students often bring with them" (Giroux, 2004, p.213).

Studies conclude that new teachers are more likely than their veteran colleagues to value school-level autonomy, opportunities for individual teacher initiatives, and substantial professional control of resources (Hart & Murphy, 1990). Since the opportunities to be autonomous within the classroom seem to be constrained by NCLB (2001), administration must find creative ways to enhance teacher autonomy (Wills & Sandholtz, 2009).

Collaboration. Collaborative work environments increase employee retention (Cotton & Tuttle, 1986; Currivan, 1999; Miller et al., 1999; Steers, 1977). In Sheridan (1992) study, the retention rates of 904 college graduates hired in six public accounting firms over a six-year period indicates that interpersonal relationships, values of team orientation, and respect for co-workers explained most of the variance in employee retention across the firms. Darling-Hammond and Berry (1999) find that a critical area of

recruiting and retaining teachers is the ability and willingness of school administration to provide time for teachers to collaborate. They suggest that a “relocation of present resources so that teachers have time to work intensively with students and collaboratively with each other is needed to retain teachers and improve the academic performance of students” (p.273).

Collaboration is an important aspect of a successful special education programs. Most learning disabled students receive educational services in the least restrictive environment which is usually the general education classroom. SETs spend a good portion of their day working with other professionals at the school site. Washburn-Moses (2005) conducted a survey (N = 191) of secondary SET teachers in Michigan public schools and found that 71.7% worked with GETs, and 53.9% with administration on a daily bases. Keefe, Moore, and Duff (2004) report that in their study on mainstreaming special needs students into general education classes that collaboration between GETs and SETs has a profound influence on the success of the special needs students accessing the core curriculum. A strong, professional collaborative relationship between GETs and SETs can have a positive influence on special education students’ academic success (Keefe, Moore, & Duff, 2004; Billingsley, 2004). Today's reformers suggest that collaborative environments offer numerous ways for teachers to actively participate in shaping their own learning (Cohen, McLaughlin, & Talbert, 1993).

Influence. Many studies confirm that employee influence over policies and procedures that govern an organization's operations is a significant predictor of employee turnover (Faber, 1991; French & Caplan, 1973; Mc Laughlin, Pfeifer, Swanson-Owens,

& Yee, 1986; Halaby & Weakliem, 1989; Tschannen-Moran & Hoy, 2000). Bednar (2003) in her literature review of child welfare workers and retention finds that decision-making opportunities regarding the policy and practice of an organization are strongly correlated to job satisfaction, and job satisfaction is strongly correlated to worker retention. French and Caplan (1973) confirm this finding in that participation in the organization decision-making process has been shown to be a critical factor in maintaining worker morale, motivation, enthusiasm, self-esteem, and overall job satisfaction.

Weiss (1999) reports that the more first-year teachers feel that they can actively participate in making decisions at their school sites, the more positively they view their school leadership. Faber (1991) and Mc Laughlin et al. (1986) find that when teachers are permitted only minimal input into decision making that directly concern the school community like curricula changes, and student disciplinary procedures, there is a decline in teacher morale, job satisfaction, locus of control, and self-esteem. Lortie (1975) supports this finding in his work on teacher control and retention. He states that the nonparticipation of teachers in decision making has a direct impact on their daily work environment and leads both to a decline in self-esteem and to strong feelings of external control by others.

This study is interested in determining the impact of organizational conditions on teacher turnover when other variables, that are determined to be significant predictors in other studies, are included in a multivariate analysis. These variables are clustered as teacher demographics and employment. The teacher demographic variables include;

teacher gender, age, and ethnicity. The employment variables include; teacher experience, salary, certification, school level taught (elementary and secondary), and school community in which a teacher provides service (urban, suburban, rural).

Teacher demographics

Gender. The nation's teacher workforce is predominantly female (79%) (Allen, 2005). The studies regarding organizational retention and gender have inconsistent findings. Some studies indicate that females leave and move more frequently than males (Cotton & Tuttle, 1986; Heyns, 1988). Billingsley (2004) reports that younger female SETs left the classroom at higher rates, but also returned to the classroom more frequently than their male counterparts. Gritz and Theobald's (1996) research is based on a longitudinal dataset providing information on the career histories of 9,756 Washington teachers. They find that male teachers, especially those in secondary education, remain in their first positions longer than female teachers in similar circumstances. Other studies conclude that gender does not appear to be related to turnover (Boe et al., 1997; Koeske & Kirk, 1995; Jinnett & Alexander, 1999). Gender may not be a predictor for teacher turnover, but dependent children at home may influence a female teacher's decision to leave the profession or transfer schools (Markham & McKee, 1991).

Allen (2005) and Kirby, Berends, and Naftel (1999), find that female teachers most often left the profession due to pregnancy or child rearing (47%), followed by the desire to try another career (13%), and a change in residence to be near a spouse's job (9%). Boe et al., (1997) report that the percentage of teachers who move declines moderately with increasing number of dependent children. They found that 9% of

movers among teachers had no dependent children compared to 5.7% movers among teachers who had three or more dependent children.

Ethnicity. The nation's teacher workforce is predominantly white (86%). The literature on teacher retention consistently concludes that white teachers have greater rates of attrition than African American, Hispanic, or Asian teachers (Allen, 2005; Murnane, 1981). Darling-Hammond and Berry (1999) report that African American teachers are less likely to leave the profession than Caucasian teachers. Mor Barak et al., (2001) state that there is some evidence that turnover is less likely among ethnic minorities. According to Billingsley (2004), there is no association between race and SET attrition.

Teacher Age. Teachers are more likely to leave the profession at the beginning of careers and at the end. Teachers demonstrate attrition patterns following a U-shape curve (Grissmer & Kirby, 1987). Teacher attrition is most likely to occur when teachers are young and new to the profession. This is represented by the top of one side of the U shape. It decreases at mid-career. This is downward trajectory of the U. As teachers advance in age so does attrition due to retirement. This is the upward path of the curve. Teacher age also predicts mover behavior. Young female teachers under thirty years of age move from their first teaching assignments to another more frequently than females over thirty years of age (Gritz & Theobald 1996).

Employment variables

There are several variables clustered as aspects of employment that current research concludes are significant predictors for teacher retention. They are; teacher

experience and years teaching, salary, teacher certification, school level (elementary and secondary), and the type of school community (suburban, urban, rural).

Experienced teacher and years of teaching. New employees are more likely to leave their jobs than employees who have remained in their positions for longer periods of time (Mor Barak et al., 2001). Turnover is nearly twice the rate for educators who have taught one to three years than their colleagues who have over three years of teaching experience (Boe et al., 1997; Miller, et al., 1999). Allen (2005) states that, “there is strong evidence that teacher attrition is most severe among beginning teachers but the likelihood of a teacher leaving declines significantly after he or she has been in the classroom for four to five years, and then increases again markedly after 25-30 years in the profession” (p.12). Younger teachers most often have the least teaching experience.

Weiss (1999) found that newly hired teachers were most vulnerable to workplace conditions, hence are more likely to leave the school site or profession they perceive offers an unfavorable work environment. Weiss (1999) hypothesizes that since new teachers have invested less time in their professional lives and are paid less than their veteran colleagues, they find it easier to seek employment elsewhere. The literature also indicates younger women are the most likely to leave teaching and that pregnancy and child-rearing are key reasons why (Allen, 2005).

Salary. Salary is consistently one of the most frequently stated predictors for employee turnover in the organizational and teacher retention literature (Billingsley, 2004; Ingersoll, 2001; Murnane, 1981). Cotton and Tuttle’s (1986) meta-analysis of 26 variables related to turnover finds that salary is the most consistent predictor of employee

turnover. They also found that employees who earn lower wages left the company more frequently than their colleagues who earned higher salaries. Miller et al., (1999), and Singer (1993), report that this is particularly true for SETs. Salary may be an important reason for the most experienced teachers to remain in teaching. It may be difficult for a seasoned teacher to find a job that pays a comparable salary without requiring additional training or education. Salary may influence a teacher's decision to move. Teachers remain in their district when salaries in their district increase comparatively to teaching salaries in other school districts (Gritz & Theobald, 1996).

Many studies find that the primary reasons teachers transfer to new schools is to obtain a better teaching position (Billingsley, 2004; Ingersoll, 2003; Futernick, 2007). Transfers between districts can be costly to teachers if they have over ten years of teaching experience. Teachers who choose to leave a district to obtain a position at another district are only given a specified number of years of teaching experience credit to apply towards their salaries in the new district. In the state of California, some of the largest school districts offer between 11 and 12 years of teaching experience in calculating an incoming teacher's salary. San Bernardino and Riverside County School Districts granted an average of 11 years of teaching experience credit, and Los Angeles County granted 12 years credit (California Department Education School Fiscal Services Division J-90 Form, 2002). It appears that teachers who transfer would suffer little or no loss in salary if they transferred before they acquired twelve years of teaching experience.

Some studies indicate that organizational conditions rather than salary were more important in a teacher's decision to stay. Allen (2005) drew similar conclusions in his

review of teacher retention literature. There is moderate evidence that working conditions may, in some cases, trump salary as a factor in teacher retention.” Yee (1990) suggests that, "pay acquires salience in the absence of intrinsic forms of compensation" (p.115).

Lortie (1975) reports that having positive feedback from students may be more important to teachers than greater salaries in their decision to remain in the profession. In his study, Lortie (1975) explores the reasons why teachers remain in their profession. These reasons are based on the rewards teachers believe are a result of their profession. Lortie (1975) indicates that there are essentially three types of rewards associated with providing instruction to students. These rewards are classified as extrinsic, ancillary, and intrinsic. The extrinsic rewards are those associated with the teaching profession and are independent from the individuals that occupy it. These rewards are salary, benefits, respect and prestige. The ancillary rewards are those that are associated with the occupation. They are the hidden benefits of the job. An example of an ancillary reward is a work schedule conducive to family life. Teachers, who are also parents, may have the similar weekday and holiday schedules as their school-aged children. This is advantageous in terms of the time that can be spent engaged in family activities. Finally, the intrinsic rewards of teaching are those that are subjective or personal to each teacher. The intrinsic rewards included in Lortie’s (1975) research are; an opportunity to create lesson plans, discipline and classroom management, opportunities to associate with students and other teachers, and student academic achievement as a direct result of teacher instruction.

Lortie's (1975) study includes a survey of professionals at 12 different school locations in Dade County, Florida in 1964 (N = 5,818). He asks teachers a series of questions regarding the types of rewards that provide the greatest satisfaction and finds that teachers consider intrinsic rewards to be the major source of satisfaction. Seventy-six percent of the educators believed that intrinsic rewards were the most satisfying compared to 11.9% that valued extrinsic rewards, and 11.7% that valued ancillary rewards. He concludes that teachers remain in the profession because of the intrinsic rewards they believe they obtain from their profession.

Teacher certification. Boe et al., (1997) finds that teachers with a full certification in their field are 8% more likely to remain in their school the following year than teachers who had only probationary, provisional, temporary, or emergency certification. The educational and credential requirements mandated by the department of education throughout the nation are extensive. In the state of California, regular teacher certification requires the teacher to complete a baccalaureate or higher degree, satisfy the basic skills requirements, complete a multiple or single subject teacher preparation program including student teaching, and obtain a formal recommendation for the credential by the California college or university where the program was completed. Obtaining regular certification requires a good deal of time, effort, and money.

For some educators who have taught for over three years and do not have regular certification, teaching may have been a temporary job on the way to pursuing another career. Lortie (1975) indicates that teaching is an easy entry profession. Before NCLB's

mandate that all teachers entering the profession be highly qualified, individuals with a Bachelor of Arts degree and little else were able to enter the teaching profession.

Miller's et al., (1999) study of over 1,000 SETs in Florida finds that higher levels of attrition were evident in those SETs who were not fully credentialed. Brownell and Smith (1992) discover that alternative education certification occurred much more frequently in special education than general education due to the shortage of educators. Alternative certification refers to a state approved process for obtaining full licensure through a nontraditional certification program while continuing full time teaching responsibilities prior to program completion (Brownell & Smith, 1992).

Banks and Neeco (1987) report that teachers with more classroom experience are less likely to have alternative certification. Mor Barak et al., (2001), find that younger worker's lack of experience and competence are significant predictors of employee turnover.

Akin to teacher certification is teacher education. There is a body of literature that states that teacher education influences teacher attrition. Kirby et al. (1999) discover that teachers with advanced degrees at entry tended to have higher attrition rates than those entering with a bachelor's degree. He attributes their exodus from the teaching profession to their advanced degrees which provide greater job opportunities in the labor market outside of education. Leavers may exit the teaching profession because their advanced degrees increase career opportunities.

School level. Elementary school educators are those teachers who provide instruction to students at the K-6 grade level for the greatest portion of the school day.

The secondary teachers are defined as those staff members who provide instruction to students in the 7-12 grades for the greatest portion of the school day. SET elementary and secondary teachers have unique roles and responsibilities. Allen (2005) indicates in his review of numerous studies regarding teacher retention that there is strong evidence that attrition is greater among secondary teachers than to elementary school teachers.

Byrne (1999), in his study on teacher burnout reports that secondary teachers exhibit a unique role conflict. He concludes that in general, high school teachers perceive themselves as experts in a particular subject area, yet they are awarded little influence regarding the structure and pace of the course(s) which they teach. This lack of control or autonomy may be a strong predictor for secondary teacher attrition.

School community (Urban, Suburban, Rural). Allen (2005), states that teacher turnover rates tend to be higher in urban schools than suburban and rural settings. Allen (2005) concludes that, "In the New York City region, for example, 28% of teachers in urban schools were still in the same school five years later compared to 46% in suburban schools." Teachers move often from urban schools with high percentages of minority students and students living in poverty to schools in suburban settings (Gritz & Theobald, 1996). Rural schools, as well as urban schools, often have the greatest need for highly qualified teachers.

Rural schools have difficulty recruiting and retaining SETs because of their inadequate resources to; secure competitive salaries, provide sufficient instructional materials for teachers, and offer social and cultural activities (Brownell, Bishop, & Sindelar, 2005). The overall low enrollment for many rural schools may require SETs to

provide instruction in several core subjects to special needs students with various handicapping conditions (Schwartzbeck & Redfield 2003). SETs have unique roles and responsibilities than GETs. In addition to these differences, the roles and responsibilities of elementary and secondary SETs vary.

SET Role and Responsibilities

Compared to their GET colleagues, SETs face unique challenges in fulfilling their roles and responsibilities governed by special education law (Billingsley, 2004; Gersten et al., 2001; Keefe et al., 2004; Wasburn-Moses, 2005). Like their GET colleagues, SETs are required to be highly qualified in their area of expertise in order to provide standards based instruction to students. SETs have the additional responsibility of monitoring the progress of special education ensuring that they are receiving the program and services stated on the IEP.

Special education services typically begin at the elementary level and conclude at high school graduation. All special education students have an Individual Educational Plan (IEP) created by the IEP team with their unique needs in mind. The IEP team is comprised of all individuals that provide instruction and services to the special needs students. Special education services begin with a standardized assessment that measures student cognitive, educational, emotional, behavioral, and vocational abilities. The results of these standardized assessments provide the IEP team with the information needed to generate an offer of free and appropriate public education (FAPE). If the student qualifies for special education services the offer of FAPE includes goals and objectives and programs and services established to promote the overall success of the

student in the least restrictive environment, which is often the general education classroom. Currently nearly half of all students with a learning disability receive instruction from a general education teacher in a general education classroom 80% of their school day (Stodden et al., 2003). At the secondary level, a transition plan that delineates goals and objectives to prepare students for postgraduate life is created and implemented by the IEP team. Often, special needs students demonstrate educational gaps in their learning.

Many special needs students are not proficient in some of the basic core subjects, but are still held to the same academic standards as their typically developing peers (Yell, Katsiyannas, & Shiner, 2006). GETs and SETs must collaborate to teach the core curriculum, as well as make curricular accommodations and modifications to provide special needs students' equal access to the curriculum (Magiera, Smith, Zigmond, & Gebauer, 2005). Providing equal access to the core curriculum is essential for special needs students to master curricular standards.

The amendments of IDEA (2004) and NCLB (2001) require all fully licensed SETs have at least a bachelor's degree, hold full state special education certification, and if teaching a core academic subject must demonstrate subject matter knowledge and teaching skill of that core academic subject.

The credentialing program for elementary and secondary teachers differs. Elementary teachers obtain a multiple subject credential that prepares them to provide instruction in all curricular subjects at all elementary grade levels. In contrast, most secondary teachers obtain single subject credentials for their academic area of expertise

which allows them to provide direct instruction for that subject only. Secondary SETs usually do not have single subject credentials that allow them to provide direct instruction to students. SETs must rely on the appropriately credentialed GETs to provide direct instruction to remain in compliance with educational law.

To meet the needs of students with active IEPs, collaboration between GETs and SETs in the general education classroom is essential (Rainforth & England, 1997). Magiera et al., (2005) state the collaboration between GETs and SETs, “helps provide students with disabilities access to the general education teacher and the general education curriculum, while providing the required accommodations from the students’ IEP” (p.20). Pugach and Johnson (1995) found that the collaboration between GETs and SETs improves instructional practice. They state that, “in collaborative working environments, teachers have a potential to create collective capacity for initiating and sustaining ongoing improvement in their professional practice so each student they serve can receive the highest quality of education possible” (Pugach & Johnson, 1995, p.6). Bandura (1977) believes that effective teachers are more likely to remain in the teaching profession. Carlson, Chen, Schroll, and Klein (2002) stated that they found in their survey results that GETs reported feeling confident in serving the needs of disabled students when they received assistance from their SET peers. The provision of special educational instructional services and the collaboration process differs at the elementary and secondary levels due to the variability in school organization, academic rigor of the curriculum at each level, and special education law.

School organization. Special needs students require a variety of instructional supports such as differentiated instruction, and curricular modifications and accommodations in order to access the core curriculum. These services require time. The structure of the school day differs drastically at the elementary and secondary grade levels. Elementary schools have blocks of time, between two and three uninterrupted hours, in which to provide instruction. Elementary teachers have discretionary power over the amount of time students will spend engaged in particular core subjects at given periods of the school day. Secondary teachers have little discretionary power over the time allotment for each instructional period. At the high school level there are typically six 55-minute periods a day. According to Stodden et al., (2003) the structure of secondary schools hinders the provision of these supports.

The size of the school and its faculty influences the success of the collaborative model. Researchers report that smaller schools are often easier to manage and have a greater sense of community. Larger schools often have a wider array of academic programs and support services (Billingsley, 2004). Typically elementary schools are smaller than secondary schools. The small number of teachers at the elementary school results in far less logistical challenges in providing services for students.

Most secondary schools have a greater number of students and hence a greater number of faculty and staff to collaborate with than elementary schools (Anderson, Kutash, & Duchnowski, 2001). At the secondary level, the curriculum is aligned with graduation course requirements. In some content areas, an array of courses is offered to provide instruction for the diverse educational needs of the secondary student population.

The math department is an example of this phenomenon. Math curriculum at the secondary level is content-driven, with high stakes assessment attached to the courses (Magiera et al., 2005). In many states, students are required to pass three years of math to graduate. Secondary schools offer many math courses that are diverse in content as well as academic rigor. The following math courses that are typically offered at the secondary level are: Algebra A, Algebra B, Algebra I and Algebra II, Geometry A, Geometry B, Geometry I, Calculus, Trigonometry, and Statistics. Every math course must be taught by an educator with a single subject credentialed to teach that course. Very few SETs are credentialed to provide instruction in the multitude of math classes required for high school graduation. A typical resource specialist, with a caseload of twenty-eight students, could have disabled students who attend many of these classes taught by different instructors. The number of secondary GETs a SET must collaborate with in a single school day is mind-boggling. Math is only one of many core curriculum courses a student must complete to graduate.

Academic rigor. The collaborative process involving SETs and GETS becomes more challenging as the academic requirements become more rigorous. Tilliczek, Ferguson, Rummen and Boydell (2006) conducted a literature review that included 100 international reports, academic papers, and policy pieces, and concluded that the shift from elementary to secondary is a shift from a less demanding academic institution to a more rigorous one. Magiera, et al.'s, (2005) qualitative study on co-teaching in a general education math class finds that at the secondary level academic requirements are more intellectually demanding and content-specific than at the elementary school level.

Secondary SETs must rely on their GET colleagues to assist them with instruction in the content standards. GETs must rely on their SET colleagues to provide their in-depth knowledge regarding the appropriate accommodations and modifications disabled students need to master the curriculum. Supporting the GETs becomes a greater challenge as the complexity and rigor of academics increases. This transition is more difficult for those students who have learning disabilities.

Federal and state law requires that secondary SETs provide additional services to disabled students. In many states, secondary students must pass an exit exam to graduate from high school with a diploma. The exit exam assesses student proficiency with basic skills at the high school level. Special needs students are held to the same academic standards as their peers. Since disabled students often struggle with obtaining and retaining academic skills, passing the high school exam can be challenging. Many disabled students struggle in reading and math, and some elementary and secondary special education teachers become frustrated with the system's demands on the disabled and the disabled students' lack of progress in complying with those demands (Stempien & Loeb, 2002). Secondary SETs often need to provide remedial instruction in the areas of academic need and test preparation services to assist the secondary student in passing the exit exam. This is an added stress for secondary teachers. Secondary SETs are also required to monitor the implementation of transition plans created by the IEP team.

Special education law. Transitions can be conceptualized as a journey across rocky landscape into the adult world of work (Tilleczek et al., 2006). Although IEP goals may include transition activities at the elementary school level, they are required by

IDEA 2004 at the secondary level. Transition plans address the following areas of concern; the coordination and management of current and post-graduation supports and services; independent living skills; and self-advocacy skill development. Outside agencies, like the Department of Rehabilitation, are occasionally involved in the creation and implementation of a transition plan. A primary goal of transition plans is to provide disabled students with the skills to obtain and retain a job. Disabled students are at a greater risk for unemployment post high school graduation than their general education peers. Wagner and Blackorby (1996), reporting the results of the National Longitudinal Transitional Study of Special Education Students, find that 56.8% of the disabled that had been out of high school between three and five years were employed, whereas 69.4% of their typically developing peers were employed.

A well-developed transition plan can assist disabled students with opportunities to increase their vocational skills and hence become more successful in obtaining and retaining a job. Secondary SETs are charged with the responsibility to coordinate services of all IEP team members to be compliant with the goals and objectives found in the transition plan.

In the literature regarding SET retention, SETs revealed concerns with the collaborative process. They expressed that there were many organizational barriers to successful collaboration. Some of these barriers were the lack of administrative support (Billingsley, 2004; Wisniewski & Gargiulo, 1997); lack of classroom autonomy (Keefe et al., 2004); the presence of organizational conflict (Bidwell, 1965; Lopes et al., 2004); lack of influence over general policies and procedures (Futernick, 2007). In this study,

these concerns will be utilized as predictors in determining the variables that separate the teacher subgroups.

The diverse and complex roles and responsibilities of the SET is one of the reasons they gave for leaving the teaching profession or moving to another school (Billingsley, 2004; Gehrke & McCoy, 2007; Stempien & Loeb, 2002). Morvant et al., (1995) found that half of the special educators in their study felt that their workload was unmanageable. A recent report by the Council for Exceptional Children (CEC) suggested that many new special education teachers are finding that they have been “prepared for jobs that no longer exist and that they are not equipped for the jobs they face” (CEC, 2000, p. 19). Westling and Whitten (1996) indicate that dissatisfaction with job responsibilities is a significant predictor of SET turnover. SETs have expressed dissatisfaction with the changes in job descriptions that vary with school levels and school sites (Conderman & Johnson-Rodriguez, 2009). Examining the differences between the special education services SETs provide at the elementary and secondary level offers a greater understanding of the complexity of their jobs. These differences may influence SETs decision to leave the profession or transfer to new schools.

CHAPTER III

Methods

Participants

The respondents of this study were randomly selected public school teachers from schools within sampled districts throughout the nation who completed the SASS (1999-2000) and TFS (2000-2001). The TFS is the complement to the School and Staffing Survey (1999-2000). The teacher sample includes special education teachers (SET) and general education teachers (GET) stayers, movers, and leavers who teach full-time, part-time, or are long-term substitutes (N = 4,048). The main teaching assignments of the respondents ranged from kindergarten to 12th grade. This sample excludes teachers' aides, pre-kindergarten teachers, and any non-teaching specialists. The sub-sample size by teacher sample is shown on Table 1. Details concerning the sampling weights are provided in the next section.

Table 1

Sample Size by Teacher Subgroups

Teacher Subgroup	Unweighted Sample	Weighted Sample
GET stayers	1,579	3,051
GET movers	1,029	328
GET leavers	1,042	251
SET stayers	170	358
SET movers	133	57
SET leavers	95	35
GET/SET Total	4,048	4,080

This study did not include teachers over 50 years of age. Teachers over 50 years of age are nearing retirement age and will naturally be leaving the profession. This study is concerned with those new and mid-career teachers who have years of being in the workforce ahead of them. The SET sample is comprised of 78% (N = 450) teachers under 50 years of age and 22% (N = 129) are over 50 years of age. The GET sample is comprised of 70% (N = 3,645) of teachers under 50 years of age and 30% (N = 1,562) are teachers over 50. SETs are older teachers compared to their GET peers. There is a significant difference between the GET and SET older (over 50) and younger (under 50) teachers in this study $F(2, 5206) = 15.74, p < .000$.

Data

The U.S. Census Bureau collected the SASS data for NCES from a random sample of schools stratified by state, public and private schools, and school level. This study only includes educators who teach in the public sector. Public schools are defined as those that provide educational services for at least one of the grades K-12; have one or more teachers on staff; are collected in one or more buildings; receive public funding as their primary support; and are operated by a central agency. The U.S. Census Bureau collected the data for both surveys for the National Center for Education Statistics (NCES) of the U.S. Department of Education. The SASS and the TFS were authorized by Title I, Part E, Sections 151(b) and 153(a) of Public Law 107-279, the Education Sciences Reform Act of 2002. The sampling frame for the SASS (1999-2000) was the 1997-98 Common Core of Data (CCD) school file. CCD is a universe file that includes all elementary and secondary schools in the United States. The SASS is thought to be the

largest and most comprehensive data source available for information on teacher demographics, teacher employment factors and the organizational aspects and conditions of schools (Haggstrom et al., 1988; Ingersoll, 1995b).

Each cycle of SASS includes questionnaires for a random sample of teachers in each school. One year later, the same schools were contacted and all those in the original teacher sample who stayed in same school and those who remaining in the profession but moved to another school completed the Teacher Follow up Survey form 03. The teachers who left the profession were sent the Teacher Follow up survey form 02 to their last known address and asked to completed and return the survey. These two distinct groups of teachers comprised the TFS sample.

The data collection cycle began with the selection of schools. The schools were selected with a probability proportionate to the square root of the number of teachers. Teachers within schools were then sampled at a rate that made the overall selection probability approximately constant within strata, subject to the constraints of sampling at least one and no more than 20 teachers per school. The first year of the data collection cycle, the SASS was distributed and the teacher responses on the SASS were gathered.

The SASS uses a complex sampling design to obtain a nationally representative sample of teachers. The sampling unit was primarily the school. After schools were selected, teacher lists were obtained from school administration from each school. Teachers were stratified into one of the five groups (a) Teacher's race is reported as Asian or Pacific Islander, (b) Teacher's race is reported as American Indian Alaskan Native, (c) Teachers who teach classes designed for Limited-English Proficient student,

(d) teacher in their first three years of teaching, or (e) All other teachers not classified in any of the other categories. Teachers were sampled from each stratum. The probability of selection varied within each stratum according to the number of teachers within each sector. The goal was to obtain enough teachers in each stratum to have an adequate sample size for analysis. Sampling weights were added to account for the probability of selection in the sampling design and produce a nationally representative sample.

The secondary year of the cycle the TFS is distributed and teacher responses are collected. The TFS was designed to measure attrition rates and to compare teachers who left the teaching profession, teachers who moved to another school, and those who stayed in the same school as the previous year. In order to accomplish this, the TFS has two distinct surveys. The Current Teacher Follow up Questionnaire was administered to those teachers who remain in the field (stayers). Within this survey there is a segment of questions that targets those teachers who remained in teaching, but left their base year school site for another school (movers). Those teachers who left the profession after the base year (leavers) completed a different survey entitled the Former Teacher Questionnaire. The TFS sample was stratified differently from the SASS.

The respondents of the TFS were stratified by four variables: sector (public, public charter, private); teacher status (stayers, movers, leavers); teaching experience (teachers with less than three years of teaching experience were labeled as new teachers, while those with over three years of experience or more were labeled experienced), and the grade level in which teachers taught (elementary or secondary). Teachers were

randomly selected from each stratum in order to obtain an adequate sample for the analysis. Like the SASS (1999-2000), the responses on the TFS (2000-2001) were weighted to produce a nationally representative sample of teachers.

The data collection for the SASS took place at the beginning of the 1999-2000 school year. The U.S. Census Bureau began the collection process by sending advance letters to the sampled local education agencies and schools in August and September. After the teacher lists were obtained from the school administration at each school. School questionnaires were mailed in October. A follow-up contact for non-responding teachers was conducted using Computer-Assisted Telephone Interviewing (CATI). Weighted response rates are defined as the number of in-scope responding questionnaires divided by the number of in-scope sample cases, using the basic weight (inverse of the probability of selection) of the record (NCES, 2000). The public school response rate for the SASS survey is 83.1%. The TFS was distributed a full calendar year after the SASS. The response rate for this survey was 90.1%.

This study is unique from others in that it is weighted to normalize the sample to obtain correct estimates. As previously stated, the original SASS/TFS was weighted to reflect the national population of teachers (Luekens, Lyter, & Fox, 2004). The SASS/TFS surveys over sampled the movers and leavers samples to obtain sufficient numbers for reliable data. The new weighting variable is calculated by dividing the actual teacher sample by the unweighted teacher population and then multiplied by the

given sample weight used in the original SASS/TFS study (Mitchell, 2009). The unweighted and weighted teacher samples by teacher subgroup are shown on Table 1

Assumptions

The data of this study were reviewed to ensure that statistical analysis assumptions are met sufficiently well to allow reliable inferences to be drawn. They were also evaluated for multicollinearity, and homogeneity of variance.

A correlation matrix indicates that there are no intercorrelations among the variables that exceed a level of concern (all correlations were $< .617$). This value is well below that identified by Field (2005) as a source of potential concern when he said, “if there is no multicollinearity in the data then there should be no substantial correlations ($r > .9$) between predictors” (p.185).

The data for this study were assessed for homogeneity of variance using the Box’s M test of the homogeneity of variance. The results of the Box’s M test for all of the discriminant function analyses of this study were statistically significant at the .000 level indicating a violation of the equality of covariance assumption. However, Field (2005, p.599) indicates that large samples, like that used in the present study, tend to, “produce greater variance and covariance” with the result that homogeneity of variance tests become overly conservative and that generally, “significant findings can be trusted.”

Reliability

There is a concern with the reliability of the results of the DFA utilizing the SASS and TFS data. The sampling unit of the surveys is the school. Schools were randomly selected. However a stratified cluster of 20 educators was drawn from each school. The

stratification resulting from cluster sampling of the teachers decreases the standard errors of the analysis because several teachers were taken from the same school site. To address this concern, this study chooses to adopt the more conservative p value of .01 in assessing the significance of statistical findings.

Variable Selection

The variables for this study were found by previous studies to be significant predictors of employee retention. Research has shown that in addition to employee demographics and employment factors, the overall conditions of the workplace significantly impacts the willingness of employees to remain in the organization (Halaby, Weakliem, Mueller, & Price, 1990 ; Steers, 1977). A handful of studies regarding teacher retention that chose to use SASS and TFS data for their analyses regarding teacher retention were also reviewed in the selection process of the variables for this study (Bobbitt, Whitener, & Lynch, 1994; Boe et al., 1996; Ingersoll, 2001).

Statistical Test Selection

The purpose of this study is to identify independent clusters of variables, teacher demographics, employment factors and workplace conditions that discriminate between SET stayers, movers, and leavers. The discriminant function analysis is the statistical test chosen for the study because it is a multivariate test that identifies a combination(s) of variable functions that best discriminates among groups (Shen, 1997). For some purposes the DFA develops an equation for the identification of individuals. This study does not identify individual teachers but identifies differences among the teacher groups, therefore the classification analysis of the DFA will not be used.

CHAPTER IV

Findings

Descriptive Statistics

Data analysis begins by examining similarities and differences among the six groups of teachers under study to reveal the extent to which teachers leaving the profession and those moving from school to school differ substantially from those who remain in the same school from one school year to the next. We begin by describing the teachers who remained in their teaching position and then compare those with the movers and the leavers. Table 2 defines the variables used in this study. The organizational conditions are defined using the particular SASS/TFS language. The specific survey items associated with each condition are included in the definition.

As previously stated, data were collected using two distinct surveys. The survey items are used to measure the perceptions of teachers regarding the organizational conditions of their present and past school sites are: Teacher Follow-up Survey for former teachers (TFS-2) and the Current Teacher Survey (TFS-3). As the numbers increase on the Likert scale, so does the respondent's perception that these organizational conditions were present on their campus to a greater degree. The exceptions to this are the questions that address teacher influence and organizational conflict. The survey questions measuring conflict and influence were recoded to have the larger numbers reflect a learning environment with less conflict and more teacher influence. A Likert Scale is established to measure the respondent's perception of the organizational conditions of their current or former school sites.

Table 2

Variables Used in the Study

Variables	Definitions and Code
Stayers	1= Teachers who remain on their school from the base year to year two of the survey. 0= did not stay.
Movers	1= Teachers who left their school sites from the base year to year two of the survey, but did not leave the profession. 0 = did not move.
Leavers	1 = Teachers who left the teaching profession. 0 = did not leave.
Non-Older:	1 = equal to or younger than 50 years of age and 0 = greater than 50 years of age
Teacher gender	1 = female and 0 = male
Experienced teacher	1 \geq 3 years of teaching 0 < 3 years of teaching
White	1 = Yes, 0 = No
African American	1 = Yes, 0 = No
Asian	1 = Yes, 0 = No
Hispanic	1 = Yes, 0 = No
Native American	1 = Yes, 0 = No
Teacher Age	1 < 30, 2 = 30-39, 3= 40-49, 4 \geq 50
Teacher salary	1 < \$30,000, 2 = \$ 30,000 to \$ 39,999, 3 \geq \$40,000
Elementary teachers	1 = grades K-6, 0 = grades 7-12
General Education Teacher (GET)	1 = Yes, 0 = No GETs are those educators who provide instruction for general education students for the greatest portion of their school day.
Special Education Teacher (SET)	1 = Yes, 0 = No SETs are those educators that provide instruction for students with active Individual Education Plans (IEP) for the greatest portion of their school day.

Variables Used in the Study Continued

Variables	Definitions and Code
Urban School Community	1 = Yes, 0 = No Large or mid-size central city
Suburban School Community	1 = Yes, 0 = No Urban Fringe of large or mid-size
Rural School Community	1 = Yes, 0 = No Small town/ Rural
Teacher Experience	This is a continuous variable regarding the number of years a teacher has taught.
Regular Certification	1 = Yes, 0 = No A regular certification or standard state certification or advanced professional certification indicates that all teaching requirements are met.
Probationary Certification	1 = Yes, 0 = No A probationary certification is one where the teacher has fulfilled all educational requirements for obtaining the regular certification. They are identified as those that have probationary status of employment.
Provisional Certification	1 = Yes, 0 = No A provisional certificate is the type of credential given to a person who is still participating in what the state calls an "Alternative Certification Program".
Temporary Certification	1 = Yes, 0 = No A temporary certificate is issued to those persons who require some additional college coursework and/or student teaching before a regular certificate can be obtained.

Variables Used in the Study Continued

Variables	Definitions and Code
Emergency Certification	Emergency Certification 1 = Yes, 0 = No An emergency certificate or waiver is issued to individuals with insufficient teacher preparation who must complete a regular certification program in order to continue as a teacher.
Administrative Support	The question stem is, “The school administrators’ behavior toward staff is supportive and encouraging.” [Stayer (TFS-3, 0804), Mover (TFS-3, 0121), Leaver (TFS-2, 0121)]. 1 = strongly disagree, 2 = somewhat disagree, 3 = neither, 4 = somewhat agree, 5 = strongly agree
Appropriate Student Behavior	The question stem is, “Student behavior is a problem.” [Stayer (TFS-3, 0586), Mover (TFS-3, 0098), Leaver (TFS-2, 0098)]. 1 = strongly agree, 2 = somewhat agree, 3 = neither, 4 = somewhat disagree, 5 = strongly disagree
Autonomy	The question stem is, “I am satisfied with the amount of autonomy and control I have over my own classroom.” [Stayers (TFS-3, 0603), Movers (TFS-3, 0115), Leavers (TFS-2, 0155)]. 1 = strongly disagree, 2 = somewhat disagree, 3 = neither, 4 = somewhat agree, 5 = strongly agree that there is
Collaboration	The question stem is, “There are many opportunities to collaborate with other teachers” [Stayers (TFS-3, 0603), Movers (TFS-3, 0115), Leavers (TFS-2, 0155)]. 1 = strongly disagree, 2 = somewhat disagree, 3 = neither, 4 = somewhat agree, 5 = strongly agree

Variables Used in the Study Continued

Variables	Definitions and Code
Influence	The question stem is, "I do not have enough influence over this school's policies and practices." [Stayer (TFS-3, 597), and Mover (TFS-3, 597) and Leaver TFS-2, 0109)]. 1 = strongly agree, 2 = somewhat agree, 3 = neither, 4 = somewhat disagree, 5 = strongly disagree

Comparing and contrasting SET and GET samples

There are significant differences and distinct similarities between SETs and GETs. The study sample consists of 89% GETs and 11% SETs. This sample is consistent with the reported breakdown of teachers published by the National Information Center of Children and Youth Disabilities (NICHCY) (2000). Table 3 shows the GET and SET subgroups by sample size.

Table 3

GET and SET Stayers, Movers, Leavers Sample Sizes

Teacher Subgroup	N= Unweighted/Weighted	Percentage within weighted subgroup
GET	3,650/3,631	89% of teachers
SET	398/450	11% of teachers
GET Stayers	1,579/3,052	84.1% of GETs
GET Movers	1,029/328	9% of GETs
GET Leavers	1,042/251	6.9% of GETs
SET Stayers	170/358	80% of SETs
SET Movers	133/57	12.7% of SETs
SET Leavers	95/35	7.8% of SETs

NICHCY reports that 10% of the teaching work force is in Special Education.

Comparing the SET and GET samples, we find that the stayers differ significantly $t(3409) = -2.37$, $p = .02$, as do the movers $t(384) = 2.45$, $p = .02$. With the originally weighted sample, the SET and GET leavers differ significantly $t(1, 285) = -1.97$, $p = .05$. When the weights are applied to normalize the sample, the leavers do not differ significantly $t(1, 285) = .65$, $p = .51$. The original weights were applied to the over-sampled special education teachers to allow us to make more precise judgments regarding their turnover behavior compared to other teachers.

Hypothesis one is supported by the findings of this study. The original weighted sample of leavers indicates that SETs are about 10% more likely to leave than GETs. The second hypothesis of the study is supported by this study. SETs are about 30% more likely to move than GETs. Although these differences are modest, this study found that stayers, movers, and leavers can be statistically distinguished from each other.

While the primary statistical tool used in this study to determine how subgroups of stayers, movers and leavers among GETs and SETs differ in their demographics, employment, and their experiences within their schools is an application of discriminant function analysis (DFA), it is helpful to begin with review of the sample descriptive statistics.

In order to identify the differences between all special education teachers and all general education teachers an analysis of variance test assessing the significance of mean differences across all independent variable was undertaken. Table 4 reports the group means, standard deviation, group mean differences, F statistic, and significance for each

independent variable that is continuous. The independent variables are listed in descending order of the absolute value with the mean differences between the groups. Table 5 reports the proportions of the independent variables and of the entire teacher sample for those variables that are nominal.

Table 4

GET and SET Significant Differences Group Means, Standards Deviations, Mean Differences, F statistics, and Significance for Continuous Variables

Independent Variable	SET Group Mean (SD)	GET Group Mean (SD)	Grand Mean (SD)	Mean Diff	<i>F</i>	Sig
Student Behavior	2.65 (1.25)	3.14 (1.37)	3.08 (1.31)	-.49	51.12	.00
Years Taught	11.90 (7.12)	11.45 (7.78)	11.50 (7.71)	+.45	1.36	.25
Influence	2.63 (1.09)	2.86 (1.19)	2.84 (1.18)	-.23	15.49	.00
Administrative Support	3.57 (1.30)	3.73 (1.31)	3.71 (1.31)	-.16	5.66	.02
Collaboration	3.10 (1.32)	3.24 (1.33)	3.22 (1.33)	-.14	4.41	.04
Autonomy	4.19 (.90)	4.22 (.95)	4.21 (.94)	-.03	.39	.54

The univariate analysis finds no significant difference ($p < .05$) between GETs and SETs for the following independent variables clustered as teacher demographics; Teacher Age, Years Taught, Whites, Hispanics, Asians, and Native American teachers. The independent variables did not significantly differ for the following variables clustered as employment factors; Elementary Teachers, Probationary, Provisional, Temporary, and, Emergency Certification, and Urban, Suburban, and Rural school communities. The organizational condition of Autonomy did not significantly differ between SETs and GETs.

There are univariate significant differences ($p < .05$) between GETs and SETs for the following independent variables by variable cluster. Within the demographic cluster African American Teachers, and Gender significantly differ between samples. The variables that differ significantly among the teacher samples within the employment cluster are Salary, Experienced Teachers and Regular Certification. Organization conditions that significantly varied between SETs and GETs are Administrative Support, Collaboration among staff members, Appropriate Student Behavior, and Teacher Influence.

Comparing the two teacher samples for those variables that significantly differ, the average SET is more often an experienced African American female with regular certification and earns higher salaries than the average GET. The typical SET is less satisfied with the administrative support, collaboration among colleagues, student behavior, and opportunities to make decisions that shape school wide operations than the average GET.

SETs have the greatest frequency of teachers with over three year of experience; 83% of the SETs, 77% of the GETs. SETs have the greatest representation of African American teachers; 10% of the SET sample, 6% of the GET sample. The SETs have the greatest representation of female teachers; 82% of the SETs, 75% of the GETs. The SETs have the greatest representation of teachers with regular certification; 85% of the SET sample, 81% of the GET sample. The variable of salary is nominal with three categories. The first category is teachers who earn less than \$30,000. The second category is comprised of teachers who earn between \$30,000 and \$39,000. The last

Table 5

GET and SET Significant Differences of Independent Variables Reported by Proportions
for Nominal Variables

Independent Variable	SET Group Proportion N = 450	GET Group Proportion N = 3,631	Entire Group Proportion N = 4,080	Significant Difference
Salary				
< \$30,000	15%	22%	21%	.00
\$30,00-\$39,000	38%	39%	40%	.46
> \$40,000	48%	39%	41%	.00
African American	10%	06%	06%	.00
Gender- Females	82%	75%	24%	.00
Experienced Teacher	83%	77%	78%	.00
Regular Certification	85%	81%	81%	.05
Suburban	54%	50%	.00%	.08
Elementary teachers	67%	63%	63%	.08
Asian	10%	02%	02%	.08
Hispanic	04%	06%	06%	.11
Emergency Certification	01%	01%	01%	.15
Native American	00%	01%	01%	.20
Teacher Age-Approximate	33 yrs	32 yrs	32 yrs	.27
Urban	26%	28%	28%	.27
Rural	20%	22%	21%	.34
Probationary Certification	07%	06%	06%	.35
Provisional Certification	02%	03%	03%	.44
Temporary Certification	01%	01%	01%	.51
White	85%	85%	85%	.85

salary bracket is educators who earn over \$40,000 annually. SET and GET significantly differ for the lowest salary bracket; 15% of the SETs, 22% of the GETs earn less than \$30,000 annually. They also differ significantly for teachers earning the greatest salaries of the sample; 48% of SETs, 39% of GETs earn over \$40,000 a year.

Retention literature clearly states that leavers are less satisfied with the work conditions at their schools than stayers (Billingsley, 2004; Halaby & Weakliem, 1989;

Tschannen-Moran & Hoy, 2000). Since SETs have a greater frequency of attrition than GETs, logically they should be less satisfied with their work environments than GETs. The findings of this study are supported by the current literature. SETs are not as satisfied with the support they receive from their administrator as GETs; SET group mean = 3.57 (SD = 1.30), GET group mean = 3.73 (SD = 1.31.), $F(1, 4079) = 5.66, p < .02$ – a mean difference of -.16. The typical SET believes that collegial collaboration is not as evident on their campus as the average GET; SET group mean = 3.10 (SD = 1.32), GET group mean = 3.24 (SD = 1.33.), $F(1, 4079) = 4.41, p < .036$. - a mean difference of -.14. The typical SETs believe that their students exhibit more problematic behaviors than GET peers; SET group mean is 2.65 (SD = 1.25), GET group mean is 3.14 (SD = 1.37), $F(1, 4079) = 51.12, p < .00$ – a mean difference of -.49. The average SET perceives that they do not have opportunities that GETs have to influence school wide policies and procedures; SET group mean is 2.63 (SD = 1.09), GET group mean is 2.86 (SD = 1.19), $F(1, 4079) = 15.49, p < .00$ - a mean difference of -.23. It is clear that SETs perceive that their work environments lack some key elements that previous research has concluded increases teacher retention (Bluedorn, 1982; Cotton & Tuttle, 1986; Currivan, 1999; Ferris & Kacmar, 1992; Hulin, 2002; Ingersoll, 2001; Waters & Roach, 2006).

Comparing and contrasting teacher subgroups by significant variables

The entire teacher workforce is composed chiefly of; stayers who are about 32 years of age, white, female, elementary teachers with regular certification. They typically have been employed in the schools for close to a dozen years and earn approximately \$31,700 annually. They most often teach at schools in a suburban community. The data

analysis indicates that there are differences between the teacher subgroups. These differences among teacher subgroups, though statistically reliable and potentially important, are not substantial in size.

Table 6 reports the proportions of the independent variables clustered as teacher demographics and employment factors across teacher subgroups for nominal variables. It is important to note that the GET leaver group has some data missing for the teacher certification variables. The data for all teacher certification variables of the GET leavers represents only 65% of the GET leaver sample. The variable Years Taught is not nominal; therefore is not included on Table 6. This analysis finds that SET stayers have taught the longest ($M = 12.46$, $SD = 7.09$) followed by GET stayers ($M = 12.05$, $SD = 7.83$), SET leavers ($M = 11.86$, $SD = 6.93$), GET movers ($M = 8.74$, $SD = 6.55$), SET movers (8.31 , $SD = 6.48$), and GET leavers (7.62 , $SD = 6.73$). The typical teacher of the sample has taught for approximately 12 years ($M = 11.50$, $SD = 7.71$).

Stayers. The GET stayers are the largest subgroup in the study; therefore the group means of the independent variables of the GET stayer sample are congruent with the group means of the entire sample for many of the independent variables. They are between 32 and 33 years of age, are predominately white female experienced teachers with regular certification and most often teach in elementary schools in suburban communities. In the educational system, longevity and education determine salary. Since stayers have more teaching experience and most often have regular certification, they earn the higher salaries. The three categories of salary yield interesting results in comparing SETs to GETs. Fifty one percent of the SET stayers are in the highest salary

Table 6

Independent Variables of SET and GET Subgroups and the entire teacher sample proportions

Independent Variables	SET Stayer N =358	SET Mover N =57	SET Leaver N = 35	GET Stayer N = 3, 051	GET Mover N = 328	GET Leaver N = 251	All Teachers N = 4080
Urban	25%	31%	31%	28%	30%	30%	28%
Suburban	54%	52%	63%	50%	49%	49%	50%
Rural	21%	17%	06%	22%	20%	21%	21%
Gender- Female	80%	91%	87%	75%	80%	76%	76%
Elementary teachers	66 %	79%	59%	63%	71 %	58%	63%
Experienced Teacher	88%	57%	80%	79%	69%	64%	78%
Teacher Age Approx	33 yrs.	30 yrs.	32 yrs.	32 yrs.	29 yrs.	29 yrs.	32 yrs.
Salary							
< \$30,000	12%	25%	20%	20%	24%	43%	22%
\$30,0039,000	26%	50%	28%	39%	48%	31%	39%
> \$40,000	51%	25%	52%	41%	31%	27%	39%
White	86%	88%	69%	85%	83%	88%	85%
African American	09%	06%	21%	06%	07%	05%	06%
Hispanic	04%	05%	07%	06%	05%	05%	06%
Asian	01%	01%	00%	02%	04%	01%	02%
Native American	00%	00%	03%	01%	01%	01%	01%
Regular Certification	88%	72%	76%	83%	80%	52%	81%
Probationary Certification	08%	06%	07%	06%	09%	04%	06%
Provisional Certification	01%	06%	03%	.03%	04%	04%	03%
Temporary Certification	.01 (.11)	.02 (.13)	.04 (.19)	.01 (.09)	.01 (.10)	.04 (.20)	.01 (.10)
Emergency Certification	.02 (.13)	.00 (.00)	.00 (.05)	.01 (.08)	.01 (.09)	.01 (.08)	.01 (.09)

bracket for this study, while only 41% of the GET stayers make over \$40,000 annually. Conversely, only 12% of SET stayers earn less than \$30, 000 compared to 20% of the GET stayers. As shown on Table 7, SET and GET stayers have different views of the organizational conditions at their schools. There are four organizational conditions in which the SET and GET stayers differ significantly; Appropriate Student Behavior $F(1, 3409) = 63.64, p. = .00$, Influence $F(1, 3409) = 22.42, p. = .000$, Administrative Support $F(1, 3409) = 9.89, p. = .00$, and Collaboration $F(1, 3409) = 8.73, p. = .00$. For every one of these variables, SET stayers have a lower group mean than GET stayers. It appears that SET stayers are not as satisfied with the behavior of their students, influence

Table 7

Univariate Means and Standard Deviations, F statistic, and significance of the Weighted Sample for Organizational Conditions by SET and GET Stayers

Organizational Conditions	SET Stayer Group Means	GET Stayers Group Means	F	Significance
Appropriate Student Behavior	2.58 (1.19)	3.18 (1.36)	63.65	.00
Influence	2.58 (1.04)	2.88 (1.17)	22.42	.00
Administrative Support	3.58 (1.27)	3.80 (1.25)	9.89	.00
Collaboration	3.03 (1.30)	3.25 (1.31)	8.73	.00
Teacher Autonomy	4.21 (.88)	4.26 (.89)	1.04	.31

regarding school wide policies and procedures, collaboration with other teachers, and support from their administrators as GET stayers.

Movers. SET movers are distinct from the typical teacher in the nation in a few keys aspects. They are younger, have less teaching experience and have one of the

greatest representations of teachers with provisional certification and have the greatest percentage of teachers in the lowest salary bracket. The GET mover has the greatest representation of Asian teachers in the sample.

The average SET mover is 30 years of age (M on the survey scale = 2.01 which converts to about 30 years of age, SD = .88); whereas the GET movers are, on average, under 30 years of age (M on the survey scale = 1.92 which converts to about 29 years of age, SD = .82). The movers are among the least experienced teachers of the sample. Only 57% of the SET movers and 69% of the GET movers are experienced; whereas 78% the entire sample is experienced. The movers have taught an average of between 8 and 9 years (SET movers M = 8.31, SD = 6.48; GET movers M = 8.74, SD, 6.55) which is about 3 years less than the typical teacher (M = 11.50, SD = 7.71). Both mover samples have the greatest frequency of teachers with provisional certification; 6% of SET movers, 4% of GET movers compared to 3% of all teachers have this certification. Both mover subgroups have a greater percentage of educators earning less than \$30,000 a year than the typical teacher in the nation; SET movers 26%, GET movers 24%, All teachers 22%. They have a lower percentage of teachers who are in the highest salary bracket than the average teacher; SET mover 25%, GET movers 31%, All teachers 39%.

Unique to the GET mover sample is the representation of Asian teachers. Four percent of the GET movers are Asian teachers. This is four times greater than the SET movers (1%), and two times greater than the average mover of all teachers (2%).

The responses of SET and GET movers to the survey questions regarding their school environments are all above the 2.5 average of the Likert scale. Table 8 shows the

SET and GET movers group means and standard deviations, the F statistic, and significance for the weighted sample on the five organizational condition questions. There is no difference that is significant between SETs and GETs movers for all organizational conditions.

Table 8

Univariate Means and Standard Deviations, F statistic, and significance of the Weighted Sample for Organizational Conditions by SET and GET Movers

Organizational Conditions	SET Move Group Means	GET Mover Group Means	F	Significance
Administrative Support	3.37 (1.37)	3.06 (1.52)	2.04	.15
Collaboration	3.34 (1.37)	3.13 (1.40)	1.03	.31
Appropriate Student Behavior	2.71 (1.47)	2.82 (1.44)	.33	.57
Teacher Autonomy	3.93 (1.10)	3.89 (1.20)	.06	.81
Influence	2.60 (1.24)	2.60 (1.27)	.00	.98

Leavers. The leavers of this study have the greatest representation of teachers with temporary certification. Although most leavers are elementary school teachers, they have the greatest representation of secondary teachers of all subgroups. SET leavers are unique because they have a greater frequency of African Americans, Hispanics, and Native Americans than the national sample. GET leavers are distinct from the average teacher in that they are younger, have less teaching experience, and earn lower salaries than other teachers.

Four percent of SET leavers as well as 4% of the GET leavers have temporary certification. This is four times greater than the average teacher of the sample of 1%...

Leavers have the lowest percentage of teachers within the sample providing instruction at elementary schools; 59% of the SET leavers, 58% of the GET leavers compared to the national average of 63%.

An interesting finding of this analysis is that SET leavers have the largest representation of teachers of color. Twenty-one percent are African American teachers compared to 6% of African Americans among all teachers. Seven percent of SET leavers are Hispanic whereas, all Hispanics among all teachers comprise 6%, and three percent of SET leavers are Native American compared to 1% of the teachers in the nation.

The typical GET leaver is the youngest teacher of all subgroups; the average GET leaver is 3 years younger than typical teacher. GET leaver is 29 years old (M on the scale is 1.91, which converts to about 29 years of age, $SD = .82$) compared to 32 years of age for the average teacher. GET leavers have been providing educational services for an average of more than 7 years ($M = 7.62$, $SD = 6.73$) which is approximately four years less than the average teacher of the sample (All teachers $M = 11.50$, $SD = 7.71$). Considering the current research which states that teachers often leave teaching because they are dissatisfied with their salary (Allen, 2005; Billingsley, 1993; Bobbitt et al., 1994), it is not remarkable that a greater percentage of GET leavers are in the lowest salary bracket than the average teacher for the sample; GET leavers 43%, All Teachers 22%. Only 27% of GET leavers are in the highest salary bracket compared to 39% of the typical teacher in the nation.

A surprising finding of this analysis is that SET leavers do not seem to fit the profile of the typical leavers provided by other studies in that leavers are the less

experienced and the lowest paid teachers (Billingsley, 2004, Brownell, Bishop, & Sindelar, 2005; Ingersoll, 2001). They have the greatest percentage of teachers in the highest salary bracket of all subgroups and a greater percentage than the average teacher of the entire teacher sample; SET leavers 52%, All teachers 39% earn over \$40,000 annually. They also have a lower percentage of teachers in the lowest salary bracket than the typical teacher of the nation; SETs 20%, All teachers 22%. They have been providing educational services for an average of 11 years ($M = 11.86$, $SD = 6.93$) which is slightly greater than the typical teacher ($M = 11.50$, $SD = 7.71$). SET leavers have been teaching for a longer period of time than the average teacher in the sample, yet they have a greater group mean for temporary certification than all teacher subgroups. It seems that SET leavers remain in the classroom for a considerable length of time, but some do not complete the educational requirements to earn the appropriate certification.

Within the leaver sample, the average mean score for every organizational condition is above the mid-point on the question scales provided by the TFS. Table 9 shows the SET and GET leavers and complete teacher sample group means and standard deviations, F statistic and significance for the weighted sample on the five organizational condition questions. In comparing the SET and GET leavers there are no organizational conditions that differ significantly between them.

Table 9

Univariate Means and Standard Deviations, F statistic, and Significance of the Weighted Sample for Organizational Conditions by SET and GET Leavers

Organizational Conditions	SET Leavers Group Means	GET Leavers Group Means	F	Significance
Teacher autonomy	4.32 (.68)	4.05 (1.16)	1.83	.18
Influence on decisions	3.25 (1.17)	2.97 (1.27)	1.50	.22
Appropriate student behavior	3.31 (1.26)	3.06 (1.39)	.98	.32
Collaboration	3.33 (1.42)	3.18 (1.43)	.37	.55
Administrative support	3.77 (1.54)	3.66 (1.46)	.16	.69

Discriminant Function Analysis

All independent variables categorized as either teacher demographics, employment or organizational conditions are entered simultaneously into a discriminant analysis to identify that combination of variables that most effectively discriminates among the teacher subgroups. The results of the DFA will either confirm or refute hypotheses three, four, and five.

There are six subgroups to discriminate in this analysis and 24 predictor variables; therefore, there are five possible dimensions of discrimination. Three of the five dimensions were found to be significant $p < .000$. These three functions provide the maximum discrimination among the groups. Since functions four and five are not statistically reliable they are not in the analysis of the discriminant function results. The pairwise comparisons reliably identify differences among the six subgroups. These differences are not seen at the individual teacher level but they can be used to identify the overall tendency among the subgroups.

Table 10 shows the pairwise comparisons for the six subgroups. Comparing the SET and GET subgroups, the two stayer groups are different $F(1, 4075) = 9.84, p = .00$, and the leaver groups differ significantly $F(1, 4075) = 3.36, p = .00$. The SET and GET mover groups do not differ significantly from each other $F(1, 4075) = 1.12, p = .34$. Contrasts among the three SET groups indicate that the stayers and movers are the only groups that differ significantly, $F(1, 4075) = 3.94, p = .00$. This difference is modest as the F is only 3.94 this indicates that it is much closer to the threshold for significance than the large differences among the GET groups. Surprisingly, the SET leavers are not different from the GET stayers or the other two SET groups.

Table 10

Pairwise comparisons for all Teacher Subgroups

Subgroups F, p. values	GET Stayer	GET Mover	GET Leaver	SET Stayer	SET Mover	SET Leaver
GET Stayer		18.64,.00	29.25,.00	9.84,.00	4.07,.00	.86, .57
GET Mover	18.64,.00		16.15, .00	11.91, .00	1.12,.34	2.63,.00
GET Leaver	29.25, .00	16.14,.00		27.47, .00	3.30,.00	3.36,.00
SET Stayer	9.84, .00	11.91,.00	27.47, .00		3.94,.00	1.61,.10
SET Mover	4.07, .00	1.12, .34	3.30, .00	3.94, .00		1.49,.14
SET Leaver	.86, .57	2.63, .00	3.36, .00	1.62, .10	1.49,.14	

Table 11 provides the univariate Wilks' Lambda, F statistic, degrees of freedom, and significance for the independent variables. Only those variables whose group means differ at the conservative statistical significance level of .01 are considered as potential variables of discrimination between subgroups.

Table 11

Equality of Group Means for all Independent Variables

Independent Variable	Wilks' Lambda	<i>F</i> Statistic	df	Significance
Regular Certification	.960	33.79	5, 4073	.00
Teaching Experience (years)	.966	28.28	5, 4073	.00
Administrative Support	.974	21.34	5, 4073	.00
Salary	.976	19.61	5, 4073	.00
Teacher Age	.977	18.84	5, 4073	.00
Appropriate student behavior	.980	16.27	5, 4073	.00
Experienced Teachers	.981	15.83	5, 4073	.00
Autonomy	.985	12.52	5, 4073	.00
Influence	.989	9.06	5, 4073	.00
Temporary Certification	.993	5.62	5, 4073	.00
African American	.995	4.27	5, 4073	.00
Elementary teachers	.995	4.07	5, 4073	.00
Gender	.995	3.93	5, 4073	.00
Asian	.997	2.39	5, 4073	.04
Collaboration	.997	2.20	5, 4073	.05
White	.997	2.12	5, 4073	.06
Native American	.998	1.35	5, 4073	.24
Rural	.998	1.29	5, 4073	.27
Provisional Certification	.998	1.29	5, 4073	.27
Emergency Certification	.999	.94	5, 4073	.46
Probationary Certification	.999	.89	5, 4073	.49
Suburban	.999	.89	5, 4073	.48
Hispanic	.999	.78	5, 4073	.57
Urban	.999	.71	5, 4073	.62

The variables are listed in descending order by *F* value. Table 11 indicates that in univariate tests the following variables have a significant ($p < .01$) group mean differences; Regular Certification, Teaching Experience in years, Administrative Support, Salary, Teacher Age, Appropriate Student Behavior, Experienced Teachers,

Autonomy, Influence, Temporary Certification, African American Teacher, Elementary Teachers, and Teacher Gender.

Table 12 reports the Wilks's Lambda, chi-square, degrees of freedom, the p-level, the canonical correlation, and the cumulative squared canonical correlation for each function.

Table 12

Wilks's Lambda and Canonical Correlations for the Six Teacher Subgroups

<i>Function</i>	Wilks's Lambda	χ^2	<i>df</i>	<i>p</i>	R_c	Cumulative R_c^2
1 through 3	.839	714.01	110	.000	.292	8.52%
2 through 3	.917	351.03	84	.000	.217	13.23%
3 through 3	.963	154.62	60	.000	.156	15.66%

The first function has the largest canonical correlation (.292) accounting for 8.52% of the group differences. Function 2 is the next largest canonical correlation (.217) with an effect size of $R_c^2 = 4.71\%$. Function 3 has a canonical correlation of .156 with an effect size of $R_c^2 = 2.43\%$.

The structure matrix (see Table 13) outlines the structure coefficients of the three significant discriminant functions. These indicate how closely each variable is related to each function. For Function 1 labeled, "Status", in the structure matrix, Regular Certification has the strongest correlation (+.612), followed by Teaching Experience in years (+.598), Salary (+.473), Teacher Age (+.472), and Experienced Teachers (+.413).

Table 13

Standardized Discriminant Functions and Structure Coefficients for the Six Subgroups

Independent Variables	Status	Organizational Engagement	Ethnicity
Regular Certification	.612*	.312	.258
Teaching Experience (years)	.598*	-.142	-.106
Salary	.473*	.149	-.263
Teacher Age	.472*	-.177	-.153
Experienced Teachers	.413*	.035	-.317
Rural	.043*	-.026	.023
Administrative Support	.281	-.599*	-.176
Appropriate Student Behavior	.083	-.532*	.442
Influence	.000	-.450*	.093
Autonomy	.319	-.328*	-.140
Elementary teachers	-.014	.280*	.124
Gender	.083	-.218*	.103
Probationary	.003	.143*	.019
Asian	-.037	.106	.265*
Temporary	-.224	-.097	-.246*
African American	.020	.133	-.218*
Collaborate	.026	-.162	.194*
Hispanic	.011	-.089	.143*
Emergency	.021	.096	-.137*
Native American	.036	-.093	.129*
Provisional	-.103	.014	.125*
Suburban	.027	.050	-.121*
Urban	-.069	-.032	.113*
White	-.015	-.052	-.085*

*Note: Largest absolute correlation between each variable and any discriminant function

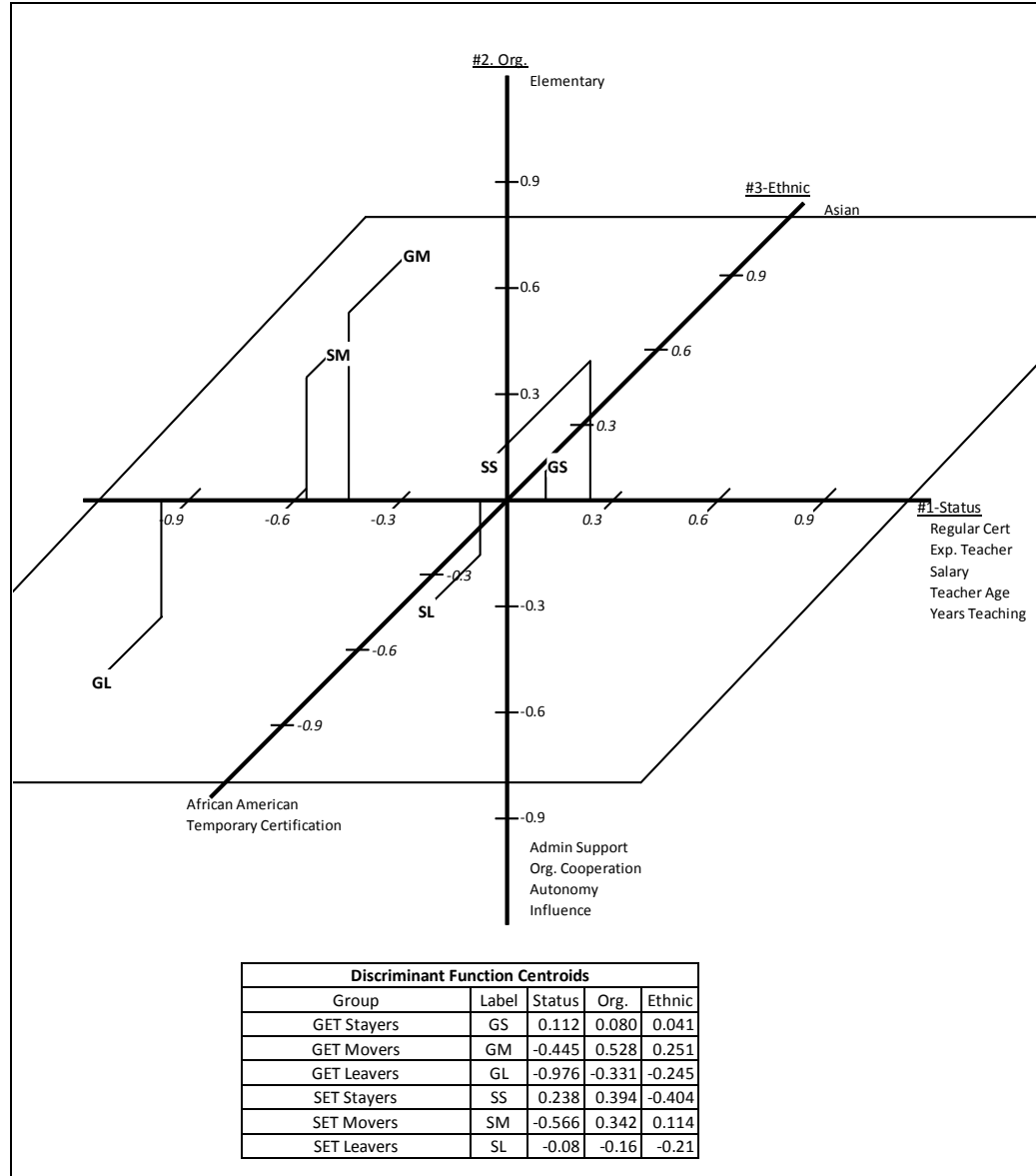
These independent variables are responsible for the largest the separation among the subgroups. These independent variables are positively correlated in this function. For Function 2 (column 3 in Table 13), labeled “Organizational Engagement”, Administrative Support (-.599) has the greatest discriminating power separating the subgroups followed by Appropriate student behavior (-.532), Influence (-.450), Autonomy (-.328), and Elementary teachers (+.280). All but the independent variable Elementary teachers are negatively correlated in this function. For Function 3 (column 4 in Table 13) labeled “Ethnicity”, Asian (+.265), Temporary Certification (-.246) and African American teacher independent variables (-.218) have the greatest correlation. Asian teachers are positively correlated at this function; whereas Temporary and African American teacher are negatively correlated.

Table 14 reports the teacher subgroup centroids by function. Centroids are calculated by applying discriminant weights to the group mean for each independent variable (Sherry, 2009). Figure 1 is a plot of the group centroids. On the Status function, (column 2 in Table 14) the centroid for SET Stayers (+.238) and GET stayers (+.112) have the greatest positively correlated centroids of the teacher subgroups. This indicates that SET Stayers and GET Stayers are more likely to have regular certification, make higher salaries, be older more experienced teachers who have been teaching longer than other subgroups of the study. Conversely, the GET leavers (-.976), GET Movers (-.445), and SET Movers (-.566) have the greatest negatively correlated centroids for the Status function. This indicates that these subgroups are least likely to be experienced, have regular certification, earn higher salaries, and be older teachers.

On the Organizational Engagement Function (column 3 Table 14), the centroid for GET leavers (-.331) and SET leavers (-.16) have the greatest negatively correlated group centroids. The independent variables on this function are negatively correlated with the exception of Elementary teachers. As a result, these subgroups are most likely to believe that they experience administrative support, appropriate student behavior, autonomy, and influence at their workplace. Since Elementary school teachers is positively correlated at this function, GET and SET leavers are most likely not to be elementary teachers. In contrast, GET Movers (+.528) and SET Stayers (+.394) and SET Movers (+.342) have the greatest positively correlated centroids than other teacher subgroups. This indicates that GET Movers, SET Stayers, and SET Movers are least likely to believe that they have, administrative support, appropriate student behavior, autonomy, and influence at their schools. They are most likely to be elementary school teachers.

On the Ethnicity Function (column 4 Table 14), SET Stayers (-.404) GET Leavers (-.245) and SET Leavers (-.212) have the greatest negative correlations. The independent variables of Temporary Certification and African American teacher are also negatively correlated; whereas Asian teachers are positively correlated. SET Stayers, GET Leavers, and SET leavers are more likely to be African American teachers with temporary certification and less likely to be Asian. GET movers (+.251) and SET movers (+.114) have the greatest positive centroids of all subgroups. As a result, SET and GET movers less likely to be African American and have temporary certification and more likely to be Asian.

FIGURE 1: SET and GET Centroids



Hypothesis three predicts that the SET mover and leaver subgroups will be younger and have a greater representation of white, females than the GET movers and leavers. Many teacher retention studies conclude that teachers with a greater rate of turnover are most often young white females (Allen, 2005; Cotton & Tuttle, 1986; Grissmer & Kirby, 1987; Heyns, 1988). Hypothesis three is not supported by the analysis. The teacher demographics of ethnicity and age are the only significant predictors among the subgroups. Although the variable gender is significant its coefficient is not large enough to substantially separate the teacher groups. Also this analysis finds that there are no significant differences between the SET and GET leavers and the SET and GET movers regarding age and teacher ethnicity. SET and GET movers and SET and GET leavers were more likely to be younger teachers of color. The leavers of both samples are more likely to be African Americans; whereas the movers are more likely to be Asian.

The results of the DFA do not confirm hypothesis four which states that SET movers and leaves will have less teaching experience, earn lower salaries, and have a greater a representation of secondary teachers with alternative certification, who are more likely to have worked at urban schools than GET movers and leavers. Retention studies indicate that those teachers who decide to leave the profession or their school sites for another teaching position are most often new secondary teachers who do not have regular certification and earn lower salaries than stayers (Boe et al., 1997; Gritz & Theobald 1996; Miller, et al., 1999). All variables with the exception of school community are significant predictors among SET and GET subgroups. The multivariate analysis finds

that there is no significant difference between the SET and GET movers and SET and GET leavers. The movers and leavers of both teacher samples are least likely to have teaching experience, regular certification, and earn higher salaries. SET and GET leavers are more likely to have temporary certification, while SET and GET movers are not. The movers are more likely to be elementary school teachers; while the leaver sample is less likely to be elementary school teachers.

Hypothesis five predicts that SET leavers are not as satisfied as GET leavers with administrative support, classroom autonomy, collaboration, appropriate student behavior, and influence regarding school wide policies and procedures on their campus. This analysis does not support this hypothesis in two ways. First, the organizational condition of collaboration is not a significant predictor; whereas all other variables significantly discriminant among subgroups. Second both SET and GET leavers were relatively more satisfied with the organizational conditions at their schools than the other subgroups, although it should be noted that the GET leaver's centroid (-.331) is twice as negative as the SET leaver's centroid (-.0.16) which indicates that the GET leavers may be relatively more satisfied with their work place conditions.

Hypothesis six predicts that secondary SETs are not as satisfied as elementary SETs with administrative support, classroom autonomy, collaboration, appropriate student behavior, and influence regarding school wide policies and procedures on their campus.

The literature review of this study includes that retention research substantiates that there are differences between the roles and responsibilities elementary and secondary SETs. This research suggests that providing services for special needs students is more complex at the secondary level (Anderson, Kutash, & Duchnowski, 2001). Studies have also concluded that there is strong evidence that attrition is greater among secondary teachers compared to elementary school teachers Allen (2005). The results of a univariate test of group differences found that Appropriate Student Behavior is the only variable that separated the elementary from secondary at the level of $p < .01$. Table 15 shows the Wilks' Lambda, F statistic, mean differences, degrees of freedom, and significance of each variable.

The one dimension of discrimination in the DFA reported in Table 15 is

Table 15

Equality of Group Means for Elementary and Secondary SETs

Organizational Conditions	Wilks' Lambda	F	df	Sig.
Appropriate Student Behavior	.984	7.366	1, 447	.007
Collaborate	.995	2.215	1, 447	.137
Influence	.996	1.787	1, 447	.182
Autonomy	.998	.700	1, 447	.403
Administrative Support	.999	.250	1, 447	.617

significant at the $p < .01$. This function provides the maximum separation between elementary and secondary SETs. The pairwise comparison reliably identifies differences

between the elementary and secondary SETs $F(1,397) = 6.19, p = .00$. Table 16 shows the pairwise comparisons for elementary and secondary SETs.

Table 16

Pairwise Comparisons for Elementary and Secondary SETs.

SET Subgroups F, Significance	SET Elementary Teachers
SET Secondary Teachers	6.19, .00

Table 17 reports the Wilks' Lambda, chi-square, degrees of freedom, the p-level, the canonical correlation, and the squared canonical correlation for the function.

Table 17

Wilks's Lambda and Canonical Correlations for Elementary and Secondary SETs

<i>Function</i>	Wilks' Lambda	χ^2	<i>df</i>	<i>p</i>	R_c	Cumulative R_c^2
1	.961	17.61	5	.003	.197	4%

The function has the canonical correlation of .197 accounting for 4% of the group differences. Table 18 shows the standardized discriminant functions and structure coefficients for the samples. For this function the variable of Appropriate Student Behavior (-.639) is responsible for the greatest discrimination between elementary and secondary SETs. This independent variable is negatively correlated on this function

Table 18

Standardized Discriminant Functions and Structure Coefficients for Elementary and Secondary Organizational Conditions

Independent Variables	Organizational Conditions
Appropriate Student Behavior	-.639
Collaboration	.350
Influence	.315
Autonomy	.197
Administrative Support	.118

The group centroids for elementary and secondary SETs are shown on Table 19. The group centroid for elementary SETs is -.140. It is negatively correlated; therefore elementary SETs are more likely to believe that student behavior at their schools is satisfactory. The group centroid for secondary SETs is +.287. Since this variable is positively correlated at this function, secondary SETs are less likely to believe that the students at their schools have satisfactory behavior. Figure 2 is a plot of the group centroids.

This finding supports hypothesis six in that appropriate student behavior does significantly separate the elementary from the secondary SETs. This variable is in the hypothesized direction. While most teachers of the study teach at elementary schools, the univariate analysis finds that secondary SETs have the smallest group means for elementary schoolteacher. The literature states that secondary teachers have a greater rate of attrition (SETs have a greater rate of attrition than of secondary teachers than the

SET stayers and movers. When comparing the two SET teacher groups, it appears that secondary SETs believe that their students are not as well behaved as elementary SETs.

FIGURE: 2. Elementary and Secondary SET by Organizational Conditions

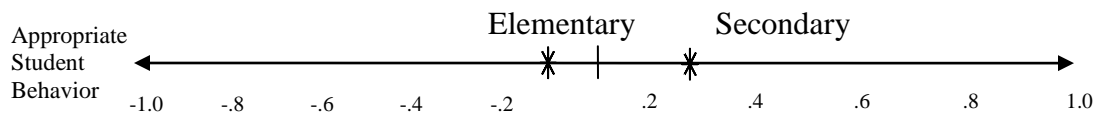


Table 19

Group Centroids for Elementary and Secondary SETs

Dependent Variable	Appropriate Student Behavior
Elementary SETs	-.140
Secondary SETs	.287

According to Ingersoll's (2001) study, the student discipline problems are strongly tied to teacher turnover. Lopes et al., (2004), found that educators felt that older students created more of a behavioral challenge compared to younger students.

To further explore the differences among the SET stayers, movers, and leavers, this study conducted a DFA that included the same 24 independent variables used in the DFA of the six subgroups and removed all GETs. Examining the pairwise comparisons, we can see that there are differences among the three subgroups that are significant.

Table 20 reports the pairwise comparisons for the SET subgroups. The SET stayers significantly differ from movers, $F(2, 396) = 11.77$, $p = .00$, and leavers $F(2, 396) =$

8.84, $p = .00$. The SET movers significantly differ from leavers, $F(2, 396) = 8.51$, $p = .00$. All SET subgroups significantly differ from each other.

Table 20

Pairwise Comparisons for SET Subgroups

SET Subgroups F, Significance	SET Stayer	SET Mover	SET Leaver
SET Stayer		11.77,.00	8.84,.00
SET Mover	11.77,.00		8.51,.00
SET Leaver	8.84,.00	8.51, .00	

Table 21 reports the equality of group means among the SET subgroups. Only those independent variables whose groups means differ at the conservative statistical significance level of .01 are considered as potential variables of discrimination between subgroups.

The results of a univariate test of group differences found that Experienced teachers, Teaching Experience (years of teaching), Salary, Influence, Native American Teachers, Regular Certification, and Appropriate Student Behavior differ between subgroups at the level of $p < .01$.

There are two possible dimensions of discrimination. Both dimensions are found to be significant $p < .00$. Table 22 reports the Wilks's Lambda, chi-square, degrees of freedom, the p - level, the canonical correlation, and the cumulative squared canonical correlation for each function.

Table 21

Equality of Group Means for SET Subgroups

Independent Variables	Wilks' Lambda	F	df	Sig.
Experienced Teacher	.926	17.786	2, 446	.000
Teaching Experience	.963	8.607	2, 446	.000
Salary	.966	7.781	2, 446	.000
Influence	.972	6.351	2, 446	.002
Native American	.975	5.772	2, 446	.003
Regular Certification	.975	5.768	2, 446	.003
Appropriate Student Behavior	.975	5.625	2, 446	.004
White	.983	3.942	2, 446	.020
Teacher Age	.986	3.157	2, 446	.043
African American	.986	3.131	2, 446	.045
Autonomy	.987	2.997	2, 446	.051
Rural	.988	2.678	2, 446	.070
Gender	.990	2.290	2, 446	.102
Provisional	.991	2.025	2, 446	.133
Collaboration	.991	1.920	2, 446	.148
Administrative Support	.995	1.108	2, 446	.331
Temporary Certification	.997	.778	2, 446	.460
Urban	.997	.704	2, 446	.495
Emergency Certification	.997	.679	2, 446	.508
Suburban	.997	.611	2, 446	.543
Hispanic	.997	.581	2, 446	.560
Asian	.999	.145	2, 446	.865
Probationary Certification	1.000	.039	2, 446	.961

The first function has the largest canonical correlation (.275) accounting for 7.5% of the group differences. Function 2 is the next largest canonical correlation (.229) with an effect size of $R_c^2 = 5.24\%$.

Table 22

Wilks's Lambda and Canonical Correlations for SETs Subgroups

<i>Function</i>	Wilks' Lambda	χ^2	<i>df</i>	<i>p</i>	R_c	Cumulative R_c^2
1	.876	59.00	6	.000	.275	7.5%
2	.948	23.90	2	.000	.229	12.74%

The structure matrix (see Table 23) shows the structure coefficients of the two significant discriminant functions. These coefficients indicate how closely each variable is related to each function. For Function 1 labeled, "Status", in the structure matrix, Experience Teacher has the strongest correlation (+.961), followed by Teaching Experience in years (+.515), Teacher Age (+.455), and Salary (+.254). These independent variables are responsible for the largest the separation among the subgroups and they are all positively correlated on this function. For Function 2 labeled "Organizational Engagement", Influence has the strongest correlation (+.674) followed by Native American (+.634), Appropriate Student Behavior (+.257), and Administrative Support (+.264). These variables are all positively correlated on this function.

Table 24 reports the teacher subgroup centroids by function. Figure 3 is a plot of

Table 23

Standardized Discriminant Functions and Structure Coefficients for SETs Subgroups

Structure Coefficients	Teacher Status	Organizational Engagement
Experienced Teacher	.961*	.267
Teaching Experience	.515*	.204
Teacher Age	.455*	.093
Salary	.254*	.217
Regular Certification	.176*	.170
Hispanic	-.142*	-.025
Probationary Certification	-.139*	-.024
White	.122*	-.084
Provisional Certification	-.085*	-.035
Black	-.025*	-.020
Influence	-.205	.674*
Native American	-.213	.634*
Appropriate Student Behavior	.013	.257*
Administrative Support	-.133	.246*
Collaboration	-.123	.188*
Gender	.020	.128*
Autonomy	-.018	.125*
Temporary Certification	.027	-.117*
Emergency Certification	.051	-.114*
Asian	.027	.089*
Urban	-.033	.071*
Rural	.040	-.052*
Suburban	-.003	-.021*

the group centroids. On the Teacher Status Function (column 2 Table 24), the centroid for SET stayers (+.138) is positive as is all the coefficients for that function; therefore, SET

FIGURE 3: SET Centroids

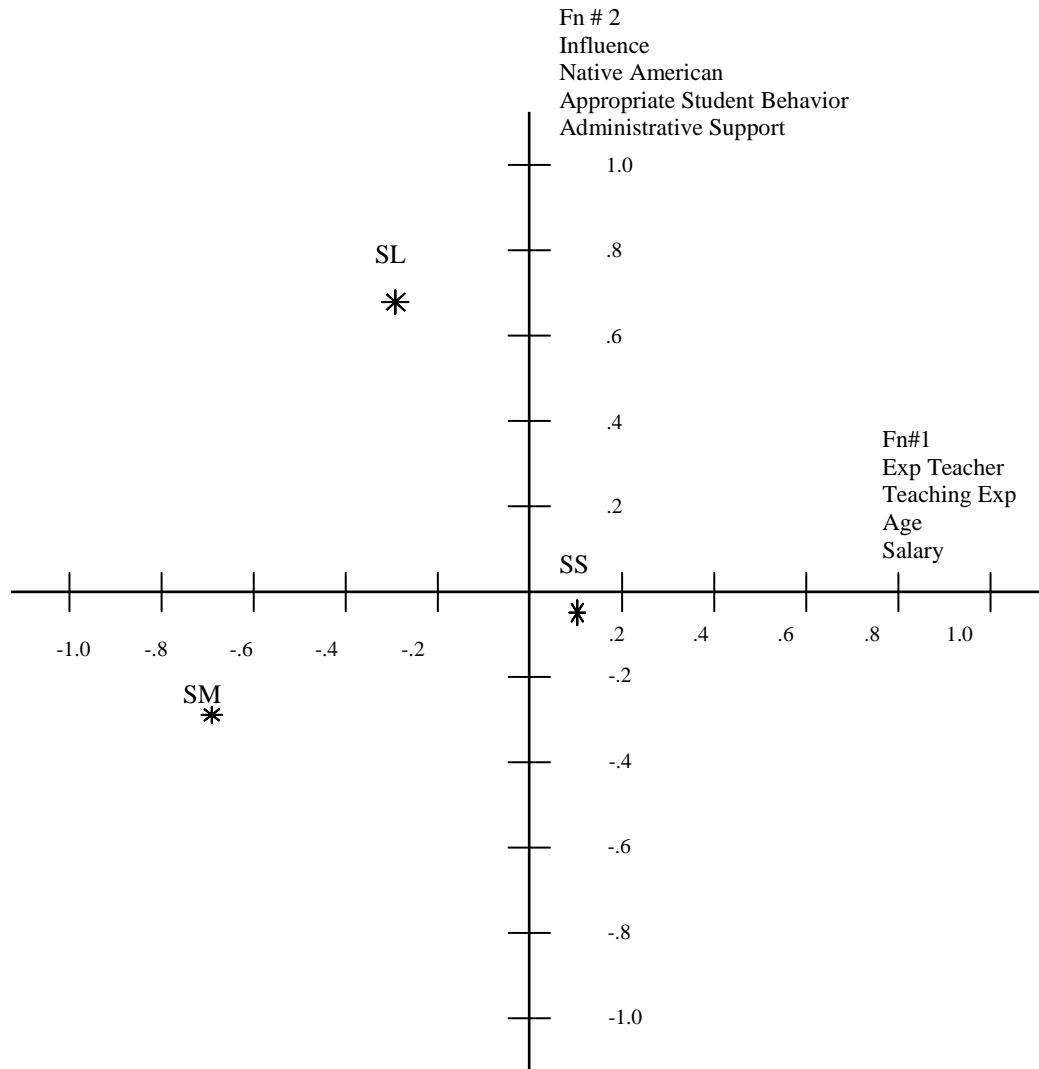


Table 24.

Group Centroids for SETs

Dependent Variable	Teacher Status Centroids	Organizational Engagement Centroids
SET Stayers	.138	-.035
SET Movers	-.686	-.254
SET Leavers	-.304	.768

stayers are more likely to be experienced older teachers with the greatest frequency of years taught and earn greater salaries than the other subgroups. On this function, the SET movers (-.686) and leavers (-.304) have negative centroids; therefore they are less likely to be older experienced teachers who earn higher salaries than stayers. On the Organizational Engagement function (column 3 Table 24), the SET leavers have the greatest positive group centroid (.768). Since the coefficients are all positive on this function, leavers are most likely to be Native Americans who believe that they have administrative support, influence regarding school wide decision making, and that student behavior is not a problem on their campus. SET stayers (-.035) and movers (-.254) have negative centroids on this function; therefore they are less likely to be Nation American, perceive that they have administrative support, influence, and that their students demonstrate appropriate behavior.

In summary, the DFA of all subgroups finds that the stayers, movers and leavers of both teacher samples are similar for the variable clusters of teacher demographics, employment, and organizational conditions. The GET and SET stayers are more likely to be older experienced Asian elementary school teachers who have regular certification, and earn the greater salaries. SET and GET stayers they are less likely to believe that their work environments are satisfactory. The SET and GET movers and leavers are young, inexperienced, teachers of color, lacking regular certification, who earned substantially lower salaries than the stayers. The movers are more likely to be Asian and elementary school teachers; whereas the leavers are least likely to teach at elementary schools and more likely to be African Americans. Both GET and SET leavers are

generally more likely to be satisfied with the organizational conditions at their schools, conversely GET and SET movers are not. Although most teachers of the study teach at elementary schools, the univariate analysis finds that secondary SETs have the smallest group means for elementary teachers; hence the SET leavers have a greater frequency of secondary teachers than the stayers and movers. When comparing the two SET teacher groups, it appears that secondary SETs believe that their students are not as well behaved as their elementary colleagues. There were many similarities and very few differences in the results of the DFA using all six subgroups compared to the DFA including only the SET sample.

When the GETs are removed from the DFA, the variables of temporary certification, Asian and African American teachers, Elementary teachers, and Autonomy did not differ significantly among the SET subgroups. The variable Regular Certification did differ significantly among the subgroups, but its coefficient is not large enough to provide a strong separation of the groups. The only variable with a coefficient large enough to separate the SET stayers, movers, and leavers that differs from the six group DFA is Native Americans.

In multivariate analysis of the SET group, as in the DFA including all teachers, the SETs stayers are more likely to be the oldest most experienced teachers and earn the highest salaries, with both the movers and leavers least likely to be older, veteran teachers and earn higher salaries. Consistent with the results of the six group DFA, the leavers are most likely to believe they have school wide influence, well behaved students, and

supportive administrators; whereas the movers and stayers are mostly likely not to believe they experience these organizational conditions. Unlike the results of the six groups DFA, leavers are more likely to be Native Americans and movers and stayers are not. It is interesting to note that even though the subgroups do significantly differ from each other as supported by the pairwise analysis, there are many similarities between the GET and SET stayers, GET and SET movers, and GET and SET leavers.

CHAPTER V

Factors influencing teacher subgroups membership

This study has determined that there are independent variables that discriminate between the SET and GET subgroups. This study also includes analyses of those independent variables that influence a teacher's retention decision. These variables are examined to determine if the reasons for leaving, teacher commitment, household dependents, earned Master's degree, and reasons for moving significantly discriminate between SET and GET subgroups. Table 25 reports the TFS items associated with each independent variable and how each variable is coded and measured.

Table 25

Factors Influencing Retention Decisions

Variables	TFS Prompt, Measure and Code
Reasons for leaving the Profession	The question stem is "Using the scale, indicate the level of importance each of the following played in your decision to leave the teaching profession." The Likert scale for the response items is as follows; 1 = "Not at all important", 2 = "Slightly important", 3 = "Somewhat important", 4 = "Very important", 5 = "Extremely important". The survey response items include the following; pregnancy/child rearing, health, retirement, teaching in a different state, laid off or involuntarily transferred, sabbatical, better salary and benefits, pursue another career within education, pursue another career outside education, little support from school community, dissatisfied

Additional Variables Used in the Study Continued

Variables	TFS Prompt, Measure and Code
Reasons for leaving the Profession continued	description or responsibility, feeling of being unprepared to implement new reform measures, do not agree with new reforms, and other family or personal reasons.
Teacher Commitment	The question stem is “How long do you plan to remain in teaching?” The Likert scale includes the following response choices; 1 = “As long as I am able”, 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 possible”.
Household Dependents	The question stem is “How many persons, including children, are dependent upon you for more than half of their financial support?” This is a continuous variable.
Masters Degree	The question stem is, “Do you have a Master’s Degree?” 1 = “Yes” and 2 = “No”
Reasons for Moving	The question stem is, “Using the following scale, how important was each of the following reasons to your decision to leave last year’s school.” The Likert scale includes the following response choices; 1 = “Not at all important”, 2 = “Slightly important”, 3 = “Somewhat important”, 4 = “Very important”, 5 = “Extremely important”. The survey items include the following; change of residence, better salary and benefits, job security, opportunity for better teaching position (subject or grade level), dissatisfaction with workplace conditions (facilities, classroom resources, school safety, student behavior, parent and community support), dissatisfied with support from administrators,

Additional Variables Used in the Study Continued

Variables	TFS Prompt, Measure and Code
Reasons for Moving	dissatisfied with changes in job descriptions or responsibilities, did not feel prepared to implement new reforms, did not agree with the new reforms, laid off or involuntarily transferred, did not have enough autonomy, dissatisfied with opportunity for professional development, dissatisfied with last year's school for other reasons not detailed in the survey.

Reasons for leaving

Research hypothesis seven asserts that a Discriminant Function Analysis of the reasons for leaving the profession will substantially identify independent variables that reliability predict SET and GET leaver group membership. Table 26 shows the group mean, grand mean, the group means differences, standard deviation for all mean scores, *F* statistic, and significance for the variables. The greater the group mean the more important the variable is in a teacher's decision to exit the profession. This table reports the independent variables listed in descending order, of the absolute value of the mean differences between the groups. The degrees of freedom for each variable are 1 and 285.

The results of a univariate test of group differences concludes that of the reasons for leaving only one is found to be significant at the p-value of .01 or less. This independent variable is retirement. SET Leavers have the greatest group mean for this

variable (SET M = 1.55, SD = 1.39, GET M = 1.13, SD = .60); therefore they stated that they left the profession to retire significantly more often than GET leavers.

There are variables, other than retirement, approaching the acceptable p-value

Table 26

Test of Equality of Group Means for Reasons for Leaving

Independent Variables	<i>Group Mean SET (SD)</i>	<i>Group Mean GET (SD)</i>	<i>Grand Means</i>	<i>Mean Differ</i>	<i>F</i>	<i>Sig.</i>
Another Career	1.77(.28)	2.47(1.66)	2.33(1.67)	-.70	5.84	.02
Personal	1.68(1.08)	2.36(1.69)	1.36(.93)	-.68	5.31	.02
Changed Residence	1.13(.61)	1.67(1.37)	1.61(1.31)	-.54	5.26	.02
Career Opportunity Out of Ed	1.21(.74)	1.67 (1.31)	1.61(1.27)	-.46	3.97	.05
Retirement	1.55(1.39)	1.13(.60)	1.18(.75)	+.42	10.30	.00
Pregnancy and child care	1.81(1.42)	2.21(1.76)	2.16(1.73)	-.40	1.66	.20
Sabbatical	1.31(.90)	1.71(1.31)	1.66(1.27)	-.40	2.94	.09
Health	1.14(.63)	1.47(1.17)	1.43(1.12)	-.33	2.70	.10
Better Salary and Benefits	2.58(1.66)	2.30(1.67)	2.33(1.67)	+.28	.87	.35
Dissatisfied Job Description	1.55(.92)	1.81(1.29)	1.78(1.25)	-.26	1.34	.25
Unprepared for New Reforms	1.14(.59)	1.30(.81)	1.28(.80)	-.16	1.20	.28
Little Support Community	1.33(.68)	1.49(1.04)	1.47(1.00)	-.16	.76	.38
Laid Off	1.08(.51)	1.20(.81)	1.18(.78)	-.12	.69	.41
Different State –No Reciprocity	1.04(.37)	1.13(.62)	1.12(.60)	-.09	.56	.46
Career Opportunity in	1.44(1.14)	1.52(1.18)	2.39(1.64)	-.08	.14	.71
Do not Agree with New Reform	1.29(.85)	1.37(.94)	1.36(.93)	-.08	.25	.62
Dissatisfied w/Job Responsibilities	1.51(.95)	1.57(1.12)	1.56(1.10)	-.06	.10	.76

established in this study. These variables are Another Career (p = .02), Personal Issues (p = .02), a Change of Residence (p = .02) and Opportunity for Career outside of education (p = .05). GETs have the greater group mean for all these variables; Another Career (GET M = 2.47, SD = 1.66, SET M = 1.77, SD = .28), Personal Issues (GET M =

2.36, SD = 1.69, SET M = 1.68 , SD = 1.08), Change of Residence (GET M =1.67, SD = 1.37, SET M = 1.13, SD = .61) and Career Opportunity Outside Education (GET M = 1.67, SD = 1.31, SET M = 1.21, SD = .74).

The pairwise comparison indicates that the SET leavers differ significantly from the GET leavers $F(1, 285) = 6.74, p = .00$. Table 27 reports the pairwise comparison.

Table 27

Pairwise Comparisons for SET and GET Leavers

SET Subgroups F, Significance	GET Leaver
SET Leavers	6.74, .00

The one dimension of discrimination in the DFA.. This dimension is found to be significant $p = .005$. This function provides the maximum separation between the two leaver subgroups. Table 28 reports the Wilks' Lambda, chi-square, degrees of freedom, the p- level, the canonical correlation, and the cumulative squared canonical correlation for the function. The function has the canonical correlation of .348

Table 28

Wilks' Lambda, Chi-Square, Degrees of Freedom, Significance, and Canonical Correlations and Cumulative Canonical Correlation for the Reasons for Leaving

<i>Function</i>	Wilks'	χ^2	<i>df</i>	<i>p</i>	R_c	Cumulative R_c^2
1	.879	35.55	17	.005	.348	12%

accounting for 12% of the group differences. Table 29 shows the standardized discriminant functions and structure coefficients for the teacher samples.

Table 29

Standardized Discriminant Functions and Structure Coefficients for Leavers

<i>Independent Variables</i>	Career Status
Retirement	-.513
Another Career	.387
Personal	.369
Changed Residence	.367
Opportunity for Career outside Education	.318
Sabbatical	.274
Health	.263
Pregnancy/ Child Care	.206
Dissatisfied with Job Description	.185
Dissatisfied with New Reform	.175
Dissatisfied with Salary/Benefits	-.149
Little Support with the Community	.140
Laid Off	.133
Moved to Different State	.120
Do not Agree with Reform	.080
Opportunity for a Career in Education	.060
Dissatisfied with Job Responsibility	.050

For the function labeled, “Career Status”, Retirement has the strongest correlation (-.513). This independent variable is responsible for the largest part of the separation between the SETs and GETs. This independent variable is negatively correlated in this function.

The group centroids are reported on Table 30. The group centroid for SETs (-.993) is negatively correlated as is the independent variable Retirement; therefore SETs are more likely to indicate that they left the profession to retire. The group centroid for

GET (.138) is positively correlated; hence GETs are less likely to report that they left the profession to retire. Figure four is a plot of the group centroids.

SETs are more likely to retire from the profession than GETs. This is an interesting finding since this study only includes those educators under the age of fifty. It seems that SETs are more likely to opt for early retirement. By contrast, the general education teachers report that their reasons for leaving are more likely to involve changing careers, changing residences or dealing with personal problems.

FIGURE 4: SET and GET Reasons for Leaving Group Centroids

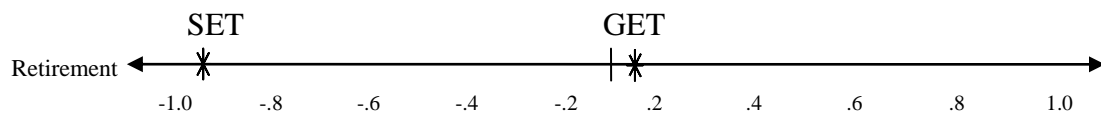


Table 30

Group Centroids for SETs and GETs Leavers

Dependent Variable	Function 1
SETs	-.993
GETs	.138

Stayer teacher commitment to the profession

As previously determined, SETs have a greater rate of attrition than GETs. One of the factors that may influence stayers' decision to remain in the profession is their commitment to it. Hypothesis eight states that if SETs have a greater rate of attrition than GETs, then a t-test using the independent variable of teacher commitment will determine

that SET stayers have a lower level of commitment to the teaching profession than GET stayers.

In this study, teacher commitment is measured by a single survey item – the amount of time a teacher is willing to remain in the profession. The Likert scale responses for this survey item assigned the highest score to the response “Undecided”. Since individuals marking this response can be assumed to hold a commitment below the survey response 2, “Until I am eligible for retirement” but probably somewhat above the survey response 3, “Will probably continue unless something better comes along”, the Undecided responses were recoded to a value of 2.5, the mid-point between response 2 and 3. The lower the group mean of the teacher subgroup on the recoded scale, the greater the length of time a teacher is willing to remain in the profession.

Contrary to the hypothesis, the t-test reveals that there is no significant difference in commitment to the teaching profession $t(3408) = 1.55$; $p = .12$ between SET and GET stayers. Table 31 shows the sample size, group means, standard deviations, standard errors, t value and p-value for SET and GET subgroup commitment.

Table 31

T-Test results comparing SETs and GETs commitment

Commitment	N	Mean (SD)	Standard Error	t	p-value 2-tailed
GETs	3052	1.89 (.81)	.01		
SETs	358	1.82 (.84)	.04	1.55	.12

Mover household dependents

Studies have found a moderate correlation between teacher turnover and having a dependent child at home, especially for women (Markham and McKee, 1991). Boe et al., (1997) found that the percentage of movers declined moderately with increasing number of dependent children. They found that 9% of movers among teachers had no dependent children compared to 5.7% movers among teachers who had three or more dependent children. Hypothesis nine states that if SET movers have a slightly greater rate of moving than GET movers, then SET movers will have less household dependents. Table 32 shows the sample sizes, group means, standard deviations, standard error, t-statistic, and significance for the weighted sample of SET movers and GET movers for Household Dependents.

Contrary to hypothesis nine, the finding of the t-test indicates that there is no significant difference between the number of dependents between GET movers ($M = 1.47$, $SD = 1.59$) and SET leavers ($M = 1.37$, $SD = 1.23$), $t(384) = .45$; $p = .66$.

Table 32

T-Test Results Comparing SETs and GETs Mover Household Dependents

Household Dependents	N	Mean (SD)	Standard Error	t	Sig (2-tailed)
GETs	328	1.47 (1.59)	.09	.45	.66
SETs	57	1.37 (1.23)	.17		

SET subgroups who have earned Master's Degrees

There is a body of literature that states that teacher education has an impact on teacher attrition Kirby et al. (1999) found that teachers with advanced degrees at entry tended to have higher attrition rates than those entering with a Bachelor's Degree. He attributed their exodus from the teaching profession to their advanced degrees which provided greater job opportunities in the labor market outside of education. Hypothesis ten states that a one-way analysis of variance (ANOVA) using the independent variable of earned Master's Degrees will reveal that SET leavers are better educated than either the SET stayers or SET movers.

The group means and standard deviation for SET stayers, movers and leavers with Master's Degrees are shown on Table 33.

Table 33

Master's Degree Group Mean and Standard Deviations for SET Stayers, Movers, and Leavers

SET Teacher Subgroup	Group Mean	Standard Deviation
SET Stayers	.46	.50
SET Movers	.41	.50
SET Leavers	.47	.51

The sum of squares, degree of freedom, mean square, F value and p-values are displayed for SET Stayers, Movers and Leavers with Master's Degrees, on Table 34. As the table indicates, there is no statistically significant effect for having a Master's degree $F(1, 431) = .09; p = .76$.

Table 34

ANOVA Summary Table for Master's Degree and SET Stayers, Movers, and Leavers

Master's Degree	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.03	1	.03	.09	.76
Within Groups	152.74	431	.35		
Total	152.77	432			

The SET subgroups have similar mean rates of attaining a Master's Degree; Stayers ($M = .46$, $SD = .50$), Movers ($M = .41$, $SD = .50$), and Leavers ($M = .47$, $SD = .51$).

In comparison there is also no statistically significant effect for having a Master's Degree between the GET subgroups, $F(1, 3091) = 1.48$; $p = .22$. The group means and standard deviations for GET Stayers, Movers and Leavers with Master's Degrees are on Table 35.

Table 35

Master's Degree Group Mean and Standard Deviations for GET Stayers, Movers, and Leavers

GET Teacher Subgroup	Group Mean	Standard Deviation
GET Stayers	.43	.50
GET Movers	.35	.48
GET Leavers	.44	.50

The sum of squares, degree of freedom, mean square, F value and p-values are displayed for GET Stayers, Movers and Leavers with Master's Degrees, on Table 36.

Table 36

ANOVA Summary Table for Master's Degree and GET Stayers, Movers, and Leavers

Master's Degree	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.415	1	.42	1.48	.22
Within Groups	867.66	3092	.28		
Total	868.07	3093			

Distinguishing between SET and GET mover groups

Teachers move for a variety of reasons. Hypothesis eleven states that a DFA of the reasons for moving to a new school will reliably predict SET and GET mover subgroup membership. Table 37 shows the group means, grand means and the standard deviations, the mean difference, *F* statistic, and significance for the reasons teachers moved for the two teacher samples. These variables are listed in descending order with the greatest absolute value of the group mean differences appearing first. The degree of freedom for each variable is 1 and 384. As illustrated on Table 35 there are no independent variables found to be significant at $p < .01$.

In the DFA, there are two groups (SET and GET Movers) therefore, only one dimension of discrimination. This dimension is not significant at the acceptable level established in this study $p = .12$. As a result, hypothesis eleven is not confirmed by this analysis. Table 38 reports the Wilks' Lambda, chi-square, degrees of freedom, the p-

level, the canonical correlation, and the squared canonical correlation for the function. Although this DFA is not statistically significant at the $p < .01$ level, the equality of group means table (Table 37) reveals that there are statistically significant differences at the less conservative value of $p < .05$ between SET and GET Movers. These reasons for moving are a dissatisfaction with the job description ($p = .02$) and a dissatisfaction with autonomy ($p = .03$). Hence, we might cautiously assess possible differences in the

Table 37
Equality of Group Means for Reasons for Moving

Independent Variables	SET Group Mean SD	GET Group Mean SD	Grand Mean SD	Mean Difference	<i>F</i>	Sig.
Dissatisfied with Job Description	2.25(1.61)	1.79(1.37)	1.86(1.42)	+.46	5.27	.02
Dissatisfied with Autonomy	1.78 (1.33)	1.44 (.99)	1.49(1.05)	+.34	5.05	.03
Other reasons not listed	2.77(1.76)	2.45(1.68)	2.49(1.70)	+.32	1.79	.18
Dissatisfied with new reforms	1.65(1.27)	1.38(.97)	1.42(1.02)	+.27	3.27	.07
Dissatisfied with Prof Develop	1.64(1.06)	1.85(1.38)	1.82(1.34)	-.21	1.18	.28
Job Security	2.06(1.47)	1.87(1.34)	1.90(1.36)	+.19	.91	.34
Unprepared for reform	1.41(.90)	1.24 (.75)	1.27(.78)	+.17	2.34	.13
Dissatisfied with Workplace	2.58(1.66)	2.44(1.63)	2.46(1.63)	+.14	.33	.57
Better Assignment	2.60 (1.65)	2.73 (1.68)	2.71(1.67)	-.13	.27	.60
Dissatisfied with salary	1.92 (1.42)	2.10(1.51)	2.07(1.50)	-.08	.66	.42
Laid Off	1.35(1.05)	1.42(1.18)	1.41(1.16)	-.07	.17	.68
Dissatisfied with Admin Support	2.76(1.78)	2.71(1.71)	2.72(1.72)	+.05	.04	.85
Change in Residence	2.00 (1.67)	2.00 (1.61)	2.00(1.62)	.00	.00	.98

reasons for SET and GET teachers to move from place to place. On the Likert scale for this survey item, the greater the group means the greater the importance of the variable in the educators' decision to move to another school. SETs may, on average be more likely to cite unsatisfactory job descriptions ($M = 2.25$, $SD = 1.61$) than GETs ($M = 1.79$, $SD = 1.37$) as a reason for moving. SETs may also be more likely to say they did not have enough autonomy in their jobs ($M = 1.78$, $SD = 1.33$) than GETs ($M = 1.44$, $SD = .99$).

Table 38

Wilks' Lambda, Chi-Square, Degrees of Freedom, Significance, and Canonical Correlations and Cumulative Canonical Correlation for the Reasons for Moving

Function	Wilks's Lambda	χ^2	df	p	R_c	Cumulative R_c^2
1	.950	19.09	13	.12	.223	4.9%

CHAPTER VI

Discussion

The origin of this study was the concern of the educational community regarding the retention of teachers, in particular those teachers who have chosen to provide services to special needs students within the public school system. The objective of this study is to identify those factors contributing to special education teacher (SET) turnover that can be directly amendable to intervention by improved policies and practices at school sites. The responses of SET stayers (special education teachers who remain on their school from the base year to year two of the survey), movers (teachers who left their school sites from the base year to year two of the survey, but did not leave the profession), and leavers (teachers who left the teaching profession) were compared to groups of general education teachers (GET) to identify similarities and differences among samples.

The data were obtained from teacher responses to the Teacher Follow-up Survey for former teachers (TFS-2) and the Current Teacher Survey (TFS-3). The respondents of the TFS were stratified by four variables: sector (public, public charter, private); teacher status (stayers, movers, leavers); teaching experience (teachers with less than three years of teaching experience were labeled as new teachers, while those with over three years of experience were labeled experienced); and the grade level in which teachers taught (elementary or secondary). Teachers were randomly selected from each stratum in order to obtain an adequate sample for the analysis. Their data measures actual teacher turnover behavior during a one year period.

This study included only public education teachers. These surveys sampled teachers throughout the nation and provided a weighting system that produced a national teacher sample. This study differs from others in two ways. First, it was found that the TFS survey over sampled the SET movers and leavers to obtain sufficient numbers for reliable data. To normalize the sample, a new weighting variable is calculated by dividing the actual teacher sample by the unweighted teacher population and multiplying that by the given sample weight used in the original SASS/TFS study.

Second, a stratified cluster of 20 educators was drawn from each school. The stratification resulting from cluster sampling of the teachers decreases the standard errors of the analysis because several teachers were taken from the same school site. To address this concern, this study chooses to adopt the more conservative p-value of .01 in assessing the significance of statistical findings.

A discriminant function analysis (DFA) was the statistical test chosen for the study because it can be used to detect multivariate group differences by independent variables. There were several independent variables in this study clustered into three categories; teacher demographics (teacher gender, ethnicity, age), employment (teacher salary, teaching experience, certification, school level and school community), and workplace conditions (administrative support, autonomy, collaboration, influence, appropriate student behavior). A Likert Scale was used to measure the respondent's perception of the organizational conditions of their current or former school sites.

This study found that the entire teacher workforce is composed chiefly of stayers who are white, female, elementary teachers with regular certification. They typically

have been employed in the schools for close to a dozen years. They most often teach at schools in a suburban community. Contrary to the literature, this study did not find that the school community was a significant predictor of group membership (Darling-Hammond, 2003 Ingersoll, 2001; Allen, 2005). There were, however, distinct teacher demographics, employment factors, and views of organization conditions that significantly separated the teacher samples and subgroups.

A univariate analysis confirmed that SETs are 10% more likely to leave the profession and about 30% more likely to move from one school to another than GETs. Although these differences are modest, this study found that stayers, movers, and leavers can be statistically distinguished from each other.

One of the most important findings of this study was that although the univariate analysis found some differences among the subgroups, the multivariate analysis found little variation on those variables that separated the SET leavers from GET leavers and SET movers from GET movers. Essentially, the teachers at risk for turnover, whether SETs or GETs, are most likely to be young inexperienced teachers of color, lacking regular certification who earned lower salaries than the stayers. The movers are more likely to be elementary school teachers; whereas the leavers are least likely to teach at elementary schools. Both GET and SET leavers are generally more likely to be satisfied with the organizational conditions at school. Conversely, GET and SET movers are not.

The GET and SET stayers were more likely to be Asian and elementary school teachers. GET stayers were more likely to be older, experienced, have regular certification, and earn the greater salaries than all other subgroups. Interestingly, they

were more likely to believe that their work environment was only moderately satisfactory.

There were many similarities and very few differences in the results of the DFA using all six subgroups compared to the DFA including only the SET sample. In multivariate analysis of the SET group, as in the DFA including all teachers, the SETs stayers are more likely to be the oldest most experienced teachers and earn the highest salaries, with both the movers and leavers least likely to be older, veteran teachers and earn higher salaries. Consistent with the results of the six group DFA, the leavers are most likely to believe they have school wide influence, well behaved students, and supportive administrators; whereas the movers and stayers are mostly likely not to believe they experience these organizational conditions. Unlike the results of the six groups DFA, leavers are more likely to be Native Americans and movers and stayers are not. It is interesting to note that even though the subgroups do significantly differ from each other as supported by the pairwise analysis, there are many similarities between the GET and SET stayers, GET and SET movers, and GET and SET leavers.

One of the poignant questions of this study is why did SETs leave when they experienced a relatively more satisfactory work environment and why did SETs stay when they perceived their work environment to be less satisfactory compare to other teachers.

Why SETs leave

Retention studies have consistently found that teachers indicate they leave the profession due to a dissatisfaction with salary and benefits (Miller et al., 1999; Murnane,

1981; Singer 1993), dissatisfied with career (Allen, 2005), pregnancy and child care (Markham & McKee, 1991), personal issues (Boe et al., 1997) and dissatisfaction with workplace conditions (Billingsley, 2004; Ingersoll, 2001).

A DFA was conducted for the reasons for leaving teaching. The analysis found that the only significant variable that separated the SET and GET leavers was retirement. SETs were more likely to retire than GETs. This is an interesting finding since this study only includes those educators under the age of fifty. It seems that SETs are more likely to opt for early retirement. The results of the DFA were clearly not what we expected. We expected that workplace conditions would be an important reason for SET departure.

The literature review suggested that the differences in school organization, academic rigor, and special education law between elementary and secondary SETs influenced teacher turnover. This study found that SET leavers are less likely to be elementary school teachers. For these reasons a DFA was conducted including the organizational conditions of schools by elementary and secondary SETs. Surprisingly, appropriate student behavior was the only variable to significantly separate the groups. The most frequently chosen variable for leaving the profession for both SETs and GETs was to obtain more dissatisfactory salaries and benefits. This is supported by numerous studies. Since collaboration is, much more complex at the secondary level, I anticipated that it would separate the groups. Further research is needed to explore the differences between elementary and secondary job descriptions and SET turnover. Other studies have suggested that advanced degrees held by leaver's increases attrition.

Teachers with advanced degrees were more likely to leave the profession (Kirby et al., 1999; Cochran-& Smith, 2004; Darling-Hammond & Sclan, 1996). An ANOVA conducted to determine the difference in group means between the SET stayers, movers, and leavers with Master's degrees found that there were no significant differences between the SET subgroups and an advanced degree. An advanced degree does not determine SET subgroup membership. Certainly, it does not separate the leavers from the stayers and movers.

Why SETs stay

Unexpectedly, this study found that SET stayers were least likely to be satisfied with the organizational conditions at their schools. This is contrary to numerous studies that have concluded that a satisfaction with the organizational conditions of school increases teacher retention (Loeb, Darling-Hammond, & Luczack, 2005; Littrell, Billingsley, & Cross (1994); Miller, Brownell, & Smith, 1999). Plausible explanations for SET stayers' willingness to remain in an unsatisfactory work environment would be the educational money trap and their commitment to the profession.

The educational money trap refers to the phenomenon where salary anchors a teacher to the profession and their districts. The salary range of teachers places them in the middle class of American society. Although the multivariate analysis determined that SET stayers earned lower salaries than GET stayers, the univariate analysis found that they were the highest pay teachers of the study with GET stayers following close behind. SETs and GETs have been teaching for an average of 12 years which indicates that they

are mid-career. Individuals in mid career are often middle aged and may experience personal debt accumulating rapidly along with financial assets (Gist & Figueiredo, 2002).

Financial responsibilities may keep stayers anchored to the teaching profession. Leaving the teaching profession to secure another job that pays enough money to provide for their families may not be feasible.

It is possible that SET stayers entertain thoughts of leaving, but are held firm by the educational money trap fueled by their financial responsibilities and a lack of other viable professional options. Rosenholtz (1989) indicates that some teachers remain in teaching only because they have no other desirable options.

Studies have found that teacher commitment to the profession is a significant predictor of retention (Billingsley & Cross, 1992; Currivan, 1999; Littrell, Billingsley, & Cross, 1994). Since SETs have a greater frequency of attrition than GETs, it is plausible that SETs are not as willing to remain in the profession as long as GETs. A t-test using the independent variable of teacher commitment determined that there is no significant difference between the stayer subgroups and their commitment to the profession.

Why SETs move

Numerous studies have concluded that the foremost reasons employees moved from one campus was; to obtain better work assignment (Billingsley, 2004; Futernick, 2007; Ingersoll, 2003), they are dissatisfied with their work environment (Currivan, 1999, Ingersoll, 2001; Steers, 1977), and that they experience a lack of administrative support (Cotton & Tuttle, 1986; Currivan, 1999; Hom, et al., 1979; Hulin, 2002). An analysis was

conducted for the reasons SETs move that included the significant predictors of other research.

Although the DFA did not find any of the reasons for moving to be statistically significant at the $p < .01$ level, there are statistically significant differences at the less conservative value of $p < .05$ between SET and GET movers for dissatisfaction with the job description, and dissatisfaction with autonomy. Since SETs had the greater group means for both variables, we may cautiously assess that SETs, on average be more likely to cite dissatisfactory job descriptions, and not enough classroom autonomy as reason for moving.

The roles and responsibilities of SETs are associated with their job descriptions. Compared to their GET colleagues, SETs face unique challenges in fulfilling their roles and responsibilities governed by special education law (Billingsley, 2004; Gersten et al., 2001; Keefe et al., 2004; Wasburn-Moses, 2005). Like their GET colleagues, SETs are required to be highly qualified in their area of expertise in order to provide standards-based instruction to students. SETs have additional responsibilities. They must have a firm understanding of federal and state special education law that govern policies and procedures in order to remain in compliance with those mandates.

SETs also differ in their roles and responsibilities at the elementary and secondary levels. Since the school organization, academic rigor, and special education laws vary between school levels, it would be beneficial to explore if the movers moved from one school level to another.

The DFA also found that classroom autonomy was a significant variable in the discriminating among the subgroups of this study. The SET stayers and movers, as well as their GET colleagues were more likely to believe they had less autonomy than the leavers. Lack of control over classroom activities seems to be influential in a teacher deciding to move from one school to another.

In summary, what we have found is that teacher turnover occurs more frequently for SETs who are the young inexperienced teachers of color, lacking regular certification with salaries that are considerably less than stayers. Contrary to the literature, leavers believe that the organizational conditions at their schools were satisfactory and they did not have a significantly greater representation of teachers with advanced degrees. When comparing SET and GET leavers, SETs were more likely to leave the profession due to retirement. Stayers remained in the profession although they were less likely to be satisfied with their work environments. Teacher commitment to the profession did not significantly differ between SET and GET stayers. It is plausible that the educational money trap anchors SET stayers to the profession. There is some evidence that the organizational conditions of schools may have been influential in a teacher's decision to move. SET movers found the workplace conditions at their year one schools to be somewhat unsatisfactory. When compared to GET movers, SET movers were particularly dissatisfied with their job description, and their general lack of control over the teaching and learning process in their classrooms.

Research Priorities

This section identifies those areas that require further research in order to provide policy makers and district and site administrators with a greater understanding of SET turnover behavior in order to develop SET specific retention strategies.

First, further investigation on the motivating factors behind SETs early retirement would provide critical information in reducing attrition. Understanding why SETs retired early and what they did after retirement would allow administrators to develop more effective retention strategies.

Second, SET movers indicated that they moved from one school to another because they were dissatisfied with classroom autonomy. Studies have concluded that some teachers believe that NCLB (2001) restricts their classroom autonomy and decision making opportunities on campus (Giroux, 2004). An analysis using the SASS and TFS data post implementation of NCLB (2001) may give more current information on the impact that work conditions, like autonomy, have on teacher turnover.

Third, the literature review of this study sought to emphasize that the roles and responsibilities of elementary and secondary were very different and as such may be a factor in a secondary SETs having a greater frequency of attrition and possibly a motivation to move from one grade level to another. Anderson, Kutash, & Duchnowski (2001) believe that secondary SETs encounter many more obstacles in the provision of services to secondary special needs students. This study found that secondary SETs are less likely to believe that their students demonstrate satisfactory behavior. Further

exploration needs to be done regarding the differences between the roles and responsibilities of elementary and secondary and their impact on teacher turnover.

Retention Strategies

The findings of this study and past studies confirm that stayers are most often older teachers (over thirty) who have taught over three years and have regular certification. One practical retention strategy for administrators desirous of retaining teachers would be to hire older, more experienced teachers with regular certification.

We found that SET leavers were more likely to opt for early retirement than GET leavers. A strategy to increase the retention of experienced SETs is to offer a variety of part time and full time teaching positions to those SETs who have retired to entice them to reenter the profession (McCreight, 2000).

Additional intervention strategies to improve retention include providing a career ladder in teaching through differentiated leadership roles with monetary compensation (Rosenholtz & Smylie, 1984; Shen, 1997; Weiss, 1999). Some examples of differentiated leadership roles would be; mentors for new teachers, instructional coaches, teachers on assignment, and teaching assistant principals. These develop teacher leadership and provide potential leavers with challenging positions with monetary benefits. With these opportunities, SETs may find leadership positions to be challenging and financially rewarding enough to remain in education. African American SETs are at a greater risk of leaving the profession; therefore channeling them into leadership positions with monetary benefits may increase their retention in the profession.

Limitations of the study

There are a few limitations of this study. One limitation is that this study does not address the return of former teachers to the profession. The data used does not measure teacher career trajectories. Teachers returning to the profession after an absence may have an impact on retention data and retention strategies. Another limitation is that this study is quantitative. Exploring teacher retention using a qualitative method may offer some explanations for the discrepancies between the findings of this study and other retention literature.

Conclusion

Teacher turnover in public schools is a significant factor undermining program stability and quality. The provision of a free and appropriate public education to students with disabilities is dependent upon the retention of qualified special education teachers in the classroom. Several studies, including this one, indicate that SETs are at greater risk for turnover behavior compared to GETs. Providing a satisfactory work place environment, which includes the provision of competitive professional salaries for teachers, increases the retention of highly qualified teachers. Teacher retention increases the achievement of all learners. The learning disabled comprise approximately ten percent of the student population. Their academic failure signals the failure of the educational system in reaching its organizational goal.

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