

JOB SATISFACTION, COMMITMENT, AND TEACHING STATUS
AMONG ALTERNATIVELY CERTIFIED CAREER AND
TECHNICAL EDUCATION TEACHERS

by

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(under the direction of ELAINE ADAMS)

ABSTRACT

Much research has been done concerning alternative teacher preparation programs, most often comparing teachers who have completed alternative route programs with those completing 4-year baccalaureate teacher preparation programs. Variables studied in that research include retention and a wide range of factors that have the potential to influence it, including job satisfaction and commitment to both school and the teaching profession. The results of those studies are mixed, and little of the research is specific to Career and Technical Education (CTE) teachers. The purpose of this causal comparative study was to compare participants in two university-based alternative CTE teacher preparation programs (an in-service program and a pre-service program) on teaching status, job satisfaction, organizational commitment, and professional commitment. In addition to preparation program, four other independent variables that have been shown to affect the dependent variables were included: age, teaching tenure, non-teaching occupational experience, and the socioeconomic status (SES) of the school. A total of 37 individuals who had completed the pre-service program and 66 who had completed the in-service

program during the same 3-year period participated in this mail survey. A series of one-way analyses of variance and chi square analyses revealed no significant differences on any of the four dependent variables by preparation program, age, teaching tenure, or non-teaching occupational experience. School SES was significantly and positively related to job satisfaction. There were, however, no significant differences in professional commitment, organizational commitment, or teaching status based upon school SES. Retention levels among study participants were extremely high, with about 88% still teaching. These findings suggest that in high quality university-based teacher preparation programs, pre-service and in-service approaches function equivalently in terms their effects upon the independent variables studied. However, there were differences across the two groups of teachers in terms of age and teaching tenure, suggesting that these preparation approaches may serve different types of teachers. The findings of this study may help to guide both teacher preparation practices and preparation research.

INDEX WORDS: Teacher preparation, Alternative certification, Job satisfaction, Professional commitment, Organizational commitment, Teacher retention, Socioeconomic status, Tenure, Occupational experience, Age, Career and technical education

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DEDICATION

This dissertation is dedicated to my Mother and to my husband, Frank. To my Mother because she instilled in me an appreciation for education and a love of learning that inspired me to go back to school again, and again, and again. Without her influence, I would never have pursued this doctorate. I know that she is looking down and smiling very proudly. To Frank because he has been a constant source of encouragement, believing in me more than I believed in myself at times. Without his loving support and willingness to give far more than his fair share, I could not have been successful in this endeavor. Thank you. I love you both very much.

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CHAPTER I

INTRODUCTION

Teacher retention is a serious and ongoing problem in this country. In fact, approximately 50% of all new teachers leave the profession in their first 5 years (Colbert & Wolff, 1992; Merseeth, 1992; Odell & Ferraro, 1992). According to some reports, roughly 40% of new teachers stop teaching in the first 2 years (Haselkorn, 1994; Karge, 1993). Attrition levels for Career and Technical Education (CTE) teachers have been reported to be high – 15% in their first year and over one-half within 5 years (Camp & Heath-Camp, 1991). In addition, the brightest college students are those least likely to enter the teaching profession, and even if they do, they tend to leave very quickly (Murmane, Singer, Willett, Kemple, & Olsen, 1991). These facts have serious implications for education and raise issues concerning the quality of our teaching force, disruption of program continuity and planning, diminished student learning, inefficient use of teacher education resources, and increased teacher recruitment and hiring costs (Shen, 1998b).

As the student population rises and the need for teachers increases, attrition rates must be lowered if continuing teacher shortages are to be averted. Forecasts projected a need for more than two million new teachers from 1999 to 2009 due to retirements, increased enrollments, class size reduction, and attrition (Hussar, 1999). In the United States there has recently been “a sharp rise in the number of individuals studying to be teachers” and in the number of institutions preparing teachers (Feistritzer, 1999, p. 1). In spite of that increase, there remains a large shortage of certified teachers in some regions and subject areas (Bartlett, 2002; Cleveland, 2003; Darling-Hammond, 2000; Howard,

2003; Walter & Gray, 2002). Thus, reducing attrition rates is an important element in the effort to strengthen and increase our teaching force.

Teacher attrition and the variables that influence it have been widely studied. Shen (1998b) provided a review of the two major approaches used in the study of teacher attrition/retention. One approach has been multivariate studies testing various theories proposed to explain why teachers choose to stay in or leave the profession. Kirby and Grissmer (1993) conducted a study of teachers in which they explored the human capital theory of occupational choice. The human capital theory proposed that individuals make systematic evaluations of the costs and benefits of remaining in an occupation. Human capital includes two types: general capital (general education and training) and specific capital (profession or job specific education/training). As specific capital rises the probability of attrition declines. This suggests that younger teachers and teachers in the early stages of their teaching careers, those with the least specific capital, would be most likely to leave teaching. Kirby and Grissmer's work supported those predictions. The human capital theory also suggests that those with less investment in their teacher education program, another form of specific capital, might be more prone to leave.

Another example of the multivariate theoretical approach to studying teacher retention is found in studies conducted with University of Michigan teacher education graduates. The purpose of these studies was to test Chapman's (1984; Chapman & Green, 1986) model of teacher retention. Chapman's model is grounded in social learning theory and suggests that retention is a function of a teacher's personal characteristics, educational experience, initial commitment, professional integration into teaching, external influences, and career satisfaction. The studies of University of Michigan graduates supported the model by demonstrating differences on all five dimensions across four groups of graduates: (a) those who taught continuously, (b) intermittent teachers, (c) those that left teaching, and (d) those who never taught. Those who taught continuously were generally older, had a more positive first teaching experience, had a higher initial

commitment to teaching, felt their education was being well utilized, and perceived that it would be more difficult for them to find another job than did those who left teaching or never taught. Intermittent teachers were most similar to those who continuously taught. They were, however, more likely to be female, earn less, and perceive themselves to be more career mobile than were continuous teachers.

The second, more common, approach to the study of teacher retention has been the examination of the relationship between retention/attrition and other specific variables such as age or gender. This approach has been used in a number of studies examining a wide range of variables (e.g., demographics, school characteristics, working environment factors, attitudes, education level), with sometimes contradictory results. Shen's (1998b) article included an excellent summary of the literature on studies using this approach to exploring teacher retention studies. Age has consistently been associated with retention and tends to follow a U-shaped curve. Younger teachers and those reaching retirement age have been found to be more likely to leave the profession than those in their middle years. Teacher tenure has also been positively correlated with retention. Inexperienced teachers are more likely to leave than their more experienced counterparts. Secondary level teachers have been found to have higher attrition rates than elementary teachers, especially in urban schools. Stronger teacher academic records and higher teacher socioeconomic backgrounds have been positively associated with attrition. A number of factors related to teachers' working environments have been associated with remaining in the profession: positive initial field experiences, low student/teacher ratios, teacher involvement in decision making, supportive administration, higher pay, and having an assigned mentor. The retention literature shows mixed results with respect to teacher gender and race, school location, and school size (Shen, 1998b). The socioeconomic status of the school in which the teacher is employed has been shown to affect retention levels, but the direction of the effect varied across studies. Shen (1998b) found that retention levels were lower in socially disadvantaged schools, while Heyns (1988) and

Theobald (1990) found that retention levels were inversely related to school district wealth.

There is also evidence that the availability of non-teaching employment opportunities may lead to higher levels of attrition (Billingsley, 1993). That is consistent with studies finding that science and math teachers, teachers whose skills are readily transferable to non-teaching jobs, are more likely to leave the profession than other teachers (Ingersoll, 2000; Wagner, 1993). It is consistent as well with earlier work by Chapman and Green (1986) showing significant relationships between retention and measures of teacher career mobility and perceived ease of finding another job. No research was identified that specifically addressed the impact of non-teaching work experience upon teacher attrition. The above findings, however, suggested that such experience should be considered, since it could be expected to affect the availability of non-teaching job opportunities for a teacher.

Studies investigating teacher retention have operationally defined the term in a variety of ways. Some focused upon observed behavior and examined whether or not the teacher remained in the profession; or, in some cases the school or district in which they were employed. Others defined retention in terms of voluntary behavior, and still other research focused upon behavioral intentions. For instance, in one study, Shen (1998b) used the voluntary behavior approach, and grouped teachers into three categories – those who stayed in the profession, those who voluntarily switched schools, and those who voluntarily left teaching. In another study, Shen (1997) looked at retention in terms of behavioral intention, how long the teacher said they planned to stay in the profession. Chapman (1984; Chapman & Green, 1986) defined retention as teaching employment status, and grouped teachers into groups based upon their employment status in the profession. This study takes a combined approach and considers both current employment as a teacher and intent to remain in the profession.

The relationship between retention and other work related attitudinal variables has been the subject of numerous studies, both in education and in other fields. Among the most frequently studied of those are job satisfaction, organizational commitment, and professional commitment (Cohen, 2003; Meyer & Allen, 1997; Spector, 1997). Although little of that research was specific to teachers, some of the findings have been consistent across fields including education, suggesting that these factors are important in the exploration of retention among teachers as well.

Job satisfaction has been defined in a variety of ways, but one definition frequently employed in the research is the extent to which the job meets the expectations and needs of the employee (Dawis, 1996). This is the definition that underlies the Minnesota Satisfaction Questionnaire. Numerous studies across a wide range of occupations have demonstrated that as job satisfaction rises, retention levels also rise (Boe, Bobbitt, Cook, Barkanic, & Maislin, 1999; Chapman, 1984; Mowday, Porter, & Steers, 1982; National Center for Educational Statistics [NCES], 1991).

Organizational commitment was defined by Mowday et al. (1982) as “the relative strength of an individual’s identification with and involvement in a particular organization” (p. 27). Most of the organizational commitment literature is based upon this definition (Meyer & Allen, 1997). In the workplace, organizational commitment reflects commitment to the employing organization; in the case of a teacher, commitment to the school. Organizational commitment has very consistently been found to be a strong predictor of employee turnover and turnover intentions (Allen & Meyer, 1996; Kacmar, Carlson, & Brymer, 1999; Lachman & Aranya, 1986; Lee, Carswell, & Allen, 2000; Mathieu and Zajac, 1990; Meyer & Allen, 1993; Mowday, Steers, & Porter, 1979; Tett & Meyer, 1993).

Professional commitment was defined by Blau as “one’s attitude towards one’s profession or vocation” (Blau, 1985, p.278). Blau’s widely used Career Commitment Scale conceptualizes professional commitment as the extent to which the individual

identifies with and values their profession, and the level of effort they expend toward acquiring knowledge relevant to it. Professional commitment has been shown to be predictive of both occupational and job withdrawal intentions (Blau, 1985, 1988, 1989; Blau & Lunz, 1998; Blau, Tatum, & Ward-Cook, 2003; Carson, Carson, Phillips, & Roe, 1996; Cohen, 1996). Studies among teachers have found professional commitment to be an important determinant of how long a teacher remains or intends to remain a teacher (Chapman, 1983; Chapman & Lowther, 1982; McCracken & Etuk, 1986; Raju & Srivastava, 1994; Singh & Billingsley, 1996).

In an attempt to address teacher shortages, and in some cases teacher quality issues, many states have instituted alternative certification routes for teachers (Feistritzer, 2004). The research concerning retention of alternatively certified teachers, however, is mixed and little of it specifically addresses CTE. Some studies showed higher retention rates for teachers prepared in alternate route programs (Cooperman, 2000; Darling-Hammond, 1992; Zeichner & Schulte, 2001), while others found that teachers prepared in alternative route programs left public school teaching at higher rates than traditionally prepared teachers (Johnson & Birkeland, 2003; Jorissen, 2002; Zumwalt, 1996). Still other research, including Ruhland and Bremer's (2003) study of CTE teachers, showed no difference between alternatively and traditionally prepared teachers. Zumwalt speculated that teachers prepared in alternative route programs are more apt to leave the profession because they tend to be mid-career entrants and may be less tolerant of unsatisfying working conditions in schools as a result of their previous work experiences. Others suggested that the length and quality of the alternate route preparation program are critical factors (Darling-Hammond; Cooperman). Darling-Hammond found that teachers participating in longer alternate route programs that combine pedagogical instruction with supervised field experience were more satisfied with teaching, and, thus, more apt to stay. Cooperman studied teachers prepared in a full-year alternate route programs in New Jersey in which the intern teacher was supported by a team including the principal and a

mentor. That research, which found high retention rates among participants, supported the findings of Darling-Hammond. The first year attrition rate among the teachers participating in the alternate route programs in the Cooperman study was only 4%. Cooperman reported that the attrition rate for traditionally prepared first year teachers during the same period was 16%. He suggested that the lower attrition rate for teachers in the alternate route programs may have occurred “because an education-school-prepared teacher was in a sink-or-swim situation, while the ‘alternate route’ teacher had a support system in place” (p. 31).

In Georgia, 19 different subjects, including four CTE subject areas, were designated by the U.S. Department of Education as critical teacher shortage areas for the 2003-2004 school year (Georgia Department of Education [GADOE], n.d.). In an effort to alleviate some of those shortages, the state of Georgia has instituted a variety of alternative routes to certification. According to Feistritzer (2004), Georgia currently offers a total of seven alternative certification routes. The Department of Workforce Education, Leadership and Social Foundations at the University of Georgia (UGA) has two CTE teacher preparation programs available to potential teachers seeking alternative certification.

One of these is the Preparation Academy for Career and Technical Educators (PACTE), an in-service program instituted in 2001. This program includes an intensive two and one-half week teacher education session during the summer and a 1-year supervised teaching internship in a public secondary school. Teachers completing this in-service program may then continue to teach without supervision on a non-renewable teaching certificate, but must pass the Praxis II test in their teaching field and complete all required education courses within a 5-year period to obtain renewable professional certification. While some of the participants in the in-service program who are pursuing certification in trade and industrial education do not hold a baccalaureate degree, most participants in the program are graduate level students.

The second alternative certification program is a graduate level pre-service teacher preparation program. In this program students obtain full certification by first completing all required education courses, and then completing a one-semester student teaching experience at a public secondary school. Upon completing this pre-service graduate level program and passing the Praxis II test in their teaching field, the student is eligible for renewable professional certification. The primary differences between the two programs lie in whether or not a student teaching experience is required, and in the timing of the completion of required coursework. Participants in the pre-service program complete all certification requirements and a student teaching experience prior to functioning as a teacher of record. In contrast, the in-service program students assume full teaching responsibility upon completion of their summer teacher education course, do not complete student teaching, and complete some of their coursework requirements during and after their internship.

One of the primary objectives of Georgia's alternative CTE teacher preparation programs is to fill, as quickly as possible, the school systems' need for highly qualified teachers. Obviously, if program graduates do not stay with teaching long term, the teacher need is not being adequately met and limited teacher preparation resources are not being fully utilized. A better understanding of retention among alternatively certified CTE teachers, and of the factors that influence it, could prove valuable in the future development or revision of such teacher preparation programs.

Purpose

The purpose of this causal comparative study was to compare the participants in two alternative CTE teacher preparation programs in terms of retention, job satisfaction, organizational commitment, and professional commitment. In addition to type of teacher preparation program, four additional independent variables that the research suggested may impact the dependent variables were included: age, teaching tenure, the socioeconomic status of the school in which the teacher was employed, and the number of

years of non-education work experience the teacher had. Retention was defined as teaching status measured by a combination of two factors: (a) whether or not an individual was teaching at the time of the study; and, (b) whether or not the individual expressed an intention to leave the profession within the next 5 years. Job satisfaction was assessed using the Minnesota Satisfaction Questionnaire (MSQ; Buros, 1978). Organizational commitment was based on the Organizational Commitment Scale (OCS; Mowday et al., 1982). Professional commitment was measured using the Blau's Career Commitment scale (Blau, 1985). The results of this study add to the existing body of research on teacher retention, particularly with respect to alternatively certified CTE teachers. It also will help to inform alternate route teacher preparation practices. The specific objectives to be addressed in this study are:

1. To describe teachers who have completed either the in-service or pre-service post-baccalaureate CTE teacher preparation programs at UGA in terms of age, tenure, years of non-education work experience, and the socioeconomic status (SES) of the schools in which they teach;
2. To describe the levels of professional commitment, organizational commitment, job satisfaction, and teaching status among teachers who have completed these post-baccalaureate teacher preparation programs;
3. To compare teachers who have completed the post-baccalaureate in-service program with those completing the post-baccalaureate pre-service program on professional commitment, organizational commitment, job satisfaction, and teaching status;
4. To compare teachers completing these post-baccalaureate preparation programs by length of non-education work experience on professional commitment, organizational commitment, job satisfaction, and teaching status;

5. To compare teachers completing these post-baccalaureate teacher preparation programs by teaching tenure on professional commitment, organizational commitment, job satisfaction, and teaching status;
6. To compare teachers completing these post-baccalaureate teacher preparation programs by age on professional commitment, organizational commitment, job satisfaction, and teaching status;
7. To compare teachers completing these post-baccalaureate teacher preparation programs by school SES on professional commitment, organizational commitment, job satisfaction, and teaching status.

Theoretical Framework

A number of different theoretical perspectives have been applied to employee retention and the factors that impact retention. Human capital theory proposes that employees evaluate the benefits and costs associated with remaining in or leaving a profession, taking into account monetary and non-monetary rewards, costs, and investments or capital. The theory suggests that as capital rises employees are less likely to leave (Macdonald, 1999). Organizational theory, on the other hand, suggests that employee turnover must be studied at the level of the organization, and is largely a function of organizational conditions and policies (Gold, 1996). Expectancy theory (Vroom, 1964) also has been widely used in the study of employee retention. It predicts that individuals will engage in behavior that they perceive will eventually lead to desired rewards. Specifically, this theory states that motivation is driven by employee perceptions that effort will lead to successful performance and that successful performance will lead to personally important outcomes. Herzberg's two factor theory (Herzberg, Mausner, & Snyderman, 1959) divides employee needs into two separate categories, hygiene factors and motivating factors. According to the theory, hygiene factors (i.e., environmental variables) do not motivate, but represent needs that must be filled to keep employees from becoming dissatisfied. Motivating factors, the intrinsic aspects of the job (i.e., recognition,

achievement, challenge), are the satisfiers that drive individuals to high performance and keep them in their jobs.

This study will be guided by work adjustment theory and the constructs of organizational and professional commitment. This framework assumes that retention is mediated by the employee's levels of job satisfaction, commitment to the employing organization, and commitment to their profession. There is considerable amount of research that demonstrated that satisfaction and commitment to both the organization and one's profession are significant predictors of retention in a wide range of fields, including education (Allen & Meyer, 1996; Crampton & Wagner, 1994; Ferris & Aranya, 1983; Fresko, Kfir, & Nasser, 1997; Hrebiniak & Alutto, 1972; Hulin, Roznowski, & Hachiya, 1985; Huselid & Day, 1991; Kacmar et al., 1999; Lachman & Aranya, 1986; Lee et al., 2000; Mathieu & Zajac, 1990; Miller, Brownell, & Smith, 1999; Ostroff, 1992; Singh & Billingsley, 1996; Tett & Meyer, 1993).

Work adjustment theory suggests that retention or tenure is a function of two factors: satisfaction and satisfactoriness. Satisfaction has to do with the extent to which the job meets the expectations and needs of the employee. Satisfactoriness speaks to the extent which the worker can meet the demands of the job. The theory predicts that when satisfaction and satisfactoriness are sufficiently high the employee is likely to be retained (Dawis, 1996).

Organizational commitment and professional commitment are different, but related concepts (Lee et al., 2000; Mathieu & Zajac, 1990; Wallace, 1993). While organizational commitment focuses on commitment to a particular organization (a school, a company, etc.); professional commitment is concerned with commitment to one's occupation, career, or profession. Mowday et al. (1982) defined organizational commitment as having three components: (a) a strong belief in and acceptance of organizational goals and values, (b) a willingness to exert considerable effort on behalf of the organization, and (c) a desire to maintain membership in the organization.

Professional commitment, in contrast, has been defined by Blau (1985) as “one’s attitude, including affect, belief, and behavioral intention toward his/her occupation” (cited in Cohen, 2003, p. 26). Others have conceptualized it as “one’s motivation to work at a chosen vocation” (Cohen, 2003, p. 26). There are several models of teacher career decision making and retention in the literature that incorporate measures of both job satisfaction and a professional commitment (Billingsley, 1993; Brownell & Smith, 1993; Chapman, 1983; Gersten, Keating, Yovanoff, & Harniss, 2001).

Significance of the Study

The significance of this research is two fold. First, it will add to the existing body of literature on teacher retention and alternative teacher certification. Teacher retention has been a problem for some time, and there has been a great deal of research published on the issue (Billingsley, 1993; Macdonald, 1999; Shen, 1998b). Little of that research, however, is specific to CTE teachers (Ruhland & Bremer, 2003). In addition, the research sheds little light on the issue of professional preparation and how it relates to not only retention, but commitment and satisfaction as well. This study is intended to address these gaps. Secondly, the results of this study could potentially help to guide future teacher preparation and preparation research. For instance, a finding that different teacher preparation programs are associated with differing levels of job satisfaction might lead to an investigation of program elements that could help prospective teachers make adjustments in their expectations and behavior to enhance their satisfaction. Differences in commitment levels would suggest further investigation of how preparation programs might address elements like early work experiences or the role expectations of prospective teachers, both of which have been found to be related to commitment levels (Meyer & Allen, 1997). Enhancing commitment and satisfaction levels, in turn, has the potential to improve retention levels (Cohen, 2003; Meyer & Allen; Spector, 1997). In contrast, a finding that the participants in in-service and pre-service teacher preparation programs do not differ in terms of the dependent variables would lead to questions concerning who

chooses each of those programs and what the motivations for that choice might be. Such a finding would suggest research to determine whether participants in these programs are also equivalent on other dimensions such as classroom performance and longer term retention.

CHAPTER II

REVIEW OF THE LITERATURE

Teacher Shortages

A National Center for Educational Statistics report (Hussar, 1999) predicted that from 1999 to 2009 approximately 2.2 million newly hired teachers would be required to meet the needs of our country's public schools. Many areas of the United States are, and for some time have been, facing shortages of teachers. These shortages tend to be regional and subject specific, and are currently most severe in the Southern and Western states. Shortages are concentrated in low income urban areas, in rural areas, and in secondary schools. Certain subject areas are also more heavily affected – math, science, English as a second language (ESL) and bilingual education, special education, and some career and technical education (CTE) areas (Bartlett, 2002; Cleveland, 2003; Darling-Hammond, 2000; Howard, 2003; Walter & Gray, 2002) . According to the Georgia Department of Education (GADOE, n.d.) the U.S. Secretary of Education has designated 19 different subjects, including four CTE subject areas (business education, health occupations, family and consumer sciences, and trade and industrial), as critical teacher shortage areas in Georgia for the 2003-2004 school year.

On a national basis the number of new teacher graduates and the number of institutions preparing new teachers reportedly grew from the mid-1980's to 1999. The number of new teacher graduates rose 49% from 1983 to 1998, and the number of institutions offering teacher education programs increased by 5% from 1287 to 1354 during the 1984 to 1999 period (Feistritzer, 1999). That trend, however, is not universal. In Georgia, the number of student teachers produced by public and private colleges

declined steadily and sharply from 1998 to 2002, from 5415 to 3388. The trend changed in 2003 as the number of student teachers rose slightly to 3507 (Georgia Professional Standards Commission [GAPSC], 2003). The national trend in the number of institutions offering teacher preparation is also not reflective of CTE teacher preparation. A study by Bruening et al. (2001) indicates that the number of institutions offering CTE teacher preparation actually declined by about 10% from 1990 to 2000.

The other commonly cited reasons for teacher shortages are an increasing student population, increased teacher retirements, class size policies, and teacher attrition (Howard, 2003; Hussar, 1999; McCaslin & Parks, 2002). Each of these factors is expected to continue to contribute to teacher shortages in the coming years.

From the 1990 to 2000 public school student enrollments rose to a record 47.7 million, an increase of 15%. During the same period, public secondary school enrollments also grew 15% to 16.2 million. It is projected that public school enrollments in total will increase another 1% from 2000 to 2012, with secondary enrollments growing at 5%. These student population increases are being driven by immigration and increasing birth rates. Public school enrollments in Georgia are expected to far outpace the national rate, with enrollments expected to rise 13% from 2000 through 2012 (Gerald & Hussar, 2002).

As teachers in the baby boom generation begin to reach retirement age, many of the nation's most experienced teachers will leave the workforce. Roughly one-quarter of all public school teachers are now over age 50. In the next 10 years it is projected that over 700,000 teachers will retire, accounting for about 28% of the anticipated hiring needs for the period (Hussar, 1999). Georgia is also facing the prospect of a large number of teacher retirements. In 2003, 25.6% of Georgia public school teachers were over 50, up from 22.7% in 2001 (GAPSC, 2003).

In an attempt to improve the quality of education, the federal government instituted a class size reduction funding program in 1999 (United States Department of

Education [USDOE], 2000), and some states have mandated reduced class sizes (Howard, 2003; Hussar, 1999). According to the USDOE report (2000) approximately 29,000 new teachers were hired under the federal program during the 1999-2000 school year. In addition, that report indicated that by 2000 over 20 states, including Georgia, had instituted their own efforts to reduce class sizes. The No Child Left Behind Act of 2001, however, eliminated specific funding for class size reduction. Instead, Title II of that law provides flexible funding grants that states can use to support state-based initiatives to improve academic achievement. Those funds can be used for a range of activities including, but not limited to, increasing teacher salaries, staff training, and class size reductions (USDOE, 2002). Clearly, if states do continue to devote those funds to class size reduction programs, the need for teachers will rise accordingly.

Teachers are leaving classrooms in this country at an alarming rate. Ingersoll (2000) notes that the departure rate across professions is about 11% per year, but among teachers the annual rate is around 14 to 16%. Reported attrition rates among new teachers vary, but most suggest that 20 to 25% leave the profession within their first 2 years and 40 to 50% leave within 5 years (Colbert & Wolff, 1992; Gold, 1996; Haselkorn, 1994; Ingersoll; Karge, 1993; Merseth, 1992; Odell & Ferraro, 1992). This retention issue is exacerbated by the number of teacher program graduates who do not actually take a teaching job immediately upon graduation – by some estimates 30 to 40% (Choy et al., 1993; Cleveland, 2003). A Georgia Professional Standards Commission report (GAPSC, 2003) suggests somewhat better retention for new teachers in Georgia with 15% attrition in year one, 26% by the end of the third year, and 35% by the end of the fifth year. Five year attrition rates provided in that report tended to be somewhat higher for secondary teachers in general and for CTE teachers.

In light of the growing concern about teacher shortages, and the increasing national emphasis on educational quality, a great deal of attention has been devoted to the question of how best to get greater numbers of qualified teachers into the classroom. In

the mid 1980's alternative teacher certification routes began to emerge in some states in response to the looming teacher shortages, and to questions about the quality of the nation's teacher force (Dill, 1996). Considerable research also has been focused upon issues surrounding the retention of teachers, a key factor in combating teacher shortages.

Teacher Preparation and Certification

The authority for the regulation of teacher certification in this country rests with the states. The states set the minimum standards for all teacher education programs and for teacher licensure. Standards vary considerably from state to state in terms of entry and exit requirements for teacher preparation programs, tests required for licensure, and licensure maintenance requirements (Hofer, 1997; Hurst, Tan, Meek, & Sellers, 2003). Historically, postsecondary institutions have been solely empowered by the states to educate teacher candidates and to recommend them to the state for licensure upon satisfactory completion of the institution's state-approved program of study. With the growth of alternative certification routes, the control of higher education over teacher preparation practices has been diminished (Stoddart & Floden, 1995) and new teacher education models have been developed.

University-based Models of Teacher Education

There have historically been dual paths to CTE teacher preparation and certification. The majority of CTE teachers follow the undergraduate pre-service teacher education route, which is a state-approved 4-year baccalaureate program of study completed at an accredited college or university (Walter & Grey, 2002). The program of study normally consisted of 2 years of general liberal arts education, followed by admission to a teacher education program for an additional 2 years of professional education and field experiences in schools. The professional education coursework typically includes courses in the foundations of learning and teaching, curriculum development, teaching methods, program planning, integration strategies, and classroom technology, as well as student teaching and other field experiences (Bruening et al., 2001).

CTE teachers also may be required to have a concentration of courses in their subject area, and a program of study often includes occupational experiences in that content area (Bruening et al.). The traditional teacher education route was the standard for agriculture, business education, marketing education, family and consumer sciences, and technology teachers (Bruening et al.; Lynch, 1996; Walter & Grey). There is a long history of alternative certification in trade and industrial and health occupations areas. In those fields, teachers in the past were certified on the basis of occupational competence and experience (Lynch). According to Bruening et al., however, there has been a shift towards use of the 4-year baccalaureate approach in the education of trade and industrial and health occupations teachers, and today it is the primary model used. Still, trade and industrial teachers and health occupations teachers are, in some cases, not required to have completed a bachelor's degree. It has been reported that 8% of teachers nationally do not hold a bachelor's degree. Nearly all of these are trade and industrial or health occupations teachers (Levesque, Lauen, Teitelbaum, Alt, & Librera, 2000). In fact, Lynch reported that in 1994 roughly 45% of all secondary trade and industrial teachers had less than a bachelor's degree.

Alternative Certification Models

There is no real consensus about what "alternative certification" means. Some use the term very broadly to describe "a method of entry into the teaching profession that does not require completion of a traditional teacher education program" (Bradshaw, 1998, p. 4). They use the terms "alternative certification" and "alternative licensure" interchangeably, and include under that umbrella term any routes to teacher certification other than the pre-service 4-year baccalaureate approach -- everything from emergency certification to fifth and sixth year post-baccalaureate preparation programs. Others restrict the term "alternative certification" to non-traditional certification routes that have a teacher education component to them (Allen, 2003; Dill, 1996; Feistritzer, 2004; Humphrey et al., 2000; Ruhland & Bremer, 2002). Still others confine the term to routes

that provide a means for individuals with a bachelor's degree in a field other than education to become fully certified to teach with less pre-service preparation than that required in traditional programs (Mayer, Decker, Glazerman, & Silva, 2003). In actuality, the vast majority of alternative certification routes do require that participants have a bachelor's degree (Feistritzer, 2004).

Feistritzer (2004) provided the most comprehensive review available of current state policies concerning alternative certification. According to Feistritzer, 43 states and the District of Columbia provided some alternative to the traditional college-based teacher education program as a route to licensure in 2003. Most states have multiple routes to certification and policies varied substantially from state to state (Feistritzer; Goldhaber & Brewer, 1999; Ruhland & Bremer, 2002). Some routes are true teacher preparation programs; others provide little or no pedagogical preparation, or are meant to provide add on certification to already licensed teachers. Examples of the latter include emergency certification, which allows persons with "special" qualifications (e.g., famous authors, Nobel Prize winners) to become certified to teach, and programs for persons seeking additional endorsements or those certified in another state. The 2004 edition of Feistritzer's review classified the alternative certification routes currently approved by states in the U.S. into 9 categories. Prior editions of the Feistritzer review included 11 categories, but two of those (emergency routes, Class F; and programs designed to eliminate emergency routes, Class J) were eliminated in the 2004 edition. The current 9 categories are as follows:

1. Class A: These are programs designed to attract talented individuals who already have a bachelor's degree in a field other than education. They involve teaching with a trained mentor, and formal instruction that deals with the theory and practice of teaching. They are not restricted to shortage areas or by grade or subject.

2. Class B: These programs are similar to those identified in Class A, but provide specially designed instruction and mentoring and are restricted to identified shortages, grades, or subject areas.
3. Class C: These programs entail a transcript analysis and review of the prospective teacher's academic and professional background. They involve individually designed in-service preparation and course-taking necessary to help the individual achieve competencies required for certification. The state and/or local school district have major responsibility for program design.
4. Class D: These programs are essentially the same as those described in Class C, except that an institution of higher education has major responsibility for program design.
5. Class E: These are post-baccalaureate programs based at an institution of higher education.
6. Class G: Programs are for persons who have few requirements left to fulfill before becoming certified through the traditional approved college teacher education program route. For example, these might be persons certified in a different state, or those certified in one area seeking to become certified in another.
7. Class H: This category includes routes that enable a person who has some "special" qualifications to be certified. For instance, a well known author or Nobel Prize winner might be certified to teach certain subjects.
8. Class I: This classification identifies is actually not an alternative certification route. Feistritzer uses Class I to identify states that provide no alternative routes to teacher certification.
9. Class K: This class is reserved for programs targeted toward individuals in specific populations who want to teach (e.g., Troops to Teachers, programs targeted to college professors, etc.)

Even among alternative certification programs that have a professional preparation component, there is tremendous variability. They vary on a number of dimensions including: (a) the stringency of their entrance requirements; (b) the entities managing the program and delivering instruction; (c) the length, content, and timing of the teacher preparation program; (d) the quality of in-service support provided; (e) their goals; and, (f) exit requirements and state requirements for licensure. Some programs are highly selective, others simply require a degree in the subject area to be taught, and a few admit candidates who do not hold a degree. Programs might be managed by the state, a school district, a postsecondary institution, a private group, or be a cooperative venture. The preparation provided ranges from a few days, to a few weeks, to a year or more. Pre-service instruction may or may not be included. In-service support in some cases is minimal, while in others extensive induction support, mentoring and ongoing professional development is provided (Allen, 2003; Bradshaw, 1998; Dill, 1996; Feistritzer, 2004).

National Alternative Route Programs

National programs are those that are either run by the federal government or programs run by private institutions that recruit nationally. There are two prominent national level programs, “Troops to Teachers” and “Teach for America.” The Troops to Teachers (TTT) program, established by the Departments of Defense and Education in 1992, is aimed at active duty and retired military personnel who want to transition into teaching. The TTT program does not provide teacher education to participants; it simply recruits candidates to existing state or district alternative certification programs. Its goal is to increase the supply of teachers to low income, high need schools. TTT participants must make a commitment to teach in a cooperating Title 1 district for 5 years. Districts that hire participants receive a stipend that is gradually reduced over 5 years to help offset the participant’s salary (Humphrey et al., 2000; Keltner, 1994). Certification requirements and required programs of study vary by state. Participants in the TTT are required to

have either a bachelor's degree; or, for prospective CTE teachers, 1 year of college and 6 years of military experience in a vocational or technical field (TTT, n.d.). Teach for America (TFA), which began in 1989, is designed to attract recent college graduates to teach in under-resourced urban and rural schools in participating school districts across the country. Applicants to the program are required to have a bachelor's degree and undergo a rigorous screening process. Participants in the program make a 2-year commitment to the school district. The program includes a 5-week pre-service teacher preparation course, district level induction, full time teaching with a mentor, and ongoing professional development (Humphrey et al., 2000; Tatel, 1999; TFA, n.d.).

State and District Initiated Alternative Certification Routes

Despite the vast differences that exist among alternative teacher certification programs, many share some general characteristics. Typically state and district run programs are internship type programs that: (a) require a bachelor's degree in the subject area to be taught; (b) require the candidate to meet established screening criteria (e.g. grade point average minimum, demonstration of content knowledge, experience, test scores, etc.); (c) provide some level of pre-service preparation; (d) provide professional instruction while the candidate teaches full time under a provisional license; (e) provide mentoring; (f) require ongoing class work; (g) last 1 to 2 years; and, (h) require assessment of candidate performance prior to full licensure (Blair, 2003; Feistritzer, 2004; Roach & Cohen, 2002). Within that model there are substantial variations.

Some states, like New Jersey and Connecticut, have taken a highly centralized approach to the development of alternative teacher certification programs. In such cases, the state department of education is responsible for management of the program, instructional design, and final assessment of teachers completing alternate certification routes. The state coordinates delivery of instruction which might be provided by school district personnel, postsecondary faculty, other professionals, or some combination of those groups. The New Jersey Provisional Teacher Program and the Connecticut

Alternative Route to Teacher Certification Program are examples of this centralized approach (Dill, 1996; Feistritzer, 2004; Natriello & Zumwalt, 1993). Other states permit school districts to run their own alternative certification programs. The California District Intern Certificate and the Texas Alternative Teacher Certification programs, which were devised to meet the needs of the states' multicultural districts, are examples of this decentralized approach. In these cases, the district is responsible for the design, management, and implementation of the program as well as the evaluation of participants. Here again, there is variation in how instruction is delivered. For example, in California the program faculty is almost exclusively district personnel, while in Texas districts typically contract with local postsecondary faculty to teach the classes (Harris, Camp, & Adkison, 2003; Stoddart & Floden, 1995).

Non-Traditional College-Based Teacher Certification Programs

Today, 75% of the institutions of higher education in this country with teacher preparation programs run or collaborate on alternative certification programs (Blair, 2003). The vast majority of these programs require that participants meet college entrance requirements and have a bachelor's degree in the subject area in which they intend to teach. Many of the college-based programs are internship programs, very similar in structure to the higher quality programs run by states and districts, but designed and implemented by college faculty. Some of these are programs in which all candidates complete the same prescribed course of study, while others are individualized programs based upon review of the individual's background and transcript analysis (Blair; Feistritzer, 2004).

Another college-based model is the post-baccalaureate program. In these programs, prospective teachers receive a year or more of professional teaching preparation, including a student teaching experience, before taking a full time teaching position. Some post-baccalaureate programs lead to a Master's of Arts in Teaching (MAT) or a Master's of Education (M. Ed.), while others are non-degree programs

ending in full teaching certification (Hofer, 1997). Some states do not classify post-baccalaureate programs as alternative certification programs, while others do (Ruhland & Bremer, 2002).

Calls for improvements in college-based teacher education have also lead to the development of two additional college-based preparation models, neither of which is classified as an alternative model. The first of these is the 5-year integrated or extended program. In these programs students pursue a non-education major, and are gradually introduced to education through course work and field experiences. The fifth (and sometimes sixth) year of their program is devoted to concentrated professional preparation. These programs may end in a MAT, a M.Ed., or a bachelor's degree with graduate level credit (Hofer, 1997). The other model is the professional development school. These schools are collaborative efforts between schools or school districts, universities, and professional organizations that are analogous to teaching hospitals in the medical profession. Professional development schools provide a clinical environment for the education of teachers, as well as sites for research on teaching and learning. These programs are reminiscent of John Dewey's laboratory school at the University of Chicago. Renewed interest in the professional development school model was stimulated by the teacher education reform recommendations of the Holmes Group in the late 1980s (Hofer; Humphrey et al., 2000; Stoddart & Floden, 1995; Yssel, Koch, & Mebler, 2002).

Pre-Service University-Based Teacher Preparation Model vs. the Alternative Certification Model

The pre-service teacher preparation model and the internship type of alternative certification model have some commonalities. Both provide some level of pre-service professional preparation, both provide instruction in subject content and pedagogy, both provide opportunities for teaching practice, and both ultimately lead to full certification to teach. They differ in terms of the types of teachers they attract, the timing of the teacher preparation given, the amount and focus of that preparation, and the assumptions about

the role of personal experience in learning to teach. Most prospective teachers who enter the pre-service route do so as undergraduates; while the alternative route attracts bachelor's degree holders, many of whom are older mid-career switchers. In the pre-service route, candidates complete their professional education before teaching full-time; the alternate route often provides minimal pre-service preparation. The pre-service route provides a liberal arts education, content coursework, and extensive pedagogical preparation. In contrast, the alternative route screens for content knowledge, and focuses on a limited course of pedagogical instruction. The traditional route assumes that one learns best to teach via coursework interspersed with short periods of supervised practice. Alternative certification routes assume that teaching can be effectively learned on the job, via extended supervised experience (Mayer et al., 2003; Stoddart & Floden, 1995). As Stoddart and Floden suggested, the two approaches are likely to produce teachers with different kinds of expertise. Alternative certification, however, is a hotly debated issue (Dill, 1996; Roach & Cohen, 2002).

The Debate: Alternative Teacher Certification versus Pre-Service University-Based Preparation Programs

Although the impetus for many alternative certification programs was to deal with shortages of qualified teachers by broadening the candidate pool, proponents viewed these programs as means of achieving several objectives. Schlechy and Vance (1983) identified additional major goals as: (a) addressing concerns about the quality of baccalaureate pre-service teacher preparation programs; (b) increasing the quality of teacher candidates; (c) recruiting a demographically representative teacher force; and (d) dealing with teacher retention issues. Undergraduate pre-service teacher preparation programs have been criticized for too frequently producing poor quality teachers (Haberman, 1994; Humphrey et al., 2000; National Commission on Excellence in Education, 1983; Walter & Gray, 2002). Critics suggested that traditional approaches produced students who were well

versed in pedagogy; but may have had limited subject area knowledge, and little “real world” instruction in teaching. They argued that the pre-service college-based teacher education models failed to produce enough well prepared teachers to educate our youth, especially poor and urban students (Haberman, 1994). Some believed, in Haberman’s (2002) words, that “the primary knowledge base teachers need is content knowledge” and that “teaching know-how and methods are best taught on-the-job” (p. 5). Critics of the traditional approach to teacher education also suggested that teacher education students are less academically able, as evidenced by their lower SAT scores and grade point averages as compared to students in other majors (Cooperman & Klagholz, 1985; Schlectly & Vance). Further, they pointed to data that suggested that the most academically able among the teacher pool were also those most apt to leave the profession (Schlectly & Vance; Shen, 1998a). They also pointed to the poor record of pre-service baccalaureate teacher preparation programs in attracting minorities, males, and teachers who are willing to teach in poor or urban schools. Nationally 9% of teachers and 26% of students are minorities, and few teachers want to work in poor/urban schools (Feistrizzer & Chester, 2002). The pre-service model with its lengthy course of study, requirement for full time student status, and financial costs was also seen by some as a substantial barrier to entry into teaching for mid-career switchers, minorities, and the poor (Dill, 1996). Alternative preparation programs, proponents have asserted, are a potential vehicle for increasing the number of available and competent teachers, improving the quality of the teacher force by attracting talented and committed people from other fields, diversifying the teacher pool, adequately staffing poor/urban schools, and reducing the need for emergency credentialing (Dill; Kwiatkowski, 1999; Ruhland & Bremer, 2002).

Critics of alternative teacher certification have lamented the spread of these programs “like dandelions in a suburban yard” (Wise & Darling-Hammond, 1991, p. 56) and assailed them on a number of fronts (Dill, 1996). First, they argued that the teacher shortage issue has been overstated. Of the 2 million plus teachers that will be required

over the next 10 years, only about one-half are likely to be newly prepared teachers. The remaining needs, according to past hiring patterns, will be filled by delayed entrants to the field and former teachers returning to the profession (Feistritzer & Chester, 2002).

According to Darling-Hammond (2000), there are currently enough teachers prepared on an annual basis to meet this demand. The “shortages”, she argued, are really distribution problems in most teaching fields. It was suggested that these distribution problems are better solved via incentive programs, increased salaries, and improvements in district level recruiting practices than by alternative teacher certification programs (Darling-Hammond, 2000). The answer, critics of alternative certification programs claimed, to teacher quality issues was not to give teachers less preparation. They proposed that the answer lies in increasing entry requirements for teacher education programs, and increasing the rigor of those programs. They suggested adding internships, increased requirements for student teaching, improved induction, full licensure before a teacher takes control of a classroom, and ongoing professional development (Darling-Hammond, 2000; Darling-Hammond, Wise, & Kline, 1999; National Commission on Teaching and America's Future, 1996). Critics also questioned the emphasis in many of the shorter term alternative teacher certification approaches on subject matter knowledge to the near exclusion of pedagogy, suggesting such an approach reduced teaching from a profession to a craft (Dill, 1996). They acknowledged that subject matter knowledge was certainly a requirement, but contended teachers also needed to be able to “unpack, expand, and simplify personal knowledge” in order to teach it (Stoddart & Floden, 1995, p.10). That pedagogical understanding, critics argued, is not usually acquired with subject matter knowledge; it requires specific instruction (Stoddart & Floden). In addition, Schussler and Testa (1984) raised concerns about the capacity of school districts to provide adequate teacher preparation; and, like others, questioned the risks to children who were being taught by under-qualified teachers (Darling-Hammond, 2000; Laczko-Kerr & Berliner, 2002). Even the most vocal of the critics of alternative teacher certification, however, acknowledge

that there are vast differences across programs, and that the more rigorous longer-term programs that include a strong pedagogical instruction component and extended field experiences can be effective in producing teachers who perform well in the classroom (Darling-Hammond, 1992).

Over the past 20 years the number of alternative teacher certification programs has grown dramatically. In 1983 only eight states had alternative teacher certification programs; by 2003, 43 states had some type of alternative route for certifying teachers (Feistritzer, 2004). Feistritzer estimated that since 1983 over 200,000 people have been certified to teach via state-run alternative certification programs and thousands more have been certified through alternative programs instituted by colleges and universities. Since some states and many universities and colleges do not routinely report enrollment and graduation numbers for alternative certification programs, it is not possible to accurately estimate the total number of teachers who have been licensed through alternative route programs (Humphrey et al., 2000).

Alternative Teacher Certification in Georgia

Feistritzer (2004) listed seven alternative preparation routes available in the state of Georgia in 2003. Those routes are summarized in Table 1.

As of March, 2004, the state of Georgia had introduced an additional alternative certification route that allows a candidate with a job offer to obtain a 5-year non-renewable certificate to teach based on testing. An individual who has a bachelor's degree with a major in the field to be taught can obtain a 5-year non-renewable teaching certificate by passing the Praxis I test, and Praxis II content test. The individual then must complete a 1-year supervised teaching practicum, pass a teaching skills test, and be recommended by their district to obtain full licensure (GAPSC, 2004).

Table 1
Alternative Certification Routes in Georgia

	Route	Began	Primary responsibility	Class *	Bachelor's degree required?	Motivation
1	Teach for America (TFA)	1989	IHE, LEA & TFA	K	Yes	Increase teacher applicant pool
2	Preparation Program for Military Personnel	1993	IHE	K	Yes	Increase teacher applicant pool
3	Georgia Teacher Alternative Preparation Program	2001	IHE, REASA, and public schools	A	Yes	Increase teacher applicant pool
4	Post Baccalaureate Non-Degree Preparation Programs	19250	IHE	D	Yes	Increased teacher applicant pool
5	Master's Degree Level Initial Preparation	1993	IHE	E	Yes	Increase teacher applicant pool
6	Permitted Personnel	1992	Professional Standards Commission (PSC)	H	In most fields, Yes	Bring those with "special" expertise/talents into public schools
7	Probationary Certificate	1974	PSC, IHE, and/or LEA	G	In most fields, Yes	Allow certified teachers to add a new field of certification

(Feistritzer, 2004; Humphrey et al., 2000)

* Note: Class refers to the alternative certification categories identified on pp. 21-23.

IHE = Institution of higher education

RESA = Regional education service agencies

LEA = Local education agencies

Alternative certification programs for CTE teachers at the University of Georgia

The Department of Workforce Education, Leadership, and Social Foundations (WELSF) at the University of Georgia (UGA) offers two programs to prepare prospective teachers from fields outside of education for certification in various CTE areas (Agriculture Education, Business Education, Family and Consumer Sciences Education, Health Occupations Education, Marketing Education, Technology Education, and Trade and Industrial Education). One of these is a pre-service graduate level program in which non-traditional candidates prepare for full certification via completion of teacher education course work and a semester-long student teaching experience. The other is the Professional Academy for Career and Technical Education (PACTE), an in-service program in which candidates complete an intensive two and one-half week summer teacher preparation course and then are employed as teachers in a public school under a 5-year non-renewable certificate while completing a 1-year internship and all required coursework for full certification. All participants in both programs, except those in trade and industrial education in the in-service program, must meet the following minimum standards established by the Georgia Professional Standards Commission for admission to career and technical education teacher preparation (GAPSC, n.d.):

1. A bachelor's degree in the appropriate field with a minimum grade point average of 2.5 on all course work attempted, or a master's in the appropriate field (the degree held must be from a PSC-approved, accredited institution);
2. A passing score on PRAXIS I or its equivalent;
3. A satisfactory criminal background check.

In-service program participants seeking certification in trade and industrial education are, in some cases, not required to hold a bachelor's degree. They are, however, required to have a minimum of 12 months full-time occupational experience. In addition, participants in the PACTE program must have an offer of employment from a school system in

Georgia. Both programs require that candidates complete the state-approved course requirements for the appropriate field and pass the Praxis II test in their teaching field in order to receive full certification. In both programs, the specific course of study for each teacher candidate is determined based upon a review of the candidate's transcript (Smith, personal communication, September 7, 2004; University of Georgia [UGA], n.d.).

The graduate level pre-service program is quite similar to the undergraduate teacher preparation approach. Students in this program complete a program of pedagogical preparation which includes semester-long courses in educational foundations, educational psychology, and special needs in occupational studies. Preparation in curriculum planning and instructional methods is provided in a full-time intensive two and one-half week instructional program just prior to the semester in which participants complete their student teaching. Additional course work requirements are determined by the prospective teacher's content area and transcript review. Students are required to complete all required coursework and student teaching prior to certification. For some students, this program ends with certification, while others continue their studies to obtain an MAT degree (UGA, n.d.).

The PACTE program was developed by the WELSF Department at the UGA in cooperation with the Career/Technology Education Unit at the Georgia Department of Education. The purpose of this program, which began in the summer of 2001, was to provide a university-based alternative route to certification for talented individuals from fields other than education. The in-service program includes a two and one-half week program of intensive full-time instruction during the summer. For some participants the summer program of instruction preceded their employment as teachers, but some others had been teaching for one or more years on a provisional basis before entering the program. Following the summer instruction program, participants complete a 1-year supervised internship in which they have full responsibility for the classroom. During the internship period participants attend monthly induction seminars, and receive extensive

mentoring and on-line support. Each year 40 to 50 students complete the program in a cohort group. During the 2001-2003 period, roughly 30 to 35 per year of those participating held a bachelor's degree. The two and one-half week summer program includes instruction in areas such as curriculum development, instructional strategies, lesson planning, assessment, technology integration, students with special needs, classroom management, work-based learning, and reflective practice. Monthly seminars during the internship year are focused upon continued professional development. During the course of the 1-year internship, PACTE participants are required to compile a teaching portfolio including reflections on their practice. Teaching evaluations are completed by university personnel for each participant at least twice each semester during the internship. This in-service program terminates with completion of the 1-year internship. After completion of the program participants have 5 years in which to complete all requirements in their course of study in order to obtain renewable professional certification. The summer course preceding the internship fulfills certification requirements for curriculum planning and instructional methods courses. All PACTE participants are required to complete courses in educational foundations, educational psychology, and special needs in occupational studies prior to full certification (Smith, personal communication, September 7, 2004; UGA, 2001, 2004).

By the time they qualify for full teacher certification status, participants in the in-service and the pre-service programs will have completed the same pedagogical course work. The primary differences between the two programs lie in the timing of the instruction received and the student teaching versus internship experience. Participants in the pre-service program complete all requirements for certification including a student teaching experience prior to assuming teacher of record responsibilities. In-service participants, in contrast, receive very concentrated basic pedagogical preparation prior to the internship, and complete the remaining course work while teaching. While in-service

program participants do no student teaching, they receive extensive structured induction support and continued professional development during their first year of teaching.

Alternative Teacher Certification Research

While a substantial amount of research has been completed on alternative teacher certification, the findings have done little to resolve the debate concerning the efficacy of alternative certification routes. It is little wonder, given the variations in alternative teacher certification routes, that the research has produced mixed results (Dill, 1996; Feistritz, 2004; Ferraro, n.d; Jelmberg, 1996; Legler, 2002; Miller, McKenna, & McKenna, 1998; Shen, 1998a). Much of the alternative teacher certification research has compared teachers who complete alternate route programs to teachers completing pre-service undergraduate programs, and little of it is specific to CTE or to Georgia. The alternative teacher certification research has addressed a number of issues including: impact upon teacher diversity, willingness of teachers to teach in urban schools, teacher quality, job satisfaction, and teacher retention (Allen, 2003; Dill; Humphrey et al., 2000).

Miller et al. (1998) characterized the research on alternative teacher certification programs as “inconclusive and sometimes contradictory” (p. 166). That is certainly true, and it is driven by a number of factors. For example:

1. There is considerable variability in how researchers have defined “alternative certification” and in the characteristics of the alternative certification programs that have been examined. Some researchers have operationally defined alternative certification as any route to certification that does not conform to the traditional education undergraduate degree route, and include everything from emergency certification to fifth-year Master of Arts in Teaching (MAT) programs. Other research included only programs that have a significant instructional component (Allen, 2003; Hawley, 1992; Miller et al., 1998).
2. Alternative certification programs vary widely in their elements. These programs vary in terms of the groups targeted, entry requirements, teacher preparation and

support provided, length, exit requirements, and a host of other variables (Hawley, 1992; Legler, 2002).

3. It is difficult to separate the impact of the program from the impact of the people who choose to participate in it (Allen, 2003). That is, do teachers who participate in a particular program perform well because the program is excellent, or because the program selects or attracts very talented and motivated individuals?
4. Much of the research does not control for differences across schools and districts, or for instructional level. In comparing alternatively certified teachers with those prepared in undergraduate teacher education programs factors like the wealth of the district, the location of the school, and the grade levels taught are not taken into account (Hawley, 1992).
5. The sample sizes in some of the research are small, since many of the studies that have been done were designed to evaluate the short-term effects of specific programs (Hawley, 1992; Humphrey et al., 2000).
6. There are marked methodological differences across studies. For example, some are national quantitative studies, some are quantitative evaluations of specific programs, and still others are qualitative studies (Humphrey et al., 2000; Miller et al., 1998).
7. A wide variety of outcome variables are measured (Miller et al., 1998).
8. Some of the measures are suspect. For instance, some studies use the ratings of the teacher by the principal as a measure of teacher effectiveness. Those principals may have had a commitment to the program, or a bias against it (Hawley, 1992).
9. Some studies use grade point averages and subject matter knowledge as measures of alternative teacher quality, when the preparation programs under investigation actually screen for those elements (Hawley, 1992).

10. Many studies focus on the first year of a candidate's alternative certification internship and compare it to the traditionally prepared teacher's first year on the job – after the traditionally prepared teacher has had the benefit of a student teaching experience (Humphrey et al., 2000).
11. State standards for licensing vary substantially, a fact that certainly impacts traditionally prepared versus alternative certification comparisons (Darling-Hammond, 2000).

Legler (2002) pointed out an additional issue concerning the comparisons of teachers prepared in alternate route programs versus those participating in pre-service undergraduate programs that are made in much of the research. Over the past two decades colleges of education have been criticized for producing mediocre teachers. In response to that criticism, there has recently been a movement towards strengthening entry and exit requirements in pre-service baccalaureate teacher education programs. Many of the teachers prepared in pre-service baccalaureate programs who form the contrast groups in the literature graduated prior to the implementation of those new standards; and, thus, the appropriateness of that group as a benchmark for today's world may be subject to question. While this criticism is not relevant to studies in which comparisons were made between teachers completing programs during the same time frame (e.g., Miller et al., 1998; Guyton, Fox, & Sisk, 1991; Houston, Marshall, & McDavid, 1993), it is a legitimate concern in studies that compared broad samples of teachers prepared in alternate route and pre-service undergraduate programs like the Shen (1997, 1998a, 1998b) and Ruhland and Bremer (2003) studies.

Despite its limitations, the alternative teacher certification research does provide fairly consistent support for alternative programs with respect to their capacity to diversify the teacher population and to recruit more teachers willing to work in urban and hard to staff schools. Numerous studies have shown that teachers entering the profession through alternative routes are more likely to be members of a minority group, males, and older

than are those in the general teacher population (Feistritzer, 2004; Guyton et al., 1991; Houston et al., 1993; Hutton, Lutz, and Williamson, 1990; Legler, 2002; Murmane et al., 1991; Natriello & Zumwalt, 1993; Ruhland & Bremer, 2003; Shen, 1997, 1998a; Stoddart, 1993). In a review of 64 alternative teacher certification programs for math and science teachers, a subject area typically dominated by males, Darling-Hammond, Hudson, & Kirby (1989) concluded that the programs were successful in attracting a greater proportion of females and minorities. Teachers who are certified by alternate routes are also frequently reported to be more apt to be teaching in urban schools (Natriello & Zumwalt, 1992; Shen, 1998a) and to express a willingness to teach in low income or urban schools than are teachers qualifying for certification via pre-service undergraduate programs (Dial & Stevens, 1993; Houston et al.; Natriello & Zumwalt, 1992, 1993; Stoddart).

The research with respect to the quality of teachers certified thru alternative routes is decidedly mixed and difficult to interpret. Researchers have examined a dizzying array of programs using a wide variety of measures and compared teachers certified through alternative routes to varying comparison groups (i.e., all teachers completing undergraduate pre-service programs, first year teachers completing undergraduate pre-service programs, emergency credentialed teachers, & provisionally credentialed teachers) (Allen, 2003; Humphrey et al., 2000; Miller et al., 1998). In some cases, researchers looking at the same programs came to different conclusions. For instance, Laczko-Kerr and Berliner (2002) examined standardized test scores for Arizona elementary school students as a function of teacher certification. They found that students taught by fully certified teachers performed better than did those taught by teachers holding emergency, provisional, or temporary certification in math, reading, and language arts. They also found that students of “Teach for America” interns fared no better than those of other “under-qualified” teachers, and concluded that TFA teachers are not as effective in the

classroom as were teachers completing pre-service baccalaureate preparation programs. Conversely, another study of the TFA program in Houston (Raymond, Fletcher, & Luque, 2001) examined middle school and elementary student 1996-2000 performance on standardized tests. The researchers compared the scores for students of TFA teachers to those for non-TFA new hires and to those for all non-TFA teachers. The authors reported that students of TFA teachers scored significantly better in math and slightly better in reading than did students of either of the comparison groups. They concluded that TFA was “a viable and valuable source of teachers” (Raymond et al., p. xiii).

Other studies using student achievement as a measure also arrived at different conclusions concerning the efficacy of alternative certification. Darling-Hammond (2000) compared scores on reading and math achievement tests for students in states with restrictive licensing practices with those in states with liberal licensing practices. Darling-Hammond defined restrictive licensing practices as requiring that teachers be fully certified and have a major in their field, and liberal licensing practices as requiring less than a minor in the teaching field or allowing teachers to teach with a restricted or emergency certificate. Controlling for poverty and language proficiency, she found that students in states with restrictive standards for teachers fare better. In contrast, Goldhaber and Brewer’s (1999) analysis of the National Educational Longitudinal Study of 1988 found no evidence of a relationship between academic achievement of students and their teacher’s credentials. Other research comparing achievement test scores for students of teachers certified through alternative routes to those for students of teachers completing undergraduate teacher preparation programs have found no differences across teacher groups (Feistritzer, 1990; Miller et al., 1998).

Studies using other measures of teacher effectiveness also show mixed results. Two evaluations of an alternative teacher certification route in Dallas (Hutton et al., 1990; Lutz & Hutton, 1989) both show that mentor ratings of interns in the program were very positive, and that interns scored better than did their counterparts prepared in pre-service

undergraduate teacher education programs on the state certification test. Principals in both studies, however, rated teachers prepared in undergraduate pre-service programs higher on discipline, management, planning, and instructional techniques. Principals in a New Hampshire study also rated teachers completing undergraduate pre-service programs higher than participants in alternative teacher certification programs in terms of teaching methods and educational foundations (Jelmberg, 1996). Researcher ratings of pre-service prepared teachers and participants in a college-based alternate route program in California on classroom environment, teacher-student involvement, and classroom management also consistently favored the traditionally trained teachers (Karge, Young, & Sandlin, 1992). However, other studies in which a variety of classroom evaluations of teacher performance were used suggested that alternatively certified teachers performed as well as did teachers completing undergraduate teacher education programs (Cornett, 1992; Guyton et al., 1991; Hawk & Schmidt, 1989; Houston et al., 1993; Miller et al., 1998).

The data on retention of teachers certified through alternative routes is also inconsistent. Here again, part of the problem is that researchers have attempted to address this issue in different ways. Some looked at whether or not new teachers stayed in the teaching profession, while others reported whether or not the teachers stayed in the district in which they were employed in their first year. Still others addressed retention by asking teachers about their intent to stay in teaching. Regardless of the measure used, whether teachers actually stayed or whether they said they intended to stay, the results are variable. Some studies found that teachers certified through alternate routes were more apt to stay than were those completing undergraduate pre-service programs (Adams & Dial, 1993; Cooperman, 2000; Murmane et al., 1991; Stoddart, 1992;). Some researchers found no difference between the two groups (Darling-Hammond et al., 1989; Guyton et al., 1991; Houston et al., 1993; Ruhland & Bremer, 2003). Still other researchers found that teachers prepared via undergraduate pre-service programs were more likely to be

retained (Darling- Hammond, 2000; Lutz & Hutton, 1989; Natriello & Zumwalt, 1992; Shen, 1997). Of the studies reviewed, only the Ruhland and Bremer research was specific to CTE teachers. In a study of CTE teachers across 28 states they found no difference between teachers prepared in alternative preparation programs and those participating in undergraduate or graduate level pre-service programs in terms of intent to remain in the profession.

There is substantial evidence that the nature of the alternative certification program matters. Darling-Hammond (1992) distinguished between what she labeled “alternative route” programs -- programs that are longer, include more pedagogical and subject matter coursework, feature extended supervised field experiences, and often provide a Master’s degree -- and short term programs that she termed “alternative certification” programs. It should be noted that in most of the literature those terms are used interchangeably, but the distinction Darling-Hammond made in terms of program rigor is an important one. She cited numerous studies that demonstrated that the former produce teachers who not only achieve better results in the classroom, but are also more likely to remain in the profession. In a more recent article, Darling-Hammond (2000) reviewed retention rates across 14 different types of alternative certification programs, and concluded that Master’s level alternative programs generate far greater retention levels than do pre-service undergraduate programs. Her analysis also suggested that undergraduate pre-service programs are superior to short term alternative programs (i.e., Bachelor’s degree plus summer teacher education program) in terms of retention.

Other research has demonstrated the importance to new teachers of mentors (Dill, 1996; Guyton, et al., 1991; Hassard, 1989; Ingersoll, 2000; Kardos, 2002; Shen, 1997; Stoddart, 1992;), strong initial induction and support (Gold, 1996; Jorissen, 2002; Sandlin, Young, & Karge, 1992;), and working with a cohort group (Hawk & Schmidt, 1989; Jorissen; Knauth & Kamin, 1994). This body of research suggests that mentors, strong induction support, and a cohort group are likely to be helpful to a new teacher

regardless of teacher education program. Studies indicating that teachers certified through alternative routes are less confident or more likely to experience early difficulties, however, suggest that those elements may be even more important to them (Darling-Hammond, Chung, & Frelow, 2002; Darling-Hammond et al., 1999; Houston et al., 1993; Karge et al., 1992).

In sum, there is a substantial body of literature on alternative teacher certification, but few definitive conclusions can be drawn from it. This lack of definitive conclusions is particularly true of alternative routes to certification for CTE teachers, since very little research in this area is specific to CTE, despite the fact that alternative certification routes are quite common in CTE (Ruhland & Bremer, 2002). But as Miller et al. (1998) stated in their review of the literature on alternative teacher certification, “alternative certification is here to stay; researchers should investigate not whether such programs work, but which ones work best” (p.166). So, what does the research suggest about what works best? The following are some common themes on the features of effective alternative teacher certification programs that have been identified in the literature.

1. Strong partnerships existed between those responsible for the preparation program and the school district (Allen, 2003);
2. The programs had high entrance standards (Allen, 2003; Legler, 2002; Wilson, Floden, & Ferrini-Mundy, 2001).
3. Solid instruction was provided in pedagogy, subject matter, class management, child development, and working with diverse students before the teacher began to teach (Allen, 2003; Legler, 2002; Wilson et al., 2001).
4. The programs featured extensive mentoring and supervision with a trained mentor (Allen, 2003; Legler, 2002; Wilson et al., 2001).
5. Practice in lesson planning was provided and program participants taught with observation and assistance in the classroom before taking full responsibility for the class (Allen, 2003; Legler, 2002; Wilson et al., 2001).

6. Ongoing professional development and reflection opportunities were provided after the teacher had taken full control of the class (Legler, 2002).
7. Program participants were provided with continuous monitoring, evaluation, and feedback (Legler, 2002; Wilson et al., 2001).

Other Research on Teacher Retention

In addition to the studies investigating retention of teachers completing alternative certification programs, there is a substantial body of research on teacher retention and attrition in general. As Shen (1998b) pointed out in a review of the literature on teacher retention, research has generally taken one of two approaches, either a multivariate theoretical approach or a bivariate approach. The multivariate theoretical approach involved the investigation of a set of variables simultaneously to test a theory of teacher retention. In contrast, the bivariate approach examined the relationship between retention or attrition and other variables.

Theobald's (1990) study is an example of the multivariate theoretical approach. This study of district level retention among Washington state teachers employed during the 1984 to 1987 period examined the theory of teachers as economically rational decision makers. Theobald's model suggests that teachers choose to stay in a teaching job or to leave it based upon their assessment of which of those decision alternatives provided them the greatest value or "utility". That utility was a function of both "measurable" and "unmeasurable" factors (p. 243). The "measurable" factors that were part of the model included personal characteristics (age, gender, ethnicity, tenure, and salary), professional characteristics (educational attainment and teaching assignment), and occupational context elements (enrollment, wealth of the district, expenditures, class sizes, student demographics, and the local unemployment rate). The model's "unmeasurable" factors, which "from the standpoint of the observer introduce a random element into the teacher's behavior" (p. 243), included the personal and professional satisfaction obtained from teaching and "disutilities" (p. 243) generated by job difficulties and stresses. The results

of the study were consistent with Theobald's model of retention as an economically rational process. Some of the personal and professional characteristics (age, tenure, salary, and an elementary teaching assignment) and three of the occupational context elements (district wealth, minority student representation, and pupil-staff ratio) were strongly related to retention across the full 3-year period. Tenure, salary, and an elementary teaching assignment were positively associated with a decision to stay. District wealth was negatively related to a stay decision. Theobald suggested that one potential explanation for this may be that teachers perceived themselves to be relatively deprived when employed in wealthy communities. This study also found that stay/leave teacher decisions were a quadratic function of age and pupil-staff ratio. Retention levels were lowest at the extremes of both variables – among the youngest and oldest teachers and at very low and very high pupil-staff ratios. The former was quite consistent with the findings of other studies (Boe, Bobbitt, Cook, Whitener, & Weber, 1997; Darling-Hammond & Sclan, 1996; Grissmer & Kirby, 1987; Murmane, Singer, & Willett, 1989), but the latter is somewhat surprising. Theobald hypothesized that may be because districts with moderate pupil to staff ratios used savings generated by lower staff levels to support other programs that benefit teachers. Educational attainment also contributed strongly to the prediction of retention in the last 2 years of the study. Teachers with more education were more likely to leave a teaching position.

Studies conducted among University of Michigan graduates with teaching certificates testing Chapman's model of teacher retention provide another example of the multivariate approach (Chapman, 1984; Chapman & Green, 1986). Chapman's model proposed that a teacher's career satisfaction was a function of: (a) a teacher's personal characteristics; (b) educational preparation; (c) initial commitment to teaching; (d) quality of first teaching experience; (e) professional and social integration into teaching; and, (f) external influences. The level of career satisfaction the teacher experienced then determined whether or not the teacher remained in the profession. These studies used a

causal comparative design to assess differences on the components of the model across four groups of teachers: (a) those who taught continuously, (b) those who taught intermittently, (c) those who taught but subsequently left the profession, and (d) those who never took a teaching position. The results supported Chapman's model. The discriminant analysis revealed differences across the four groups on five dimensions: (a) personal characteristics; (b) educational experiences; (c) integration into teaching; (d) external factors; and, (e) career satisfaction. In comparison to those who never took a teaching position, the group of teachers who taught continuously were older, had a higher level of initial commitment to teaching, had a more positive student teaching experience, assigned more importance to the financial rewards of teaching, believed that their educational experiences were well used in their job, and felt it would be more difficult to find another job with comparable pay and benefits. Intermittent teachers were more similar to those who continuously taught and those who left the profession were more similar to those who never taught. Intermittent teachers differed from those who taught continuously in that they were more apt to be female, earned lower incomes, assigned less importance to financial rewards, felt less locked into their jobs, and perceived greater ease in finding another job.

A third example of the multivariate approach is Kirby and Grissmer's (1993) work investigating their theory of teacher attrition based on the human capital theory of occupational choice. Human capital theory suggested that teachers make systematic evaluations of the net monetary (e.g., income, benefits, promotion opportunity) and non-monetary benefits (e.g., working hours, physical environment, co-worker relationships, stress levels) of alternative career choices. Based upon those evaluations teachers make decisions to remain in or leave the profession depending upon which options maximizes their net returns. The theory proposed that as the individual trains for or stays in a profession they accumulate two types of capital - generic or general capital that is easily transferred to other occupations, and specific capital that is relevant to only one

profession. As specific capital rises, the probability that the individual will stay in the chosen profession also rises. Examples of specific capital might be occupation specific training or skills, accumulated benefits, seniority or status, professional contacts, and vesting in a retirement system. General capital might include things like broad-based education, managerial ability, teamwork skills, and skills or knowledge that are applicable in other fields. Kirby and Grissmer further suggested that early attrition was also affected by the job's balance between inspection characteristics (attributes that can be observed without actually experiencing the job) and experience characteristics (those which are evident only after experiencing the job). They proposed that the greater the level of experience characteristics in a job or profession the more likely it is that early attrition will occur. Their study of Indiana public school teachers showed that attrition was most likely to occur among newly graduated teachers, that tenure was positively related to retention, that salary and retention were positively related in the first 8 years of teaching, and that teachers whose skills were easily transferred to other fields (e.g., science teachers, English teachers) and teachers in poor or stressful working conditions had higher attrition rates. These findings supported human capital theory and Kirby and Grissmer's extension of it.

The bivariate approach, examining the relationship between attrition or retention and other specific variables, has been the more common approach to the study of teacher retention. Numerous studies have examined a wide range of variables including demographic and personal factors, subject and level taught, education level of the teacher, teaching tenure, salary and workplace conditions, and school characteristics with sometimes conflicting results. There does seem to be general agreement that the relationship between attrition and age follows a U-shaped curve. Young teachers and those over 50 are more likely to leave the profession than are those in the 30 to 49 age range (Boe et al., 1997; Darling-Hammond & Sclan, 1996; Grissmer & Kirby, 1987; Murmane et al., 1989).

The research with respect to gender and race has been mixed. Some studies have shown that women were more apt to leave than men, and that white teachers left more often than did minorities (Adams, 1996; Murmane et al., 1991), while others have found no differences by gender or race (Billingsley, 2001; Boe et al., 1997; Shen, 1998b; Singer, 1993). Other personal factors that have been associated with higher rates of attrition included the teacher being from a higher social class (Dworkin, 1985), being unmarried or having no children (Heyns, 1988), and having strong academic ability (Schlectly & Vance, 1983; Shen).

Retention levels have been found in some studies to vary with the subject taught and level. Teachers of higher mathematics, science, and special education have been found to have higher attrition levels than other teachers (Ingersoll, 2000; Murmane et al., 1991; Wagner, 1993). That finding has not, however, been entirely consistent. Bobbitt, Leich, Whitener, & Lynch (1994) found little evidence of variation in attrition by subject. Also, secondary level teachers have been reported by some researchers to be more likely to depart the profession than are elementary teachers (Heyns, 1988; Murmane et al., 1989, 1991). Shen (1998b) and Boe et al. (1997), however, found no differences in retention by level of instruction.

There is mixed evidence concerning the impact of the teacher's level of education on the probability of attrition. Boe et al. (1997) found that while the level of highest degree earned was not a factor, teachers who had completed their most recent degree within the prior 2 years were more likely to leave their job than those who had not recently completed a degree. While the latter is certainly consistent with the conclusions of Kirby and Grissmer (1993) that newly graduated teachers are more apt to leave the profession, Boe et al. cited evidence that approximately 40% of all recent degrees earned by teachers were held by experienced teachers. Based upon that evidence, Boe et al. suggested that for both new and experienced teachers a recent degree is "a ticket out of the profession or into a different school" (p. 400). In contrast to the Boe et al. findings, Adams's (1996)

study of 2327 Texas elementary school teachers indicated that the highest level of degree earned by the teacher did make a difference. That study showed that attrition levels were higher for teachers with graduate degrees than for those holding only a bachelor's degree. Other studies, however, found the reverse - higher attrition levels among teachers who held only a bachelor's degree (Adams; Heyns, 1988) - and suggested that advanced degrees function as investments that retard departure from the profession.

Teaching tenure has been shown to be positively related to retention. Boe et al. (1997) found in a national study that less experienced teachers were more apt to leave the profession and more likely to change schools. That is consistent with the Shen (1998b) national finding that number of years in teaching was a primary discriminator separating teachers who stayed in the profession and their job from those who changed schools and those who left the profession. Murmane et al. (1991) also found in a study of teachers in North Carolina and Michigan that attrition levels were higher among those in their earlier years of teaching. Given the relationship of age to retention, these findings were not surprising, since age and tenure tend to be correlated (Billingsley, 1993). As Billingsley pointed out, however, more and more teachers are now entering the profession at a later age, thus it is important to examine the effects of tenure as well as age.

A number of studies have explored the effects of a variety of workplace conditions and salary levels on retention. Salary levels have been shown in a number of studies to be positively related to retention (Boe et al., 1997; Gritz & Theobald, 1996; Murmane et al., 1991; Singer, 1993; Shen, 1998b). Positive initial field experiences (Chapman & Green, 1986; Ruhland, 2002) and mentoring programs (Odell & Ferraro, 1992; Shen) also have been linked to higher levels of retention. Other workplace conditions that have been linked to higher teacher retention levels were having highly supportive school administrators (Bobbitt, Faupel, & Burns, 1991; Darling-Hammond, 2000; Shen), allowing teachers more involvement in school decision making (Bacharach, 1990; Darling-

Hammond & Wise, 1983; Shen), and keeping teacher stress levels low (Breeding & Whitworth, 1999; Macdonald, 1999; Wisniewski & Gargiulo, 1997).

The characteristics of the schools in which teachers work also have been found to influence teacher attrition. Shen (1998b) found that attrition levels tended to be higher in schools that: (a) had high percentage of students receiving free and reduced lunches; (b) had high minority populations; and, (c) and had a high percentage of teachers with less than 3 years experience. Those findings were at odds with those of Heyns (1988) and Theobald (1990) which suggested that teachers were more apt to leave relatively wealthy schools than problem schools. Although Shen did not find the location of the school to be a significant predictor of retention, a number of other studies have shown lower retention levels in large urban districts (Corcoran, Walker, & White, 1988; Grant, 1989; Haberman, 1987; Murmane et al., 1991)

Retention and Work Related Attitudes

There is a wide body of research, spanning a broad range of industries, which addressed the workplace factors that influence employee retention. Among the most frequently studied of those factors are job satisfaction and various forms of employee commitment (Cohen, 2003; Meyer & Allen, 1997; Spector, 1997). While relatively little of this research is specific to the teaching profession, some of the findings have been quite consistent across fields including education, suggesting that these factors mediate retention among teachers as well.

Job Satisfaction Definition and Theory

According to Spector (1997), the concept of job satisfaction is central to almost every theory of work withdrawal behavior. Job satisfaction has over the years been the subject of a tremendous amount of research, and it has been variously defined. For instance, Spector defined it as “simply how people feel about their jobs. It is the extent to which people like (satisfaction) or dislike (dissatisfaction) their jobs.” (p. 2). Dawis (1996) characterized job satisfaction as the extent to which the individual perceived that

the job and various aspects of the job met the individual's needs and fulfilled the individual's aspirations and expectations. Smith, Kendall, and Hulin (1969) proposed that satisfaction was "a function of the perceived characteristics of the job in relation to an individual's frame of reference" (p.12). Porter, Lawler, and Hackman (1975) stated that job satisfaction was determined by "the differences between the amount of some valued outcome that a person receives and the amount of that outcome he feels he *should* receive" (p. 53). Despite these differences in definitions of job satisfaction, there was in the literature general agreement that job satisfaction was an affective reaction to the job stemming from the individual's comparison of actual job outcomes to those outcomes that were desired or expected (Cranny, Smith, & Stone, 1992). Job satisfaction has been approached from both a global satisfaction perspective and as a set of related attitudes about various aspects of the job (Spector, 1997). The former approach, more prevalent in the literature, looked at satisfaction as an overall attitude toward the job and has been used extensively in studies relating job satisfaction to other variables of interest (e.g., turnover, commitment, absenteeism, etc.). The latter approach, the facet approach, was used when the objective was to identify what specific parts of the job generate satisfaction or dissatisfaction. This approach recognized that people can have very different feelings about different aspects of their jobs. In fact, it has been found that not only do people have different reactions to different facets of their jobs, but facets are only moderately related to one another (Spector, 1985). The facet approach is useful for organizations seeking ways to improve member satisfaction levels. Facets evaluated often include job elements like pay, benefits, coworker and supervisor relationship, the nature of the work itself, recognition, security, organization policies and procedures, growth and promotion opportunities, and the organization itself. Both the global and facet approaches are sometimes used in concert to obtain a comprehensive picture of satisfaction levels (Spector, 1997).

Numerous theories have been applied to the study of job satisfaction. Gruenberg (1979) categorized them as either content or process theories. Content theories attempted to account for the factors that influence job satisfaction. Content theories assumed that all individuals possess the same set of needs and seek to identify the characteristics that should be present in jobs in order to make them satisfying. Process theories, on the other hand, attempted to explain the process by which variables such as individual needs, expectations, and values interact with the job environment to produce job satisfaction. Process theories stress individual differences in needs and focus on the cognitive processes that influence satisfaction.

Perhaps the most familiar of the content theories is Herzberg's two-factor theory (Herzberg et al., 1959), which is rooted in Maslow's Hierarchy of Needs (Maslow, 1943). Herzberg proposed that satisfaction and dissatisfaction are actually separate continua, and that each is influenced by a different set of factors. The first group of factors, hygiene factors, corresponded to Maslow's lower order needs: salary, company policies and administration, physical working conditions, supervision, interpersonal relationships, and security. The theory suggested that the absence of hygiene factors led to dissatisfaction, but their adequate fulfillment led to neutrality rather than satisfaction. The second group of factors, motivating factors, corresponded to Maslow's higher order needs. It was the fulfillment of these factors – achievement, recognition, intrinsically interesting work, responsibility, advancement, and growth – that led to job satisfaction. Their absence, however, yielded neutrality rather than dissatisfaction. Gruenberg (1979) likened the two-factor model to the relationship between pleasure and pain. The absence of pain is not necessarily pleasure, nor is the absence of pleasure pain.

There are a wide range of process theories. Some were based on an equity model that proposed that satisfaction resulted when the individual perceived that the effort they expended and the rewards that they received as a result of those efforts were comparable to the efforts and rewards of others. Others are reference group theories which also

suggested that individuals compare their inputs and rewards with those of others, but argued that it was essential to understand the group to whom the individual related in order to understand the individual's level of job satisfaction (Gruenberg, 1979). Yet another type of process theory that has been applied to job satisfaction was the expectancy theory of motivation, developed by Victor Vroom (1964). Vroom's theory predicted that individuals would be satisfied when they perceived that their efforts eventually led to desired rewards. Specifically, this theory stated that motivation was a multiplicative function of: (a) expectancy - the perception that effort led to good performance; (b) instrumentality - the perception that good performance led to need fulfillment; and (c) valance - the importance the individual attached to the need. The theory predicted that as needs to which the individual assigned a high value were better met, satisfaction increased.

The theory of work adjustment, originally developed as a theory of career choice and development, has also been broadly applied in the study of job satisfaction. This theory, which forms part of the framework for this study, underlies the Minnesota Satisfaction Questionnaire (MSQ; Buros, 1978), is one of the most frequently used instruments in the measurement of job satisfaction. The theory of work adjustment characterized work as an interaction between the worker and the work environment. The theory suggested that the worker comes to the job with individual needs like salary, good working conditions, autonomy, and so forth that he or she expects will be met through the work and work environment. To the extent that those needs are met, the worker is satisfied with the job. The work environment also has requirements of the worker. Those requirements might be for production, punctuality, or certain attitudes or behaviors. If the worker meets the needs of the work environment, the worker is satisfactory. When both the worker's needs and those of work environment are met, the individual and the environment are said to be in correspondence. The worker was both satisfied and satisfactory. Under those conditions, the theory predicted that the worker would be retained (Dawis, 1996).

Commitment Definition and Theory

Commitment forms. Work commitment in its various forms has been studied as an explanatory variable related to a number of workplace outcomes including retention, effort expenditure, performance, absenteeism, and organizational citizenship behavior. Morrow (1983) proposed a model of work commitment that included five forms of commitment: (a) work ethic; (b) career or professional commitment; (c) job involvement; (d) organizational commitment; and, (e) union commitment. Morrow argued that these commitment forms were relevant to a wide range of employees and probably had common antecedents and linkages across industries. While Morrow proposed the development of a single measure of work commitment encompassing all five commitment forms, much of the commitment research that has been done focused upon identifying the correlates of each of the commitment forms and exploring the relationships among subsets of the five (Cohen, 2003).

Organizational commitment. Organizational commitment has been the most frequently studied of the five commitment forms (Cohen, 2003). It has been the subject of a great deal of research over the past half century, and it continues to be widely studied. Organizational commitment has been related to a number of other variables including job satisfaction, turnover, turnover intention, job performance, and extra-role work behavior (Meyer & Allen, 1997). Organizational commitment has been defined by some as an attitudinal construct, while others use a behavioral or calculative approach (Cohen; Meyer & Allen; Mowday et al., 1982). Mowday et al. took the attitudinal approach and define organizational commitment as:

the relative strength of an individual's identification with and involvement in a particular organization. Conceptually, it can be characterized by at least three factors: (a) a strong belief in and acceptance of the organization's goals and

values; (b) a willingness to exert considerable effort on the part of the organization; (c) a strong desire to maintain membership in the organization (p. 27).

Adherents to this view focus upon the individual's psychological bond to and identification with the organization.

The theory of Mowday et al. (1982) suggested that organizational commitment developed over time as a function of the interplay of the individual's personal characteristics, the role-related characteristics of the job, the structural characteristics of the organization, and the individual's experiences on the job. Individuals who were highly committed to the organization would exhibit positive work-related behaviors: desire and intent to remain with the organization, lower levels of absenteeism and tardiness, increased job effort, and lower turnover levels.

The behavioral definitions of organizational commitment (Hrebiniak & Alutto, 1972; Salancik, 1977) are rooted in the "side-bet theory" of Howard Becker (1960). Becker described commitment as a process in which individuals made side-bets or investments (e.g. refusing to take a new job, a large pension, the social costs of leaving, etc.) in the organization and were bound to the organization by those investments. Once these commitments were made, the individual adjusted their attitudes toward the organization to justify their committed behavior. Thus, the development of organizational commitment in this view was a self-reinforcing cycle in which a behavioral commitment caused the individual to adjust attitudes accordingly, which in turn led to more committed behavior (Cohen, 2003; Mowday et al., 1982). Proponents of this view would define organizational commitment as the individual's propensity to maintain membership in the organization.

The side bet theory suggested that the individual was bound to the organization, not by attitudes, but as the outcome of an inducements-contribution transaction between the individual and the organization. Commitment was based not on the individual's

identification and acceptance of values, but on a cost-benefit assessment, and on the extent to which the perceived magnitude of investments bound the individual to the organization. In this view, it was past committed behavior that drove both attitudes and future behavior.

A third approach views organizational commitment as a multidimensional construct. The Meyer and Allen (1991) definition of organizational commitment typifies this approach. They defined organizational commitment as “a psychological state that (a) characterizes the employee’s relationship with the organization, and (b) has implications for the decision to continue membership in the in the organization” (p. 67). Meyer and Allen proposed that organizational commitment had three components – affective commitment, continuance commitment, and normative commitment - and that an employee’s relationship with an organization might reflect varying degrees of all three. Affective commitment was the employee’s emotional attachment to, identification with, and involvement in the organization. This component was comparable to organizational commitment as defined by Mowday et al. (1982). Continuance commitment was a function of the employee’s judgment of the costs associated with leaving the organization. A dimension roughly parallel to Becker’s (1960) “side bet” notion. Normative commitment was a feeling of obligation to continue employment, essentially the sense that one “ought” to remain – a moral obligation.

Most of the organizational commitment literature is based upon the Mowday et al. (1982) definition. The related Meyer and Allen (1997) affective commitment definition also has been frequently used in more recent studies (Cohen, 2003). The Mowday et al. definition of organizational commitment was used in this study.

Professional commitment. The terms professional, occupational, and career have often been used interchangeably in the literature on commitment (Cohen, 2003). That is in line with Morrow’s (1983) argument that all three tap a similar notion – the importance of the individual’s occupation. Some, however, do submit that the term professional

commitment should be reserved for vocations that are consistently high on the characteristics of professionalism (i.e., specialized knowledge or expertise, autonomy, a sense of calling to the field, beliefs in the importance of the service provided, and regulation of the profession by its members) (Blau et al., 2003). Cohen, however, argued that professionals and non-professionals could experience commitment to the work they did, and Blau's (1988) study of professional commitment among first level supervisors in insurance and newspaper companies supported that contention. Since teaching is generally recognized as having many of the characteristics of a profession, this review uses the more precise term of professional commitment.

In a 1992 article Aryee and Tan (1992) stated that there was, in comparison to other forms of work commitment, "a paucity of research" (p. 288) on professional commitment. Goulet and Singh (2002) contended that deficit still existed. Professional commitment has been defined in different ways including:

1. one's identification with a profession based upon investments (time spent in training), involvements (with peers), and interest in skills specific to the profession (Becker & Carper, 1956 cited in Blau et al., 2003, p. 75);
2. the strength of one's motivation to work in a profession (Hall, 1971, p.59);
3. one's attitude towards one's profession or vocation (Blau, 1985, p. 278);
4. the relative strength of identification with and involvement in one's profession (Aranya, Pollock, & Amernic, 1981).

Theoretically, it has most often been approached from the same perspectives as those used in addressing organizational commitment – the attitudinal, behavioral, and multidimensional perspectives (Cohen, 2003). Organizational commitment measurement instruments rooted in both Becker's (1960) "side-bet theory" and the attitudinal theory of Mowday et al. (1982) have been used to operationalize professional commitment by simply changing the referents used in each item from "organization" to "occupation" or "profession" (Cohen). The same approach has been used to adapt the Meyer and Allen

(1991) multidimensional definition and instrument to the measurement of professional commitment (Meyer & Allen, 1993). Blau's (1985) widely used career commitment scale took an attitudinal approach and used items drawn from other previously developed scales assessing professionalism, professional commitment, and career salience. Blau's scale provided the operational definition of professional commitment in this study.

Job Satisfaction, Organizational Commitment, and Professional Commitment Differences

Mowday et al. (1982) argued that job satisfaction differed from organizational commitment in a number of ways. First, commitment was a broader concept, reflecting an affective reaction to the organization as a whole, while job satisfaction reflected one's attitude toward their job or to specific aspects of it. Organizational commitment represented the level of attachment to the organization and acceptance of its goals and values, while job satisfaction was very position and task specific. Secondly, job satisfaction has been shown to be less stable over time and more responsive to changes in the work environment. Organizational commitment, in contrast, was said to build slowly and consistently over time, and to be resistant to transitory events. Studies using various measures of organizational commitment and job satisfaction have repeatedly shown these constructs to be positively related, but different constructs (Brooke, Russell, & Price, 1988; Ferris & Aranya, 1983; Kacmar et al., 1999; Lee et al., 2000; Mathieu & Farr, 1991; Mathieu & Zajac, 1990; Meyer & Allen, 1997; Mowday et al.; Shore & Tetrick, 1991; Wallace, 1993).

Organizational and professional commitment are both forms of work commitment, but they differ with respect to the focus of the commitment. While organizational commitment focuses on commitment to a particular organization (a school, a company, etc.), professional commitment is concerned with commitment to one's occupation, career, or profession. In addition to the difference in the focal point of the commitment, some suggested that these two commitment forms differed in terms of stability, contending that professional commitment was less likely to be influenced by situational elements

(Blau & Lunz, 1998; Morrow, 1983, 1993). There is ample evidence that these commitment forms are related, but distinct. Three meta-analyses found professional commitment was significantly correlated with organizational commitment (.45, Lee et al., 2000; .44, Mathieu & Zajac, 1990; .45, Wallace, 1993). Lee et al. also concluded that the professional commitment construct was distinguishable from other work related attitudes including job satisfaction and organizational commitment. In addition, their analysis indicated that the relationship between professional commitment and organizational commitment was stronger for professionals working in a corresponding organization (.48, a nurse in a hospital) than for those working in non-corresponding organizations (.23, a nurse in a factory setting). A number of other studies across a variety of occupations, including teaching, also found that professional commitment and organizational commitment were correlated, but distinct concepts (Aryee & Tan, 1992; Blau, 1985, 1988, 1989; Cohen, 1999, Collarelli & Bishop, 1990; Morrow, 1993).

Job Satisfaction, Organizational Commitment and Professional Commitment Research

Job satisfaction, organizational commitment, and professional commitment have been studied across a wide range of fields (Cohen, 2003; Meyer & Allen, 1997; Spector, 1997) including education. Professional commitment has, however, received less attention (Goulet & Singh, 2002). Much of the research that has been done was focused upon understanding the nature of the relationship between these variables and other work-related and personal variables. There was variability across studies in the measures used to quantify job satisfaction, organizational commitment, and professional commitment, especially the former. Despite that, the findings did show a number of consistencies.

Job satisfaction was found to be related to key work place outcome variables. Research fairly consistently showed that it is correlated with turnover and turnover intentions across a range of occupations (Crampton & Wagner, 1994; Hulin et al., 1985; Lee et al., 2000; Tett & Meyer, 1993). Two meta-analyses also found modest correlations

of about .25 between job satisfaction and job performance (Iaffaldano & Muchinsky, 1985; Petty, McGee, & Cavender, 1984). Studies among teachers also found job satisfaction to be associated with turnover intentions (e.g., Ostroff, 1992; Singh & Billingsley, 1996). Little information is available about the relationship of job satisfaction to either job involvement, or to extra-role behavior (Spector, 1997). Job involvement was defined by Morrow (1993) as the extent to which the individual was absorbed in and identified with their job, and their work performance affected their self esteem. Extra-role behavior was defined as the degree to which the individual engaged in workplace behavior that went beyond the demands of their work role (Spector).

Job satisfaction does appear to be related to age and tenure, but the findings with respect to gender have been inconsistent. The research has generally shown that as age increases, job satisfaction tends to increase as well (Spector, 1997). A meta-analysis across 19 studies produced a mean correlation between the two variables of .22 (Brush, Moch, & Pooyan, 1987). Tenure also has been found to be positively related to job satisfaction, a relationship some have suggested is a function of its impact upon the employee's reward structure (Gruenberg, 1979). There was little clear evidence of a consistent difference in satisfaction levels by gender. Two meta-analyses showed near zero correlations across dozens of studies (Brush, et al.; Witt & Nye, 1992).

Organizational commitment also has been shown to be associated with a number of work related outcome variables. It has quite consistently been found to be a strong predictor of employee turnover and turnover intent (Allen & Meyer, 1996; Kacmar et al., 1999; Lachman & Aranya, 1986; Lee et al., 2000; Mathieu and Zajac, 1990; Meyer & Allen, 1993; Mowday et al., 1979; Tett & Meyer, 1993). Allen & Meyer found a significant negative relationship across all three commitment types (affective, continuance and normative) but the relationship was strongest for affective commitment, the conceptualization closest to the OCQ questionnaire. Organizational commitment has been found to be positively, albeit in some cases weakly, correlated with measures of job

performance (Darden, Hampton, & Howell, 1989; Meyer & Allen; Mowday et al., 1982). Studies have also found positive associations between organizational commitment and job involvement (Blau & Boal, 1989; Kacmar et al.; Mowday et al., 1982), as well as between organizational commitment and organizational citizenship or extra role behavior (Meyer & Allen, 1993, 1997; Organ & Ryan, 1995; Shore & Wayne, 1993).

Research on personal characteristics in relation to organizational commitment has addressed a number of variables including age, gender, and tenure. The research, here again, with respect to gender has been mixed. Some research showed weak gender differences, most often that commitment was higher among females (Mathieu & Zajac, 1990; Mowday et al., 1982), but a later meta-analysis (Aven, Parker, & McEvoy, 1993) revealed no consistent relationship. Age and tenure have been fairly consistently shown to be positively related to organizational commitment (Allen & Meyer, 1996; Hrebiniak & Alutto, 1972; Mathieu & Zajac; Mowday et al.).

There seems to have been little research done on organizational commitment that was specific to teachers, most of the work found that was specific to teachers focused upon professional commitment (e.g., Fresko et al., 1997; Singh & Billingsley, 1996). Hrebiniak and Alutto (1972) did include teachers and nurses in their research examining the relationships of several personal and work role-related variables to organizational commitment levels and found little difference across the two occupations. Hrebiniak and Alutto, as well as Ostroff (1992), found organizational commitment was strongly related to satisfaction among teachers. Ostroff also found a strong negative correlation between organizational commitment and turnover intentions among teachers. Thus, while little study has been done concerning organizational commitment among teachers, the research that was conducted suggests that it is a variable worthy of further study.

Professional commitment has been found to be significantly correlated with several other work related concepts. Research has demonstrated that it is predictive of both occupational and job withdrawal intentions, especially the former (Blau, 1985, 1988, 1989;

Blau & Lunz, 1998; Blau et al., 2003; Carson et al., 1996; Cohen, 1996). Professional commitment has been found to be positively related to job satisfaction (Blau, 1999, 2000; Blau & Lunz; Chernis, 1991; Goulet & Singh, 2002; McGinnis & Morrow, 1983), organizational commitment (Blau, 1985, 1988, 1989; Blau & Lunz; Carson, Carson, & Bedeian, 1995; Cohen; Goulet & Singh; McGinnis & Morrow), and job involvement (Blau, 1985, 1989; Goulet & Singh; McGinnis & Morrow; Morrow & Wirth, 1989). The literature reviewed showed no clear evidence of any consistent relationships between professional commitment and age, tenure, or gender.

Studies indicated that professional commitment was related to workplace outcomes among teachers. It has been found to play an important role in determining how long a teacher stayed or intended to stay in the classroom (Chapman, 1983; Chapman & Lowther, 1982; McCracken & Etuk, 1986; Raju & Srivastava, 1994; Singh & Billingsley, 1996). Higher professional commitment levels in teachers were linked to higher levels of organizational commitment (Aryee & Tan, 1992), intrinsic motivation, and career satisfaction (Raju & Srivastava). Studies also found positive relationships between professional commitment levels and teacher efficacy in both pre-service and in-service teachers (Coladarci, 1992; Evans & Tribble, 1986; Knobloch & Whittington, 2003). Knobloch and Whittington studied Ohio agriculture education teachers who were in their first 3 years of teaching. They found that teachers high in professional commitment were no different from those with lower commitment levels in terms of self-efficacy ratings at the beginning of the school year. By the tenth week of the year, however, those with lower commitment levels had experienced a significant decline in self-efficacy, while self-efficacy levels among the more committed teachers were unchanged.

There was little in the general or teacher education literature that directly addressed the impact of years and type of work experience or professional preparation upon job satisfaction, organizational commitment, or professional commitment. Some

research did suggest that pre-entry knowledge of the job was related to organizational commitment (Kammeyer-Mueller & Wanberg, 2003), and that the individual's sense of self-efficacy was positively related to both professional commitment and job satisfaction (Coladarci, 1992; Evans & Tribble, 1986; Wu & Short, 1996). The research also suggested that role ambiguity was negatively correlated with both organizational and professional commitment (Mathieu & Zajac, 1990; Blau, 1985) and with job satisfaction (Jackson & Schuler, 1985). Taken in concert, these facts seem to suggest that teachers better prepared for the classroom are likely to be more committed and more satisfied.

As previously indicated, the research indicated that organizational commitment, professional commitment, and job satisfaction are related, but distinct constructs. The nature of the relationship among the variables, however, was not clear. While the majority of studies led to the conclusion that organizational commitment was a consequence of job satisfaction (Brown & Peterson, 1994; DeCotiis & Summers, 1987; Mathieu & Hamel, 1989; Reichers, 1985; Testa, 2001), some suggested that the reverse is true; job satisfaction is a consequence of organizational commitment (Bateman & Strasser, 1984; Kacmar et al., 1999; Vandenberg & Lance, 1992). Few studies explored the nature of the relationship between professional commitment and either job satisfaction or organizational commitment. Fresko et al. (1997), in a study of teachers, concluded that job satisfaction is antecedent to professional commitment. Other researchers, however, suggested that professional commitment precedes job satisfaction (Chapman & Lowther, 1982; Culver, Wolfe, & Cross, 1990). London's (1983) model proposed that organizational commitment was antecedent to career commitment, but Chapman's (1984) model suggested the reverse. No research was identified that investigated the direction of the relationship between these two commitment forms.

While little of the available research is specific to CTE teachers, organizational commitment, professional commitment, and job satisfaction, and their relationships to turnover have been studied in a wide range of occupational fields including education.

The consistency of the relationships demonstrated among these variables across industries and over time suggests that these findings should be applicable to CTE teachers as well. Unfortunately, the research sheds little light on the issue of professional preparation and how it affects retention, commitment to the organization and profession, and satisfaction. This is a knowledge gap that the proposed study is intended to help fill.

Summary

Our nation currently faces a growing need for qualified teachers. In some geographic regions and subject areas those needs are simply not being met. The resulting shortages tend to be concentrated in the Southern and Western regions of the country and certain subject areas, including CTE (Bartlett, 2002; Cleveland, 2003; Darling-Hammond, 2000; Howard, 2003; Walter & Gray, 2002). Teacher shortages are driven by four factors: an increasing student population, rising teacher retirements as the baby boom generation ages, efforts to reduce class sizes, and high teacher attrition levels (Howard; Hussar, 1999; McCaslin & Parks, 2002). These shortages, and rising national emphasis on educational quality, have generated a great deal of attention to two interrelated issues. The first of these is how best to increase the number of qualified teachers. The second is teacher retention and the factors that influence it.

Alternative teacher certification routes began to emerge in the mid 1980's as a potential means of both increasing the supply of teachers and addressing teacher quality issues. Alternative teacher certification spread rapidly and by 2003, 43 states offered some alternative to traditional 4-year college-based teacher preparation programs as a route to certification. These programs vary dramatically in structure. Some are national, some state or district run, some are college or university-based, and still others are joint efforts. They also differ in terms of their entrance requirements, duration and timing of teacher preparation activities, course work required, field experiences provided, induction support, and exit requirements. In short, there is no consistent definition of alternative

teacher certification (Allen, 2003; Bradshaw, 1998; Dill, 1996; Feistritzer, 2004; Humphrey et al., 2000; Ruhland & Bremer, 2002).

In an effort to alleviate teacher shortages in several subject areas, including four CTE areas, the State of Georgia has instituted or approved a number of alternative teacher certification programs (Feistritzer, 2004, GADOE, n.d.). The University of Georgia currently offers two teacher preparation programs to prepare prospective teachers from fields outside of education for certification in the various CTE fields. One of those is a pre-service graduate level program in which participants complete all required pedagogical and content area coursework and a semester-long student teaching experience prior to obtaining renewable professional certification. The other is an in-service program which includes an intensive two and one-half week professional education program in the summer, a 1-year supervised internship, mentoring, and monthly professional development classes during the internship (Smith, personal communication, September 7, 2004; University of Georgia [UGA], n.d.).

Alternative certification routes have been the subject of considerable debate and research. Proponents view them as a means of improving teacher preparation, recruiting more high quality teacher candidates, diversifying the teacher force, and enhancing retention levels (Dill, 1996; Haberman, 1994; National Commission on Excellence in Education, 1983; Schlechy & Vance, 1983). Critics argue that teacher shortages are better addressed via incentives, increased salaries, and better recruiting practices. They submit that many alternative certification programs provide too little teacher preparation, place too little emphasis on pedagogy, reduce teaching from a profession to a craft, and put children at risk of being taught by under-qualified teachers (Darling-Hammond, 2000; Dill; National Commission on Teaching and America's Future, 1996). The research on alternative teacher certification programs has done little to resolve the debate. These programs do seem to be effective in diversifying the teacher population and recruiting more teachers to hard to staff schools (Feistritzer, 2004; Guyton et al., 1991; Houston et

al., 1993; Hutton et al., 1990; Natriello & Zumwalt, 1993; Ruhland & Bremer, 2003; Shen, 1997, 1998a; Stoddart, 1993). Results on other measures (e.g., student achievement, principal/mentor ratings of teachers, observations of in-class teacher performance, retention) are mixed. Some studies found that teachers prepared in alternative certification programs performed at least as well, and stayed just as long as did those completing 4-year college-based teacher education programs (Goldhaber & Brewer, 1999; Guyton et al.; Houston et al.; Miller et al., 1998). Others, however, concluded that teachers completing undergraduate pre-service teacher preparation programs performed better and stayed longer (Darling-Hammond; Hutton et al.; Karge et al., 1992; Natriello & Zumwalt, 1992; Shen, 1997). Given the wide variation in alternative teacher certification programs and the methodological differences across studies, this inconsistency in findings is not surprising. There is evidence that the type of alternative teacher certification program matters. Longer, more rigorous alternative teacher preparation programs that include more pedagogical preparation and supervised field experiences have been found to produce better teachers and higher retention rates (Darling-Hammond, 1992, 2000).

A considerable amount of research has been devoted to understanding teacher retention and the variables that influence it. The variables that have generally been found to be related to retention levels include: age, teaching tenure, salary levels, the availability of alternative employment, the minority representation and socioeconomic level of the school, subject and level taught, stress levels, teacher involvement in school decision making, administration support, and the quality of early teaching experiences (Boe et al., 1997; Chapman, 1984; Chapman & Green, 1986; Darling-Hammond, 2000; Darling-Hammond & Sclan, 1996; Darling-Hammond & Wise, 1983; Grissmer & Kirby, 1987; Ingersoll, 2000; Kirby & Grissmer, 1993; Macdonald, 1999; Murmane et al., 1989, 1991; Shen, 1998b; Theobald, 1990; Wisniewski & Gargiulo, 1997).

More general research concerning employee retention often focused on other work related variables that have been found to mediate retention such as job satisfaction,

organizational commitment, and professional commitment (Cohen, 2003; Meyer & Allen, 1997; Spector, 1997). The various theoretical approaches to each of these constructs were discussed. The theory of work adjustment approach to job satisfaction (Dawis, 1996) and the attitudinal approaches of Mowday et al. (1982) to organizational commitment and of Blau (1985) to professional commitment were identified as the framework for this study.

The research has shown that job satisfaction, organizational commitment and professional commitment are related, but distinct, and that all three are highly predictive of retention (Blau, 1985, 1988, 1989; Cohen, 1996, 2003; Lee et al., 2000; Meyer & Allen, 1993, 1997; Mowday et al., 1979; Spector, 1997). Like retention, job satisfaction and organizational commitment have been found to vary as a function of age and tenure (Allen & Meyer, 1996; Cohen, 2003; Gruenberg, 1979; Mathieu & Zajac, 1990; Spector). There is, however, no clear evidence of a relationship between professional commitment and either age or tenure. There is little in the literature that addresses the relationships between these retention mediators and either professional preparation or the individual's work experience in other fields that might offer employment alternatives. These mediators of retention have, however, been found to be correlated with other work related variables that logically link to preparation: pre-entry job knowledge (positively), sense of self-efficacy (positively), and role ambiguity (negatively) (Blau, 1985; Coladarci, 1992; Evans & Tribble, 1986; Jackson & Schuler, 1985; Kammeyer-Mueller & Wanberg, 2003; Mathieu & Zajac; Wu & Short, 1996). These findings have been consistent across a wide range of fields including education; thus, they should be applicable to CTE teachers.

Since alternative teacher certification appears to be here to stay, research efforts need to be directed making these programs as effective as possible (Miller et al., 1998). Research clearly indicates that certain workplace attitudes – job satisfaction, organizational commitment, and professional commitment – affect employee retention. A better understanding of those workplace attitudes among participants in different

alternative teacher certification programs could provide valuable information to guide alternative teacher certification program development.

CHAPTER III

METHOD

Purpose

The purpose of this causal comparative study was to compare the participants in two alternative Career and Technical Education (CTE) teacher preparation programs in terms of retention, job satisfaction, organizational commitment, and professional commitment. In addition to type of teacher preparation program, four additional independent variables that the research suggests may impact the dependent variables were included: age, teaching tenure, the socioeconomic status of the school in which the teacher was employed, and the number of years of non-education work experience the teacher had. Retention was defined as teaching status measured by a combination of two factors: (a) whether or not an individual was teaching at the time of the study; and, (b) whether or not the individual expressed an intention to leave the profession within the next 5 years. Job satisfaction was assessed using the Minnesota Satisfaction Questionnaire (MSQ; Buros, 1978), organizational commitment was measured based on the Organizational Commitment Scale (OCS; Mowday et al., 1982), and professional commitment was measured using the Blau's Career Commitment scale (Blau, 1985).

The results of this study add to the existing body of research on teacher retention, particularly with respect to alternatively certified and CTE teachers. It also will help to inform alternate route teacher preparation practices, and potentially assist in guiding future teacher preparation and research on teacher preparation. For instance, a finding that different teacher preparation programs are associated with differing levels of job satisfaction might lead to an investigation of program elements that could help

prospective teachers make adjustments in their expectations and behavior to enhance their satisfaction. Differences in commitment levels would suggest further investigation of how preparation programs might address elements like early work experiences or the role expectations of prospective teachers, both of which have been found to be related to commitment levels (Meyer & Allen, 1997). Enhancing commitment and satisfaction levels, in turn, has the potential to improve retention levels (Cohen, 2003; Meyer & Allen; Spector, 1997). In contrast, a finding that the participants in in-service and pre-service teacher preparation programs do not differ in terms of the dependent variables might lead to questions concerning who chooses each of those programs and what the motivations for that choice might be. Such a finding also would suggest research to determine whether participants in these programs are also equivalent on other dimensions such as classroom performance and longer term retention. The specific objectives to be addressed in this study are:

1. To describe teachers who have completed either the in-service or pre-service post-baccalaureate CTE teacher preparation programs at UGA in terms of age, tenure, years of non-education work experience, and the socioeconomic status (SES) of the schools in which they teach;
2. To describe the levels of professional commitment, organizational commitment, job satisfaction, and teaching status among teachers who have completed these post-baccalaureate teacher preparation programs;
3. To compare teachers who have completed the post-baccalaureate in-service program with those completing the post-baccalaureate pre-service program on professional commitment, organizational commitment, job satisfaction, and teaching status;
4. To compare teachers completing these post-baccalaureate preparation programs by length of non-education work experience on professional commitment, organizational commitment, job satisfaction, and teaching status;

5. To compare teachers completing these post-baccalaureate teacher preparation programs by teaching tenure on professional commitment, organizational commitment, job satisfaction, and teaching status;
6. To compare teachers completing these post-baccalaureate teacher preparation programs by age on professional commitment, organizational commitment, job satisfaction, and teaching status;
7. To compare teachers completing these post-baccalaureate teacher preparation programs by school SES on professional commitment, organizational commitment, job satisfaction, and teaching status.

Design

A causal comparative research design was used for this study. Causal comparative research designs are typically used when cause and effect relationships between a categorical independent variable and one or more dependent variables are examined. However, the independent variable is not manipulated in this type of research design. Studying naturally occurring groups of teachers who differ in terms of the type of preparation program in which they participated provided the opportunity to determine whether these groups also exhibit differing levels of job satisfaction, commitment, and retention. The primary advantage of a causal comparative research design is that it provides a means of exploring causal relationships in situations that are not amenable to experimental approaches. The primary disadvantage of causal comparative designs is that because participants are not randomly assigned to groups, it is not possible to rule out all extraneous variables as the source of variation across groups. Thus, any conclusions drawn concerning causality must be considered tentative (Gall, Gall, & Borg, 2003). Numerous studies investigating teacher retention and teacher preparation programs have used causal comparative approaches (Ingersoll, 2000; Jelmberg, 1996; Laczko-Kerr & Berliner, 2002; Miller et al., 1998; Stempien & Loeb, 2002).

Research has shown that younger teachers (Kirby & Grissmer, 1993) and those with more years of experience in related non-teaching careers (Jorissen, 2002) tended to leave the profession at higher rates. It has also been found that teachers with fewer years of teaching experience (Kirby & Grissmer; Shen, 1998b) were more apt to leave. These findings are consistent with findings across teaching content areas showing that job satisfaction, organizational commitment, and turnover were positively correlated with age and tenure (Allen & Meyer, 1996; Hrebiniak & Alutto, 1972; Mathieu & Zajac, 1990; Meyer & Allen, 1997; Mowday et al., 1982) and that commitment varies with the perceived availability of other job alternatives (Meyer & Allen; Mowday et al.). Previous research also suggested that the location and socioeconomic status of the school in which the teacher was employed were factors in teacher retention. Retention levels were found to be lower in large, urban, or disadvantaged schools as compared to smaller suburban schools and those in higher income areas (Murmane et al., 1991; Shen). Therefore, information was gathered concerning the location and socioeconomic status schools at which the teachers in this study were employed. This study controlled for age, years of industry experience, teaching tenure, and school socioeconomic level by including them as independent variables (Lewis, 2001).

This study has several delimitations. Since all participants were individuals who had completed alternative teacher certification programs and held at least a bachelor's degree; the results are not generalizable beyond this group. In addition, the groups being studied in this research were self-selected. Thus, it is possible that any differences found in satisfaction, commitment, or retention levels were driven by some underlying differences in the people who chose either the pre-service or in-service preparation program. Self-selection is an issue in much of the existing research on alternative teacher preparation programs. Virtually all of the studies reviewed were causal comparative ones, and few made any attempt to control for underlying differences in participant groups. This study attempted to control for underlying differences by including some of the potential

confounding factors as independent variables (age, tenure, non-teaching experience, type of school, and motivation for program choice), and by attempting to make the two groups as similar as possible on other key dimensions (Wallen & Fraenkel, 2001). Including potentially some confounding factors as independent variables controlled for them by permitting at their effects to be quantified. Others, like student and program quality, were controlled by holding them constant across groups. All participants in this study held bachelor's degrees in fields other than education. All were graduate level students in the Department of Workforce Education, Leadership, and Social Foundations (WELSF) at University of Georgia (UGA) during the same time period; and, thus, took the same courses, had the same faculty, and were required to meet the same admissions criteria. Despite these attempts to control extraneous variables, it is still possible that other factors not addressed in this study may have affected the dependent variables, thus any conclusions drawn concerning causality must be considered tentative.

Participants

The population for this study was comprised of CTE teachers in Georgia who completed alternative certification programs. The population was further defined as individuals certified to teach CTE classes at the middle school and high school level in Georgia who held an undergraduate degree in a field other than education, and had obtained certification to teach via some type of alternative teacher preparation program. The accessible sample was participants who completed either the in-service or the pre-service CTE teacher preparation program at UGA since Spring, 2001 and held at least a baccalaureate degree in a field other than education. Although some participants in the in-service program were not college graduates, participants in the pre-service program are required to have a bachelor's degree. Non-degree holding in-service program participants were excluded from the study in order to eliminate teacher education level as a source of variation. All those completing these two programs since Spring 2001, when the in-

service program began, were requested to participate. The total number of graduate level participants completing these CTE teacher preparation programs during that period was 95 for the in-service program and 42 for the pre-service program. Using an alpha level of .05 and power of .70, it was anticipated that these respondent pools would produce ending samples large enough ($n \geq 34$) to read medium (.06) effect sizes (Keppel, 1991). For most of the analyses, that proved to be true; although samples sizes did fall below 34 in some cases.

Program participants were identified through UGA records. University records also included participants' addresses and telephone numbers at the time of their completion of the program. These addresses were verified by telephone whenever possible. Internet searches were conducted in an attempt to locate participants for whom the telephone number and address obtained from University records was no longer correct. It was not possible to obtain addresses for 7 of the 95 in-service program participants. Of the 88 questionnaires mailed to in-service program participants 66 were returned and usable, yielding a response rate of 75%. Of the 42 questionnaires sent to pre-service participants 37 were returned and usable, a response rate of 88%. Response rates such as these are quite acceptable for a mail survey (Dillman, 1978; Green & Hutchinson, 1996).

Non-response bias is a potentially serious problem when data is gathered using a mail survey. In order to assess the presence of non-response bias Whipple and Muffo (1982) suggested comparing late-responders to early responders. Whipple and Muffo found that late-responders are similar to non-responders, thus if the early and late responders do not differ on the dependent variables measured that would indicate that non-response bias is not a factor. A comparison of independent variable measures in this study for participants responding in the weeks 1 through 3 versus those responding in weeks 4 through 6, showed no significant differences in professional commitment ($F(1,101) = .096, p = .757$), organizational commitment ($F(1,88) = 1.704, p = .195$), job

satisfaction ($F(1,87) = 2.151, p = .146$) or teaching status ($\chi^2 = .173, df = 1, p = .678$). These results suggested that non-response bias did not significantly affect the results of this study.

Of the 103 teachers participating in this study, 91 (88.3%) reported that they were teaching at the time they completed the questionnaire. Of those teaching, 63 were teaching in a public high school, 18 taught in a public middle school, 3 were employed in a private high school, 4 were teaching at the postsecondary level, 1 taught in an elementary school, and 2 declined to identify their school. The schools in which the active teachers were employed were predominately reported to be located in the suburbs (59.6%). Roughly one third (32.6%) said they were teaching in an urban school, and 7.9% were employed in a rural school. On average the active teachers were teaching four classes per day, though that varied rather widely (from two to eight). That variation is partly driven by the fact that some of the schools were on a block rather than a traditional schedule. A block schedule is comprised of four 90-minute classes per day and courses that are one semester long. In contrast, the traditional schedule features six to seven 50-minute classes per day and courses generally last the full school year. The variation noted in the number of classes taught was also partly a function of the differing levels at which the teachers were teaching, and partly due to the fact that some of these teachers were functioning for part of their day as cooperative education coordinators. Most of the teachers were teaching within one CTE area, most often Business Education; but there were several that were teaching in multiple CTE fields, and 4 who were teaching academic subjects and/or special education. Marketing was the second most commonly taught subject among participants in this study, followed by Family and Consumer Sciences and Health Occupations, in that order. A full listing of the areas taught is provided in Appendix A. The participants in this study were predominately female (74.8%) and most (76.7%) held at least a Master's degree.

Teacher Preparation Program

Of the total 103 participants in the study, 37 (36%) had taken part in the pre-service CTE teacher preparation program at the University of Georgia and 66 (64%) had completed the in-service program, the Professional Academy for Career and Technical Education.

Age

The mean age of the participants was 36.6 and participant ages ranged from 24 to 58. The age distribution was skewed under 45 with a sharp peak at 26 to 28 years. In-service trained teachers were, on average, significantly older than their pre-service counterparts ($t = -2.906$, $df = 100$, $p = .005$). Table 2 provides the age mean, standard deviation, and distribution for the total sample as well as the two teacher preparation groups. One participant in the pre-service program did not answer the age question.

Table 2

Mean, Standard Deviation, and Distribution of Teacher Age

	Total teachers (n = 102)	Pre-service program teachers (n = 36)	In-service program teachers (n = 66)
Mean	36.6	33	38.56
Standard deviation	9.6	9.94	8.83
<u>Distribution:</u>			
24 to 30	34.3%	55.6%	22.7%
31 to 35	18.6%	16.7%	19.7%
36 to 40	12.7%	5.6%	16.7%
41 to 45	10.7%	2.8%	15.2%
46 to 50	14.7%	8.3%	18.2%
51 to 55	6.9%	8.3%	6.1%
56 to 60	2.0%	2.8%	1.5%

Teaching Tenure

Teachers in this study had been teaching for an average of 3.2 years and their teaching tenure ranged from half a year to 14 years. Teaching tenure was, as would be expected in this group, skewed low and it peaked in the 3 to 4 year range. Table 3 provides means, standard deviations, and distributions of teaching tenure. Teaching tenure was significantly higher in the in-service teacher group ($t = -5.393$, $df = 88$, $p = .000$), in which 27 study participants had been teaching under provisional licensure or in a non-public school setting for a year or more prior to entering their teacher preparation program. One person in the pre-service program did not answer the teaching tenure question.

Table 3
Mean, Standard Deviation, and Distribution of Teaching Tenure

	Total teachers (n =90)	Pre-service program teachers (n = 29)	In-service program teachers (n = 61)
Mean	3.2	1.73	3.95
Standard deviation	2.09	1.25	2.04
<u>Distribution:</u>			
1 year	15.6%	48.3%	
2 years	15.6%	24.1%	11.7%
3 years	26.7%	10.3%	34.4%
4 years	20.0%	13.8%	23.0%
5 years	12.2%	3.4%	16.4%
6 years or more	9.9%		14.7%

Years of Experience in Prior Occupation

The mean number of years of experience participants reported in the occupation in which they were involved during the 5 years before becoming certified to teach was 7.33 years, but length of prior occupation experience varied widely. Thirteen participants

reported that they were full time students during that 5-year period and had not worked. In contrast, 16 reported more than 15 years of experience in their prior occupation and 1 reported 32 years of experience. Table 4 provides means, standard deviations, and distributions of years of prior occupation experience reported by participants. Mean years of experience in the prior occupations of participants did not differ significantly across teacher preparation groups ($t = -1.786$, $df = 100$, $p = .077$). One person in the in-service program did not answer the question concerning number of years experience she had in prior occupation.

Table 4
Mean, Standard Deviation, and Distribution of Years Experience in Prior Occupation

	Total teachers (n = 102)	Pre-service program teachers (n = 37)	In-service program teachers (n = 65)
Mean	7.33	5.73	8.23
Standard deviation	6.88	6.92	6.74
<u>Distribution:</u>			
None	12.7%	27.0%	4.6%
1 to 3 years	22.5%	18.9%	24.6%
4 to 6 years	26.5%	32.4%	23.1%
7 to 9 years	9.8%	2.7%	13.8%
10 to 12 years	11.8%	8.1%	13.8%
13 to 18 years	5.8%		9.2%
19 to 24 years	7.9%	8.1%	7.7%
25 or more years	2.9%	2.7%	3.1%

Percentage of Students Eligible for Free or Reduced Lunch

Across the public schools in which the teachers in this study were employed the average percentage of students eligible for free or reduced lunch, a commonly used indicator of socioeconomic status (Borman & Rachuba, 1999; Finn, Gerber, & Wang, 2001; Ingersoll, 1996; Shen, 1998a; Solomon, Battistich, & Horn, 1996), was 33.8% in

2003 - 2004. That is well below the average for the State of Georgia for the 2003 -2004 school year of 46% (GADOE, 2004), indicating that the socioeconomic status of these schools tended to be above the state average. This SES advantage for the schools in this study relative to the state is driven by the fact that the schools represented are heavily concentrated in the Atlanta Metropolitan Area, in counties which the 2000 census indicated had median household incomes higher than the state average (Georgia State Office of Planning and Budget [GAOPB], n.d.). Of the those participating in the study that were employed as teachers, 59% were teaching in schools located in the 20 county Atlanta Metropolitan area, counties that represent 50% of the state population. In addition, only 1 of those participating in the study taught in a school in the largely rural southern half of the state (GAOPB). A listing of the counties represented in the study and the number of participants teaching in each is provided in Appendix B. Table 5 summarizes the means, standard deviations, and distributions of eligibility percentages for the schools employing the teachers in this study. Those percentages ranged from 2% to 94% and were fairly normally distributed, excepting three extreme cases over 90%. They did not differ significantly across teacher preparation program groups ($t = -.845$, $df = 78$, $p = .40$).

Table 5

Mean, Standard Deviation, and Distribution of Percentages of Students Eligible for Free and Reduced Lunch at Public Schools Represented in this Study.

	Total teachers (n = 80)	Pre-service program teachers (n = 25)	In-service program teachers (n = 55)
Mean	33.8	31.1	35.04
Standard deviation	19.2	19.6	19.02
<u>Distribution:</u>			
0 to 33%	51.3%	60.0%	47.3%
34 to 66%	43.7%	36.0%	47.2%
67 to 100%	5.0%	4.0%	5.5%

Study Participants Compared to CTE Teachers in Georgia

As previously noted the schools in which participants in this study taught were heavily concentrated in the Atlanta Metropolitan Area (59%), and were almost exclusively located in the Northern half of the state. Those schools also tended to be below the state average in the percentage of students eligible for free and reduced lunch (33.8% versus 46% for the state) indicating relatively high socioeconomic levels. Data obtained from the Georgia Public Service Commission (C. Afolabi, personal communication, August 2, 2005) reveals that participants in this study were older, were more likely to be female, and were more highly educated than were CTE teachers in Georgia in total during the 2003-2004 school year. Obviously, they also had far less teaching experience than Georgia CTE teachers. Unfortunately, GAPSC was unable to provide descriptive data for CTE teachers who attained certification through an alternative route program and no other source was identified for such data. Table 6 provides comparative data for study participants and Georgia CTE teachers. Given the demographic, geographic, and socioeconomic differences in study participants as compared to Georgia schools and Georgia teachers, the generalizability of the results of this study are clearly limited.

Instruments

The independent variables in this study were teacher preparation program, age, years of non-teaching work experience, teaching tenure, and the SES of the school in which the teacher was employed. Years of non-teaching work experience was defined as the number of years of experience of participants reported in the occupation in which they were involved during the 5 years before becoming certified to teach. The SES of the school in which the teacher was employed was defined as the percentage of students at that school eligible for free or reduced lunches. This operational definition of SES has been used in a number of prior studies (Borman & Rachuba, 1999; Finn et al., 2001; Ingersoll, 1996; Shen, 1998a; Solomon et al., 1996).

Table 6
Demographic Characteristics of Study Participants and CTE Teachers in Georgia During 2003-2004

	Study participants	CTE teachers in Georgia
Gender:		
Male:	25.2%	39.6%
Female:	74.8%	60.4%
Average age	36.6	44.8
Average teaching tenure	3.2	14.1
Educational level:		
High school		2.5%
Associate degree		5.5%
Bachelor's degree	23.3%	37.3%
Master's degree	69.9%	39.4%
Specialist	4.9%	13.9%
Doctorate	1.9%	1.5%

The dependent variables were organizational commitment, professional commitment, and job satisfaction, and retention. Instruments used to measure each of those variables are discussed in the following sections. All instruments are included in the questionnaire in Appendix C.

Professional Commitment: The Blau Career Commitment Scale

Professional commitment was measured using the Blau (1985) Career Commitment measure. This measure has been widely used in professional commitment research across a wide range of occupations. Morrow (1993) recommended that it be used in studies exploring career commitment “because it appears to be the cleanest conceptualization with the best psychometric properties” (p. 31). Blau’s scale is an eight item instrument that uses 7-point Likert scales and yields an overall measure of commitment to one’s profession. The scales range from strongly disagree to strongly agree and are scored 1 to 7, respectively (strongly agree = 7; moderately agree = 6; slightly agree = 5; neither agree nor disagree = 4; slightly disagree = 3; moderately disagree = 2, strongly disagree = 1). To reduce response bias some of the items use negative phrasing

and were reverse scored. Previous research has raised questions about the use of neutral midpoints in Likert-type scales (Hodge & Gillespie, 2003; Raaijmakers, van Hoof, Hart, Verbogt, & Vollebergh, 2000; Weems & Onwuegbuzie, 2001). Neutral midpoints are intended to reflect a level of the specified dimension that is midway between the two extremes of the scale. Research suggests that some respondents do, indeed, interpret the midpoint to indicate a “neutral” or “neither/nor” response. Others, however, seem to interpret it as “don’t know”, ‘don’t care’, “no opinion”, or “undecided” option - essentially a non-response (Raaijmakers, et al.). The ambiguity of the midpoint clearly raises questions about how corresponding scores should be interpreted (Hodge & Gillespie; Raaijmakers et al.; Weems & Onwuegbuzie). In order to avoid that ambiguity, permission to modify the scale by eliminating the neutral midpoint response was requested from the author. The author granted that permission and a 6-point scale with no midpoint was used. Overall professional commitment scores were computed by summing scores across the eight items, yielding a possible overall commitment score range of 8 to 48. Blau’s commitment scale is one of the most frequently used in studies of professional or career commitment (Cohen, 2003; Lee et al., 2000). Previous studies have produced internal consistency coefficients for the instrument in the .82 to .92 range (Blau, 1988, 1989; Goulet & Singh, 2002). Blau (1985, 1988) provided evidence of both discriminant and convergent validity for the instrument across occupations with differing levels of professionalism. Blau’s scale produced a Cronbach alpha of .86 in this study, suggesting that reliability of the scale is acceptable for this sample.

Organizational Commitment: The Organizational Commitment Scale

Organizational commitment was measured using the Organizational Commitment Scale (OCS) modified for use in school situations (Mowday et al., 1979). The OCS has been the most frequently used measure of occupational commitment in the literature, and it has been used in previous studies among teachers (Burrows, Munday, Tunnell, & Seay, 1996; Singh & Billingsley, 1996; Wu & Short, 1996). This scale is in the public domain

and the authors have granted blanket permission for its use. It is a 15-item instrument that uses 7-point Likert scales to produce an overall measure of organizational commitment. These Likert scales range from strongly agree to strongly disagree, with values ranging from 1 to 7, respectively (strongly agree = 7; moderately agree = 6; slightly agree = 5; neither agree nor disagree = 4; slightly disagree = 3; moderately disagree = 2; strongly disagree = 1). To reduce response bias some of the items use negative phrasing and were reverse scored. Here again, the “neither agree nor disagree” descriptor was eliminated and a 6-point scale was used. Scores were summed across the 15 items to produce an overall organizational commitment score with a possible range of 15 to 90. Mowday et al. reported internal consistency reliability coefficients for the OCS range from .82 to .93 and test-retest reliability ranges from .53 to .75. They also provided good evidence of convergent, discriminate, and predictive validity for the instrument. The reliability of the OCS in this study (Cronbach alpha = .93) was in line with previously reported reliability measures.

Job Satisfaction: The Minnesota Satisfaction Questionnaire

Job satisfaction was measured using the short form of the Minnesota Satisfaction Questionnaire (MSQ; Buros, 1978). The short form is a 20-item instrument that measures overall satisfaction with the job and the organization. The MSQ is one of the most broadly used measures of job satisfaction and has been used in recent studies of satisfaction among educators (Burrows et al., 1996; Strumpfer, & Mlonzi, 2001). The short form of the instrument has acceptable reliability and ample evidence of validity in past research. The authors (Weiss, Dawis, England, & Lofquist, 1967) reported Hoyt reliability coefficients across occupations ranging from .84 to .91 for the intrinsic scale, .77 to .82 for the extrinsic scale, and .87 to .92 for overall satisfaction. This study produced a Cronbach alpha statistic of .92 for overall satisfaction, indicating a high degree of reliability for the MSQ for the participants in this study. Weiss et al. provided evidence of construct and content validity by demonstrating that the MSQ performs according to

theoretical expectations and that its factor structure is consistent across occupational groups. Their finding that the instrument differentiates across occupational groups provided further evidence of construct validity. Since the focus of this study is on differences across those completing differing teacher preparation programs in overall satisfaction, rather than an exploration of the components of satisfaction, the short form of the MSQ is appropriate. Use of the short form, which has 20 items as compared to 100 in the long form, was also deemed likely to improve the response rate for this mail administration. The instrument uses 5-point Likert scales on 20 items addressing satisfaction with specific aspects of the job and working environment. The scale scores and descriptors are: not satisfied = 1; only slightly satisfied = 2; satisfied = 3; very satisfied = 4; and, extremely satisfied = 5. Scores were summed across the 20 items yielding a possible range for overall satisfaction scores of 20 to 100. For this study only overall satisfaction scores were computed.

Retention: Teaching Status

Retention was defined in this study as the participant's teaching status. Prior studies have defined retention in terms of both behavior, whether or not the teacher leaves the profession (Chapman, 1984; Chapman & Green, 1986; Shen, 1998b), and behavioral intention (Shen, 1997), whether the teacher expresses an intention to stay in the profession. This study took a combined approach that included both behavior and behavioral intention. Teaching status was a categorical variable, and operationally defined by whether or not the participant: (a) was employed as a teacher at the time of the study; and, (b) planned to leave the profession during the next 5 years. Based upon those two factors participants were placed in one of two teaching status groups: (a) those currently employed as a teacher and have no plan to leave in the next 5 years; and, (b) those either not teaching or teaching and planning to leave the profession in the next 5 years. Prior to the implementation of the study the plan was to divide teachers into four teaching status groups: (a) never employed as a teacher; (b) previously employed as a teacher, but left the

profession; (c) currently employed as a teacher, but plan to leave in the next 5 years; and, (d) currently employed as a teacher and have no plans to leave the profession in the next 5 years. There were not, however, a sufficient number of participants in each of those four groups to conduct the planned chi square analyses. Chi square analysis requires that there be no empty cells and that most cells have a minimum frequency of 5 (Norusis, 2005). The planned four group definition produced empty cells for some of the planned analyses, and more than 50% of cells with frequencies less than 5 for some of those analyses. The two group definition used separated the participants most strongly committed to teaching from others, and provided sufficient cell frequencies for the analysis.

Instrument Validity

In assessing the validity of the three instruments used in this study, two sets of analyses were conducted. The first of those was a correlation analysis to test the convergent validity of the instruments. Prior research indicated that professional commitment, organizational commitment, and job satisfaction are significantly correlated with one another. It would, therefore, be expected that those relationships should be evident in this study as well, and that was the case. Table 7 below provides the correlation matrix.

Table 7
Intercorrelations Between Instrument Overall Scores

Instrument	Blau	OCS	MSQ
Blau		.47**	.54**
OCS			.73**
MSQ			

**p<.01

The second analysis examined the concurrent validity of the instruments. Prior research indicates that professional commitment, organizational commitment, and job satisfaction are predictive of retention. Given that, it was expected that overall scores on

each of the three instruments would differ across teaching status groups. The data support that expectation. Overall scores for those who were teaching and had no plan to leave were significantly higher than those for other participants on all three scales (Blau: $F(1,100) = 21.433, p = .000$; OCS: $F(1,88) = 11.503, p = .001$; MSQ: $F(1,87) = 11.964, p = .001$). The results of the analyses conducted provide support for the validity of these instruments for this study.

Questionnaire Development

A questionnaire was developed to collect demographic data, type of preparation program completed, teaching status and tenure, intent to remain in teaching, industry experience, number of schools employed in since program completion, specific information about the school where the teacher worked, and classes taught. Based upon Dillman's (1978) recommendations, an open-ended question was placed on the back cover of the questionnaire inviting participants to offer any comments they had about their experiences as a CTE teacher and about the experiences of new teachers in general.

The questionnaire was reviewed by members of the author's dissertation committee in order to identify any potential problem areas. Members of the committee read the questionnaire and provided feedback which was used to revise it. The questionnaire was also pre-tested with a sample of 20 CTE teachers who completed alternative teacher certification programs not affiliated with UGA in order to insure that instructions were clear and to identify any potential problems. Those teachers were identified by the Marketing Education coordinators at three high schools in Douglas County, Georgia. Pre-test participants were asked to complete the questionnaire, to identify any elements of the questionnaire that they found confusing or hard to understand, and to provide any suggestions they had for improvements of changes to the questionnaire. The pre-test revealed no problem areas and no changes to the questionnaire or instructions were required.

Procedure

Prior to implementation, permission to conduct this study was obtained from the University of Georgia Institutional Review Board (UGA IRB). Copies of the IRB approval request and the IRB approval notification are provided in Appendix D. For purposes of this study consent forms were not required; return of a completed questionnaire was assumed to imply consent to participate. In order to insure participant confidentiality each participant was assigned an identification number. No participant names were included on questionnaires and data were reported only in aggregate. Participant identification codes were discarded when data collection was completed.

Given the small number of potential participants, it was essential to maximize the response rate. Therefore, the mail survey procedures and timing recommended by Dillman (1978) were used. A questionnaire booklet, cover letter, and a stamped and pre-addressed return envelope were mailed to all potential participants on March 8, 2005. An uncirculated one dollar bill was included in this mailing as a token of appreciation for the individual's participation in the study. One week later, on March 15, a follow-up postcard was sent to all those who had not yet returned the completed questionnaire. On March 29, a replacement questionnaire and follow-up letter were sent to all potential participants who still had not returned a completed questionnaire. Dillman recommends a second follow-up letter and another replacement questionnaire be sent by certified mail seven weeks after the initial mail-out to those who have not responded by that time. At the request of the UGA IRB, that final follow-up mailing was eliminated. Data collection ended on April 19, six weeks after the initial mail-out. The initial cover letter and questionnaire are included in Appendix C. A copy of the post-card follow-up and the second follow-up letter are provided in Appendices E and F. Letters requesting permission to use the MSQ and the Blau Career Commitment scales and permission approvals are included in Appendices G and H.

Data Analysis

Data analysis was conducted using the Statistical Package for the Social Sciences (SPSS) version 13.0. The analysis began with descriptive measures. Separate comparative analyses were then conducted assessing the effect of each independent variable on each of the four dependent variables, using a family wise alpha level of .05. Measures of effect size, the proportion of the variance in the dependent variable explained by the grouping or independent variable, were calculated for each comparative analysis. These effect sizes provide estimates of the magnitude, or practical meaningfulness, of the effect of each independent variable upon each dependent variable and allow comparisons to be made across studies and variables (Keppel, 1991).

Multivariate Versus Univariate Analyses

Huberty and Morris (1989) argued that the decision to conduct a multivariate analysis versus multiple univariate analyses ought to be guided by the research questions being asked. When the questions pertain to group differences on individual outcome variables that are conceptually independent, they recommended multiple univariate tests. Multivariate analyses, Huberty and Morris suggested, are more appropriate when the questions concern overall effects on the collection of dependent variables (main and interaction), variable selection, variable ordering, and the underlying structure of the system of variables. In this study, the questions are clearly focused on how teachers completing alternative teacher certification programs differ in terms of professional commitment, organizational commitment, job satisfaction, and teaching status based on each of the independent variables. The study was intended to inform teacher preparation practices. That purpose was best supported by a clear understanding the relationship between each of the independent variables and retention as well as its antecedents. Therefore, the analysis was most appropriately conducted using separate analyses for each independent variable.

Treatment of Instrument Subscales

In deciding whether to treat items or subscales within an instrument as separate variables or to treat them as a series of related factors Huberty and Morris (1989) suggest that the two additional issues need to be considered. First, do the subscales on the instruments in question represent conceptually independent variables? And secondly, how has the variable in question has been treated in past research?

The answers to those questions for the OCS and Blau's professional commitment scale are straightforward. Both instruments have been shown to be unidimensional (Blau, 1985; Caught, Shadur, & Rodwell, 2000; Mowday et al., 1982), and have been treated univariately in previous research. The univariate approach was used for these variables in this study as well.

In the case of the short form of Minnesota Satisfaction Questionnaire (MSQ), the information available suggested that the subscales, intrinsic and extrinsic satisfaction, are not conceptually independent. The two subscales logically tap two dimensions of a single construct and have been shown to be quite highly correlated. Weiss et al. (1967) reported a total correlation of .60 between the two scales, with a range across occupations of .52 to .68. Prior research across occupations also showed that the scale had two distinct factors, an intrinsic factor and an extrinsic factor. This suggested that the MSQ subscales would be most appropriately treated via multivariate analysis of variance. Prior studies using the MSQ, however, have approached the measure in some cases as a general measure of satisfaction, while others have treated the intrinsic and extrinsic scales separately. In light of the differences in the way in which the MSQ subscales were been treated in prior studies, a factor analysis was conducted to confirm that the two factors were valid for this study. That factor analysis, however, suggested that within this population the MSQ does not have two factors. The analysis identified four factors with eigenvalues in excess of the widely used Kaiser standard of 1 (Kaiser, 1960), but 16 of the 20 items loaded most heavily on the first factor which accounted for 41.6% of the total variance. Two items

“The way my boss handles his/her workers” and “The competence of my supervisor in making decisions” loaded on the second factor which accounted for 10.1% of the total variance. Two others “My pay and the amount of work I do” and “The chances for advancement on this job” loaded on the third factor which accounted for 7.6% of the total variance. No items received their highest loading on the fourth factor which accounted for 6.2% of the total variance. These results cast doubt on the appropriateness of the intrinsic and extrinsic scales for this study. In light of that, the decision was made to treat the MSQ univariately and analyze only the overall satisfaction scores.

Treatment of Independent Variables

All five independent variables (preparation program, age, teaching tenure, years of non-teaching occupational experience, and SES of the school) were treated as categorical variables. In light of the limited sample size of this study only two categories were constructed for age, teaching tenure, years of non-education occupational experience, and school SES. Descriptive statistics for each of these variables were presented on pages 70 through 74.

Preparation program. The preparation program variable had two levels: (a) in-service program; and, (b) pre-service program. Of the study participants 66 had completed the in-service program and 37 had completed the pre-service program.

Age. The age groups constructed were defined based upon Buhler’s theory of biological and developmental phases (Okun, 1984). Buhler identified five phases of development: (a) childhood (0 to 15 years); (b) youth (15 to 25 years); (c) early adulthood (25 to 45 years); (d) middle adulthood (45 to 65 years); and, (e) late adulthood (65 and older). Buhler’s early adulthood and middle adulthood phases very nearly corresponded to the age range of the participants in this study which was 24 to 58. Two levels of age were used in the analysis: (a) 24 to 45; and, (b) 46 and over. Of the study participants, 75 were 24 to 45 years of age and 27 were over 45 years of age.

Teaching tenure. Several prior studies have distinguished between beginning and more experienced teachers and used under 3 years experience as a definition of a beginning teacher (Billingsley, 2001; Drake, 2002; Huberman, 1993; Kent, 2000). Consistent with that definition, the levels of teaching tenure employed in this study were: 3 years or less; and, more than 3 years. Of the study participants, 51 had taught for 3 years or less and 39 had taught for more than 3 years.

Non-teaching occupational experience. A number of studies examining the effects of tenure in a range of fields have defined experienced workers as those having greater than 2 to 3 years of experience (Cleveland & Hyatt, 2002; Cohen, 1991; Dreher & Ryan, 2002; Schaefer & Moos, 1993; Wright, 2001). In order to maintain consistency with that prior research and research within the teaching profession, this study used two levels of non-teaching occupational experience: (a) 3 years or less; and, (b) more than 3 years. Of the study participants, 35 had 3 years or less of non-teaching occupational experience and 67 had more than 3 years of such experience.

School SES. In studies in which the percentage of the student body eligible for free and reduced lunch has been used as an indicator of school SES, socioeconomic status levels have been defined in a variety of ways. For example, Ingersoll (2001) defined high SES as 0 to 15% of students eligible for free and reduced lunch, medium SES as 15 to 50% eligible, low SES as greater than 50% eligible. Solomon et al. (1996) also created high, medium, and low categories. Solomon et al., however, used 0 to 19%, 20 to 74%, and 75 to 100% free and reduced lunch eligibility to define those categories. Finn et al. (2001) defined high poverty schools as those in which more than 25% of students were eligible for free or reduced price lunches. Borman and Rachuba (1999) defined high, medium, and low SES schools using free and reduced lunch eligibility ranges of 0 to 33%, 34 to 66%, and 67 to 100%, respectively. An examination of the free and reduced lunch eligibility levels in Georgia reported in the 2002 public school report card (GADOE, 2002) revealed that the one third of Georgia schools with the lowest free and reduced

lunch eligibility were in the 0 to 33% range, the middle one-third of schools were in the 34 to 53% range, and the highest one-third were 54% or more. Given the absence of a consistent definition in the literature of SES categories based upon free and reduced lunch eligibility levels, the free and reduced lunch distribution in Georgia was used as a basis for creating the categories used in this study. The two categories used were 0 to 33% (Affluent), and 34% or more (Non-affluent). The 0 to 33% category is representative of the highest tertile of public schools in the state in terms of socioeconomic status, and is consistent with “high SES” definition used by Borman and Rachuba. Of the participants in this study who were teaching in public schools, 41 taught in schools in which fewer than 34% of the students qualified for free or reduced lunch, and 39 taught in schools in which 34% or more of the students were qualified for free or reduced lunch.

The data analysis for this study is summarized in Table 8.

Table 8
Data Analysis

Question	Independent variables	Dependent variables	Analysis
Question 1: Describe program completers	Preparation Program (categorical) Years of non-education work experience (continuous) Teaching tenure (continuous) Age (continuous) School SES (continuous)		Descriptive statistics (mean, standard deviation, sample distribution)
Question 2: Describe program completers		Professional Commitment (continuous) Organizational Commitment (continuous) Job Satisfaction (continuous) Teaching Status (categorical)	Descriptive statistics

Table 8 (Continued): *Data Analysis*

Question	Independent variables	Dependent variables	Analysis
Question 3: Compare program completers	Preparation program	Professional Commitment Organizational Commitment Job Satisfaction Teaching Status	Chi Square ANOVA ANOVA ANOVA
Question 4: Compare program completers	Years of non-educational work experience	Professional Commitment Organizational Commitment Job Satisfaction Teaching Status	Chi Square ANOVA ANOVA ANOVA
Question 5: Compare program completers	Teaching tenure	Professional Commitment Organizational Commitment Job Satisfaction Teaching Status	Chi Square ANOVA ANOVA ANOVA
Question 6: Compare program completers	Age	Professional Commitment Organizational Commitment Job Satisfaction Teaching Status	Chi Square ANOVA ANOVA ANOVA
Question 7: Compare program completers	School SES	Professional Commitment Organizational Commitment Job Satisfaction Teaching Status	Chi Square ANOVA ANOVA ANOVA

CHAPTER IV

RESULTS

The purpose of this causal comparative study was to compare the participants in two alternative CTE teacher preparation programs in terms of retention, job satisfaction, organizational commitment, and professional commitment. In addition to type of teacher preparation program, four additional independent variables that the research suggests may impact the dependent variables were included: age, teaching tenure, the socioeconomic status of the school in which the teacher was employed, and the number of years of non-education work experience the teacher had prior to teaching. Retention was defined as teaching status measured by a combination of two factors: (a) whether or not an individual was teaching at the time of the study; and, (b) whether or not the individual expressed an intention to leave the profession within the next 5 years. Job satisfaction was assessed using the Minnesota Satisfaction Questionnaire (MSQ; Buros, 1978), organizational commitment was measured based on the Organizational Commitment Scale (OCS; Mowday et al., 1982), and professional commitment was measured using the Blau's Career Commitment scale (Blau, 1985).

This chapter presents the results of the analyses conducted to address each of the research questions posed. Study analyses included descriptive statistics, analyses of variance, and chi square analyses. Separate comparative analyses were conducted assessing the effect of each independent variable on each of the four dependent variables, using a family wise alpha level of .05 ($\alpha = .0125$ for each test). Descriptive statistics for each of the independent variables, addressed in Question 1, were discussed in the participant section of Chapter 3. This chapter includes a summary of the descriptive

statistics for the independent variables, a report of the results for Question 2 thru 7, and a summary of responses to the open ended question. It concludes with a brief summary of the results.

Analysis of Research Questions

Research Question 1

Describe teachers who have completed either the in-service or pre-service post-baccalaureate CTE teacher preparation programs at UGA in terms of age, tenure, years of non-education work experience, and the socioeconomic status (SES) of the schools in which they teach.

Detailed descriptive statistics for study participants by program in terms of age, teaching tenure, years of non-teaching work experience, and school SES were provided in Chapter 3 on pages 71 through 74. The average age of the participants in this study was 36.6 and participants ranged in age from 24 to 58. The average age of the in-service program participants (38.5) was significantly higher ($t = -2.906$, $df = 100$, $p = .005$) than that of pre-service program participants (33.0). Teachers in this study had been teaching for an average of 3.2 years, and their length of teaching experience ranged from 6 months to 14 years. Teaching tenure was significantly higher ($t = -5.373$, $df = 88$, $p = .000$) for those who had participated in the in-service program, 3.95 years as compared to 1.73 years for those in the pre-service program. Of the in-service program participants, 27 had been teaching under provisional licensure or in non-public school settings for a year or more prior to entering their teacher preparation program. On average, participants in this study had 7.33 years of non-teaching occupational experience, but that varied widely with some having no non-teaching work experience and others reporting more than 25 years of such experience. Pre-service and in-service program participants did not differ significantly in terms of length of non-teaching occupational experience ($t = -1.786$, $df = 100$, $p = .077$). Across the public schools in which study participants taught, the average percentage of students eligible for free or reduced lunch, an indicator of school SES, was

33.8% for the 2003-2004 school year. The average percentage of students eligible for the state of Georgia for the same period was 46% (GADOE, 2004). The fact that the schools represented in this study had, on average, fewer students eligible for free and reduced lunch indicated that they tended to be relatively high SES schools. There was, however, a wide range of school SES levels represented, with free and reduced lunch eligibilities ranging from 2% to 94%. The schools in which in-service program participants taught did not differ significantly ($t = -.845$, $df = 78$, $p = .40$) from those in which pre-service participants taught in terms of free and reduced lunch eligibility levels.

Research Question 2

Describe the levels of professional commitment, organizational commitment, job satisfaction, and teaching status among teachers who have completed these post-baccalaureate teacher preparation program.

Professional commitment, organizational commitment, and job satisfaction.

Table 9 provides descriptive statistics across all teachers in the study for the professional commitment, organizational commitment, and job satisfaction measures. Score distributions for both professional commitment and organizational commitment were skewed somewhat towards the high end of the scales. Job satisfaction scores appeared to be approximately normally distributed.

Table 9

Descriptive Statistics for Professional Commitment, Organizational Commitment, and Job Satisfaction

	Mean	SD	Minimum	Maximum
Professional commitment (n = 103)	36.8	8.3	8	48
Organizational commitment (n = 90)	66.5	15	27	87
Job satisfaction (n = 89)	72.8	13.6	41	100

Teaching status. Of the teachers participating in this study 79.4% were currently teaching and expressed no intention to leave the profession during the next 5 years.

Another 8.8% said that they were currently teaching, but planned to leave the profession within the next 5 years and none of those planning to leave were at or near retirement age. A small percentage (4.9%) had previously taught, but had already left teaching. The remainder (6.9%) had never held a teaching position. One respondent did not answer the questions concerning intent to stay in teaching. All of those who had never held a teaching position were prospective teachers who had completed the pre-service preparation program. That is to be expected since having already secured a teaching position on a provisional teaching certificate is a prerequisite for entering the in-service teacher preparation program. As indicated in Chapter 3, four teaching status categories were originally planned but the very small number of teachers falling three of those categories presented problems with respect to the planned chi square analysis, since cell frequencies fell below minimum requirements for the analysis. That necessitated a redefinition of this variable. The redefined variable had two levels: (a) teachers who were teaching and expressed no intention to leave the profession within the next 5 years ($n = 81$, 79.4% of the sample); and, (b) those who were either not teaching or were teaching but said they planned to leave the profession within the next 5 years ($n = 21$, 20.4% of the sample).

Research Question 3

Compare teachers who have completed the post-baccalaureate in-service program with those completing the post-baccalaureate pre-service program on professional commitment, organizational commitment, job satisfaction, and teaching status.

There were no significant differences in the professional commitment, organizational commitment, or job satisfaction scores obtained among pre-service program teachers as compared to those obtained among in-service program teachers. Table 10 provides the cell means and standard deviations for each variable. Tables 11, 12, and 13 summarize the ANOVA results for each of the three variables across program groups. While Levene's test of variance equality for the job satisfaction measure did

indicate a departure from ANOVA assumption of variance equality, a check of the significance level using the more robust Welch test for that variable confirmed the conclusion of no effect (Welch statistic $(1,72.2) = 1.264$, $p = .265$) (Keppel, 1991). There also was no significant association between preparation program and teaching status (χ^2 (df 1) = 2.968, $p = .085$, $\phi = -.171$). Table 14 provides a summary of the chi square analysis for teaching status by teacher preparation program.

Table 10

Independent Variable Means and Standard Deviations by Teacher Preparation Program

Variable	Pre-service teachers (n = 37)		In-service teachers (n = 66)	
	Mean	SD	Mean	SD
Professional commitment	38.22	7.9	35.94	8.47
Organizational commitment	68.48	12.59	65.62	16.03
Job satisfaction	74.89	10.43	71.82	14.8

Table 11

Professional Commitment by Teacher Preparation Program - ANOVA Results

Source	df	F	η^2	p
Preparation program	1	1.797	.017	.183
Subjects within-group error	101	(68.396)		

Note. Values enclosed in parentheses represent mean square errors.

Table 12

Organizational Commitment by Teacher Preparation Program - ANOVA Results

Source	df	F	η^2	p
Preparation program	1	.713	.008	.401
Subjects within-group error	88	(225.609)		

Note. Values enclosed in parentheses represent mean square errors.

Table 13
Job Satisfaction by Teacher Preparation Program - ANOVA Results

Source	df	F	η^2	p
Preparation program	1	.981	.011	.325
Subjects within-group error	87	(184.732)		

Note. Values enclosed in parentheses represent mean square errors.

Table 14
Teaching Status by Teacher Preparation Program Observed Frequency Counts

Teaching status	Preparation program	
	In-service program	Pre-service program
Teaching and no plan to leave	55	26
Not teaching or plan to leave	10	11

Note. Values enclosed in parentheses represent mean square errors.

Research Question 4

Compare teachers completing these post-baccalaureate preparation programs by length of non-education work experience on professional commitment, organizational commitment, job satisfaction, and teaching status.

The results show that levels of professional commitment, organizational commitment, and job satisfaction also did not differ significantly as a function of the participant's level of experience in their prior occupational field. Teaching status appears to be unrelated to length of prior non-teaching occupational experience as well (χ^2 (df 1) = .238, $p = .625$, $\phi = .049$). Table 15 provides descriptive statistics by length of prior occupational experience, and Tables 16, 17, and 18 summarize the results of the analyses of variance. Table 19 details the observed cell frequencies for teaching status by length of prior occupational experience.

Table 15

Independent Variable Means and Standard Deviations by Length of Experience in Prior Occupation

Variable	3 years or less (n = 35)		More than 3 years (n = 67)	
	Mean	SD	Mean	SD
Professional commitment	35.49	8.73	37.6	7.97
Organizational commitment	66.27	14.53	66.7	15.38
Job satisfaction	72.55	13.73	72.93	13.63

Table 16

Professional Commitment by Length of Experience in Prior Occupation - ANOVA Results

Source	df	F	η^2	p
Length of prior occupation experience	1	1.51	.015	.222
Subjects within-group error	100	(67.889)		

Note. Values enclosed in parentheses represent mean square errors.

Table 17

Organizational Commitment by Length of Experience in Prior Occupation - ANOVA Results

Source	df	F	η^2	p
Length of prior occupation experience	1	.017	.000	.897
Subjects within-group error	88	(227.392)		

Note. Values enclosed in parentheses represent mean square errors.

Table 18

Job Satisfaction by Length of Experience in Prior Occupation - ANOVA Results

Source	df	F	η^2	p
Length of prior occupation experience	1	.016	.000	.899
Subjects within-group error	87	(186.78)		

Note. Values enclosed in parentheses represent mean square errors.

Table 19
Teaching Status by Length of Experience in Prior Occupation Observed Frequency Counts

Teaching status	Length of experience in prior occupation	
	3 years or less	More than 3 years
Teaching and no plan to leave	29	52
Not teaching or plan to leave	6	14

Research Question 5

Compare teachers completing these post-baccalaureate teacher preparation programs by teaching tenure on professional commitment, organizational commitment, job satisfaction, and teaching status.

There were no differences in the professional commitment, organizational commitment, or job satisfaction scores of teachers with 3 years or less teaching tenure versus teachers who had more experience in the classroom. In addition, chi square analysis revealed no meaningful association between teaching tenure and teaching status (χ^2 (df 1) = .608, $p = .435$, $\phi = .082$) Tables 20, 21, 22, 23 and 24 provide descriptive statistics and details of these analyses.

Table 20
Independent Variable Means and Standard Deviations by Length of Teaching Tenure

Variable	3 years or less (n= 51)		More than 3 years (n = 39)	
	Mean	SD	Mean	SD
Professional commitment	37.75	6.71	37.03	8.05
Organizational commitment	67.49	14.09	65.31	16.21
Job satisfaction	73.6	12.5	71.74	14.97

Table 21

Professional Commitment by Length of Teaching Tenure - ANOVA Results

Source	df	F	η^2	p
Length of teaching tenure	1	.214	.002	.645
Subjects within-group error	88	(53.53)		

Note. Values enclosed in parentheses represent mean square errors.

Table 22

Organizational Commitment by Length of Teaching Tenure - ANOVA Results

Source	df	F	η^2	p
Length of teaching tenure	1	.465	.005	.497
Subjects within-group error	88	(226.239)		

Note. Values enclosed in parentheses represent mean square errors.

Table 23

Job Satisfaction by Length of Teaching Tenure - ANOVA Results

Source	df	F	η^2	p
Length of teaching tenure	1	.406	.005	.526
Subjects within-group error	87	(185.948)		

Note. Values enclosed in parentheses represent mean square errors.

Table 24

Teaching Status by Length of Teaching Tenure Observed Frequency Counts

Teaching status	Length of teaching tenure	
	3 years or less	More than 3 years
Teaching and no plan to leave	47	34
Not teaching or plan to leave	4	5

Research Question 6

Compare teachers completing these post-baccalaureate teacher preparation programs by age on professional commitment, organizational commitment, job satisfaction, and teaching status.

The data show no significant age group effects upon professional commitment, organizational commitment, or job satisfaction scores. There also was no relationship noted between age group and teaching status (χ^2 (df 1) = .870, p = .351, ϕ = .093). Cell means and standard deviations by age group and summaries of the three ANOVA's conducted by age group are presented in Tables 25, 26, 27 and 28. Chi square cell frequencies for teaching status by age group are provided in Table 29.

Table 25

Independent Variable Means and Standard Deviations by Age Group

Variable	24 to 45		46 to 58	
	(n = 75)		(n = 27)	
	Mean	SD	Mean	SD
Professional commitment	35.76	8.58	39.15	6.93
Organizational commitment	66.46	14.58	66.81	16.66
Job satisfaction	72.31	13.26	74.33	14.84

Table 26

Professional Commitment by Age Group - ANOVA Results

Source	df	F	η^2	p
Age group	1	3.403	.033	.068
Subjects within-group error	100	(66.971)		

Note. Values enclosed in parentheses represent mean square errors.

Table 27

Organizational Commitment by Age group - ANOVA Results

Source	df	F	η^2	p
Age group	1	.008	.000	.927
Subjects within-group error	88	(227.414)		

Note. Values enclosed in parentheses represent mean square errors.

Table 28

Job Satisfaction by Age group - ANOVA Results

Source	df	F	η^2	p
Age group	1	.353	.004	.554
Subjects within-group error	87	(186.06)		

Note. Values enclosed in parentheses represent mean square errors.

Table 29

Teaching Status by Age Group Observed Frequency Counts

Teaching status	Age group	
	24 to 45	46 to 58
Teaching and no plan to leave	61	20
Not teaching or plan to leave	13	7

Research Question 7

Compare teachers completing these post-baccalaureate teacher preparation programs by school SES on professional commitment, organizational commitment, job satisfaction, and teaching status.

Professional commitment was unrelated to school SES, but teacher job satisfaction levels did vary significantly as a function of the SES of the school in which the teacher was employed. Teachers working in affluent schools more satisfied with their jobs than were those teaching in non-affluent schools; and the magnitude of the effect ($\eta^2 = .122$) was substantial, falling in what is typically characterized as the “medium” (.06) to “large” (.15)

category (Keppel, 1991). In contrast, school SES appears to have little effect upon the teacher's commitment to the teaching profession. The results with respect to the effect of school SES upon the teacher's level of organizational commitment also show no significant difference, but the effect size measure ($\eta^2 = .068$) for that analysis suggests that there may indeed be a relationship that this study was not powerful enough to identify. The results of the chi square analysis of teaching status by school SES level suggests no association between the two variables (χ^2 (df 1) = .356, $p = .550$, $\phi = -.067$). Table 30 provides descriptive statistics by school SES level. Summaries of the three ANOVA's conducted by school SES are given in Tables 31, 32 and 33 detail the ANOVA results. Table 34 provides the chi square cell frequencies for teaching status by school SES.

Table 30

Independent Variable Means and Standard Deviations by School SES

Variable	Affluent (n = 41)		Non-affluent (n = 39)	
	Mean	SD	Mean	SD
Professional commitment	37.34	6.93	36.95	8.11
Organizational commitment	69.98	15.87	62.21	12.67
Job satisfaction	76.88	13.18	68.05	11.88

Table 31

Professional Commitment by School SES - ANOVA Results

Source	df	F	η^2	p
School SES	1	.054	.001	.816
Subjects within-group error	78	(56.681)		

Note. Values enclosed in parentheses represent mean square errors.

Table 32
Organizational Commitment by School SES - ANOVA Results

Source	df	F	η^2	p
School SES	1	5.821	.068	.018
Subjects within-group error	78	(207.325)		

Note. Values enclosed in parentheses represent mean square errors.

Table 33
Job Satisfaction by School SES - ANOVA Results

Source	df	F	η^2	p
School SES	1	9.862	.122	.002
Subjects within-group error	78	(157.901)		

Note. Values enclosed in parentheses represent mean square errors.

Table 34
Teaching Status by School SES Observed Frequency Counts

Teaching status	SES level	
	Affluent	Non-affluent
Teaching and no plan to leave	37	35
Not teaching or plan to leave	5	3

Open Ended Question Responses

The Dillman (1978) mail survey protocol followed in this study recommends using the back cover of the questionnaire to give the study participant an opportunity to offer any open ended comments they might have on the survey topic. Accordingly, on the back cover of the questionnaire participants were invited to offer any comments they might have “about their experiences as a career and technical educator” or that might help the researcher “in our future efforts to learn more about the experiences of new teachers.” Forty-seven of the 103 study participants provided some comment in response to that question. Their responses provide some context for the study results and highlight some

of the joys and frustrations these teachers face in their work. A summary of participant open ended responses follows. Full verbatim responses are provided in Appendix G.

One of the recurrent themes that emerged from the open-end responses was the poor image these teachers believed that CTE had in their schools. Several participants said that in their schools CTE courses are seen as a “dumping ground” for students with low ability or behavioral problems, and that CTE teachers are looked down upon or not respected. CTE classes, they said, are viewed as being a much lower priority than are academic classes. The following quotes illustrate this theme.

“CTE teachers are often used as a dumping ground for students who can't (or won't) do anything else. CTE teachers are asked to teach multi-levels of the same course at the same time, at different grade levels, and at levels varying from special ed to gifted. Often, not enough special CTE courses are offered. For example, the demographics at our school cry out for automotive and/or construction. Those programs no longer exist, because they could not "afford" them My situation is not unique.”

“CTE teachers do not receive the respect (of parents, students, & other faculty) that "Academic" teachers receive. We are thought of as for "the students who can't go to college." I believe this is one factor contributing to CTE teachers not remaining in the classroom.”

“CTE is still viewed as an "also ran" as compared to academics. The news we have from a financial aspect of the Carl Perkins Act is discouraging. Especially to new teachers.”

“Great source of dissatisfaction is lack of emphasis and respect for vocational education. Also, classes tend to become a "catch-all" or dumping ground for students with behavioral problems or low-ability.”

“We are the second class citizens of the school.”

“Unfortunately my county does not seem to value Career and Technical Education and at a more local level, my C & T administrator either doesn't understand or care about our programs. In the past year, our department has had equipment seized and allocated to others, prerequisites abolished and all the work that had been accomplished over the past four years in developing our programs wiped away in a matter of months.”

Participants also spoke often of the joys and rewards of being a CTE teacher. Many said that they enjoyed teaching and found it rewarding. They liked working with students and found it gratifying to see them learn and succeed. Some commented that they felt their life and professional experiences prepared them well for the classroom and they enjoyed sharing their experience and insights with their students. Examples of this theme follow.

“An extremely rewarding occupation both inside and out! Love it!”

“I love to teach! I believe that working in a job other than school taught me to be ready to become a teacher. Life experience has prepared me for the classroom. I believe it has given me the skills to bring real life experience to my students.”

“I love seeing a student happy and fulfilled at their job! I love seeing them become proud of themselves when I have good things to tell them - that their

employer has shared with me!.... I enjoy the energy and laughter most high school students have. Overall - I enjoy my job!"

"I am very happy in my decision to change careers and become an educator especially after 26 years in the corporate arena. I feel that I am highly qualified to prepare my students for the challenges that they will face in the very competitive world of work. I am very excited to bring my experience to them and share my insights so that they can achieve."

"My experience thus far as a CTE teacher has been a positive one. I like the school in which I teach and I love the employees who work there. I have a great Business Education department in which every one is very helpful and supportive. The students are what bring me to school everyday, though."

Participants also, however, took the opportunity to vent about the challenges they face as teachers. They spoke most often of the heavy demands placed on them, especially in the first year, their perceptions that they did not get the support from other staff and administration that they needed, and inadequate resources. The following quotes illustrate the challenges participants reported that they face.

"The amount of time spent on non-productive meetings and paperwork is incredible. There is no coordination of what is asked of teachers. Demands come from every direction."

"We teach 7 classes a day, 30 students per class. We have morning duty and afternoon duty. And we have 63 minutes per day that serves as our lunch and planning period. I enjoy the teaching aspect of the job, but feel we are being abused and taken advantage of."

“I wish there was a way to ease the overwhelming stress level of student teaching/first year teaching....I love the joy of teaching and the results I see with the students but right now the stress/work loads is smothering the reward/joys. I pray next year is better.”

“I wish I could give more advice for improvement as a CTE teacher - but since it is my first year I am just making it day by day - it is so much work to do all aspects of the job! It really takes 2-3 people.”

“Lack of funds make teaching difficult especially in Lab CTE courses.”

“My only other negative aspect of work is the fact that I float to 3 different computer labs, hence the answer of 3 on "being able to work alone". Many times the class I am in, the other teacher stays and I feel like my every action is watched. I have a hard time because my students want to touch things in other teachers' classroom and I constantly feel like a "guest".”

“The building I work in has lead paint peeling from all walls & is asbestos ridden - the building should be condemned. The BOE does not invest a dime in this school. We buy our own supplies & we pay for any copies of materials with our own funds.”

“However, I feel that the leadership from administrators should be more involved. Why should the staff listen to me if the administrators don't express their support?”

“As a CTE teacher you often feel "alone" because no one else teaches what you do - so it's hard to share ideas with "co-workers" about lesson plans.”

A few participants made suggestions for teacher preparation, but the only one that was mentioned more than once was that prospective teachers receive more classroom management instruction. Other suggestions included requiring all prospective teachers to do a practicum in addition to student teaching in order to insure their exposure to various teaching styles and classrooms, instruction in curriculum alignment, instruction in middle school education, and requiring more programming and web design coursework. One teacher also spoke to the importance of a good mentor in the first few years of a new teacher's career.

Only four of the 47 participants responding to this item made any specific mention of their assessment of the CTE teacher preparation program in which they participated. Two in-service program participants felt that their teacher preparation program was ineffective in preparing them to teach. Two teachers prepared in the pre-service program felt that their preparation program was very good. Note though that all four of these individuals indicated that they were currently teaching and planned to stay in the classroom.

Summary

The results of this study revealed no significant differences in the occupational commitment, organizational commitment, job satisfaction, or teaching status of participants based upon type of preparation program, teaching tenure, length of non-teaching work experience, or age. School SES was also unrelated to professional commitment and teaching status; but school SES did have a significant impact upon the teacher job satisfaction. Teachers in low SES schools were significantly less satisfied than were those teaching in more affluent schools. While the difference in organizational commitment scores for teachers in low SES schools as compared to those teaching in higher SES schools did not reach the level of significance established for this study, the

effect size measure suggests that there may have been an effect that this study was not sufficiently powerful to detect. Just under half (46%) of the study participants offered an open-ended comment when provided the opportunity to write any comments they might have “about their experiences as a career and technical educator” or that might help the researcher “in our future efforts to learn more about the experiences of new teachers”. The recurrent themes emerging from those comments included the poor image of CTE, the joys and rewards of being a CTE teacher, and the workplace challenges these teachers face (e.g., heavy demands, lack of administrative support, and inadequate resources).

CHAPTER V

SUMMARY, CONCLUSIONS, IMPLICATIONS, AND RECOMMENDATIONS

This chapter begins with a restatement of the rationale, purpose, and objectives of this study. A brief summary of the study method and results of the analyses are also presented. Conclusions drawn from the analysis and the implications of the findings are discussed. The chapter ends with recommendations for teacher preparation practice and future research.

Rationale

Some studies have suggested that roughly 40% of new teachers stop teaching in the first 2 years (Haselkorn, 1994; Karge, 1993). Attrition levels for CTE teachers also have been reported to be high – 15% in the first year and over one-half within 5 years (Camp & Heath-Camp, 1991). Teacher retention issues are a contributing factor in the current teacher shortages being experienced in some regions of the country and in some subject areas (Howard, 2003; Hussar, 1999; McCaslin & Parks, 2002). Teacher shortages are reported to be most severe in the Southern and Western states, in low income urban and rural schools, in secondary schools, and in several subject areas including some career and technical education (CTE) subjects (Bartlett, 2002; Cleveland, 2003; Darling-Hammond, 2000; Howard, 2003; Walter & Gray, 2002). In response to teacher shortages, and to concerns in some circles about teacher quality and diversity, many states have instituted alternative certification routes for teachers (Dill, 1996; Feistritzer, 2004). In Georgia 19 different subjects, including four CTE subject areas, were designated by the U.S. Department of Education as having critical teacher shortages for the 2003-2004

school year (Georgia Department of Education [GADOE], n.d.). Currently the state of Georgia has seven alternative teacher certification routes (Feistritzer).

One of these alternate routes is the University of Georgia (UGA) Preparation Academy for Career and Technical Educators (PACTE) instituted in 2001. The PACTE is an in-service program that includes an intensive two and one-half week instruction program during the summer and a 1-year supervised teaching internship in a public secondary school (middle or high school). After completing the program and passing the appropriate Praxis II content area test, participants may continue to teach without supervision on a non-renewable teaching certificate, but must complete all required education courses within a 5-year period to obtain full, renewable certification. The second UGA alternate route program for CTE teachers is a pre-service program for graduate level students. In this program students obtain full certification by first completing all of the education courses required for their certification, and then student teaching at a public secondary school for one semester. Upon satisfactorily completing the student teaching experience and passing the appropriate Praxis II test, the student is eligible for full, renewable teacher certification. The primary differences between the two programs lie in whether or not student teaching is required, and whether or not all required education course work is completed prior to assuming full teaching responsibilities.

The vast majority of studies investigating alternative teacher certification routes have either been descriptive or have compared teachers certified through alternative route programs to those completing a 4-year undergraduate teacher education program. The studies that have addressed the retention of teachers prepared via alternative teacher certification programs have produced mixed results. Some showed comparatively higher retention rates for teachers prepared in alternate route programs (Adams & Dial, 1993; Cooperman, 2000; Darling-Hammond, 1992; Murmane et al., 1991; Stoddart, 1992; Zeichner & Schulte, 2001), while others found that teachers completing alternative

certification programs left public school teaching at higher rates than did those completing 4-year undergraduate teacher education programs (Johnson & Birkeland, 2003; Jorissen, 2002; Lutz & Hutton, 1989; Natriello & Zumwalt, 1992; Shen, 1997). Still others found no difference between the two groups (Darling-Hammond et al., 1989; Guyton et al., 1991; Houston et al., 1993; Ruhland & Bremer, 2003). Little of the alternative teacher certification research specifically addresses retention among CTE teachers.

There is a considerable body of research focused upon the factors that influence retention among teachers and among workers in a broad variety of other occupations. Three factors that have repeatedly been shown to be strongly predictive of turnover and turnover intentions across a wide range of fields, including education, are job satisfaction, organizational commitment, and professional commitment (Cohen, 2003; Meyer & Allen, 1997; Spector, 1997).

Purpose

The purpose of this causal comparative study was to compare the participants in two alternative CTE teacher preparation programs in terms of retention, job satisfaction, organizational commitment, and professional commitment. In addition to type of teacher preparation program, four additional independent variables that the research suggests may impact the dependent variables were included: age, teaching tenure, the socioeconomic status of the school in which the teacher was employed, and the number of years of non-education work experience the participant had. Retention was defined as teaching status and measured by a combination of two factors: (a) whether or not an individual was teaching at the time of the study; and, (b) whether or not the individual expressed an intention to leave the profession within the next 5 years. Based upon these two factors participants were placed in one of two teaching status groups: (a) those currently employed as a teacher and have no plan to leave in the next 5 years; and (b) those either not teaching or teaching and planning to leave the profession in the next 5 years. Job satisfaction was assessed using the Minnesota Satisfaction Questionnaire (MSQ; Buros,

1978), organizational commitment was based on the Organizational Commitment Scale (OCS; Mowday et al., 1982), and professional commitment was measured using the Blau's Career Commitment scale (Blau, 1985). The results of this study add to the existing body of research on teacher retention, particularly with respect to alternatively certified and CTE teachers. The findings also will help to inform alternate route teacher preparation practices. The specific objectives addressed in this study were:

1. To describe teachers who have completed either the in-service or pre-service post-baccalaureate CTE teacher preparation programs at UGA in terms of age, tenure, years of non-education work experience, and the socioeconomic status (SES) of the schools in which they teach;
2. To describe the levels of professional commitment, organizational commitment, job satisfaction, and teaching status among teachers who have completed these post-baccalaureate teacher preparation programs;
3. To compare teachers who have completed the post-baccalaureate in-service program with those completing the post-baccalaureate pre-service program on professional commitment, organizational commitment, job satisfaction, and teaching status;
4. To compare teachers completing these post-baccalaureate preparation programs by length of non-education work experience on professional commitment, organizational commitment, job satisfaction, and teaching status;
5. To compare teachers completing these post-baccalaureate teacher preparation programs by teaching tenure on professional commitment, organizational commitment, job satisfaction, and teaching status;
6. To compare teachers completing these post-baccalaureate teacher preparation programs by age on professional commitment, organizational commitment, job satisfaction, and teaching status;

7. To compare teachers completing these post-baccalaureate teacher preparation programs by school SES on professional commitment, organizational commitment, job satisfaction, and teaching status.

Method

Design

A causal comparative research design was used for this study. Causal comparative research designs are typically used when cause and effect relationships between a categorical independent variable and one or more dependent variables are examined. However, the independent variable is not manipulated in this type of research design. Studying naturally occurring groups of teachers who differ in terms of the type of preparation program in which they participated provided the opportunity to determine whether these groups also exhibit differing levels of job satisfaction, commitment, and retention. Numerous studies investigating factors affecting teacher retention and the effect teacher preparation program type have used causal comparative approaches (Ingersoll, 2000; Jelmberg, 1996; Laczko-Kerr & Berliner, 2002; Miller et al., 1998; Stempien & Loeb, 2002).

Participants

The population for this study was certified middle school and high school career and technical education teachers in Georgia who held an undergraduate degree in a field other than education, and had obtained certification to teach via some type of alternative teacher preparation program. The accessible sample was participants who completed either the in-service or the pre-service CTE teacher preparation program at UGA since Spring, 2001 and held at least a baccalaureate degree in a field other than education. All those completing these two programs since Spring 2001, when the in-service program began, were requested to participate. The total number of graduate level participants completing these CTE teacher preparation programs during that period was 95 for the in-service program and 42 for the pre-service program. It was not possible to

obtain addresses for 7 of the 95 in-service program participants. Of the 88 questionnaires mailed to in-service program participants 66 were returned and usable yielding a response rate of 75%. Of the 42 questionnaires sent to pre-service participants 37 were returned and usable, a response rate of 88%.

Instrument

The questionnaire for this study included the short form of the Minnesota Satisfaction Questionnaire, the Organizational Commitment Scale, Blau's Career Commitment Scale, demographic data, type of preparation program completed, teaching status and tenure, intent to remain in teaching, industry experience, number of schools employed in since program completion, specific information about the school where the teacher worked, and classes taught. Based upon Dillman's (1978) recommendations, an open-ended question was placed on the back cover of the questionnaire inviting participants to offer any comments they had about their experiences as a CTE teacher and about the experiences of new teachers in general.

Research Procedures

Prior to implementation, permission to conduct this study was obtained from the University of Georgia Internal Review Board (UGA IRB). For this study consent forms were not required; return of a completed questionnaire was assumed to imply consent to participate. In order to insure participant confidentiality each participant was assigned an identification number. No participant names were included on questionnaires and data were reported only in aggregate. Participant identification codes were discarded when data collection was completed. The study was conducted as a mail survey and the mail survey procedures and timing recommended by Dillman (1978) were used in order to maximize the return rate. Dillman recommends an initial questionnaire packet mailing, a post card follow-up after one week, a replacement packet mailing after three weeks, and a second replacement packet mailed by registered mail after seven weeks. The final registered mail follow-up was eliminated at the request of UGA IRB.

Data Analysis

Data analysis was conducted using the Statistical Package for the Social Sciences (SPSS) version 13.0. The analysis began with descriptive measures. Separate comparative analyses were then conducted assessing the effect of each independent variable on each of the four dependent variables, using a family wise alpha level of .05. All five independent variables (preparation program, age, teaching tenure, years of non-teaching occupational experience, and SES of the school) were treated as categorical variables. All of the dependent variables except teaching status were treated as continuous variables and analyzed using a series of one-way ANOVA's. Since teaching status was a categorical variable, comparative analyses for that variable were chi-square analyses. Measures of effect size, the proportion of the variance in the dependent variable explained by the grouping or independent variable were calculated for each comparative analysis.

Summary of Findings

Of the 103 participants in this study, 37 had participated in the pre-service teacher preparation program and 66 had participated in the in-service program. The average age across all study participants was 36.6 years. In-service program participants were, on average, significantly older (38.5 years) than were their pre-service program counterparts (33 years). Study participants had been teaching for an average of 3.2 years; but there was a fairly broad range of experience, from 6 months to 14 years. In-service participants had significantly more teaching experience than did pre-service participants (3.9 and 1.7 years, respectively). Many study participants had substantial experience in the occupation in which they were involved during the 5 years before they were certified to teach, with 65% claiming more than 4 years non-teaching experience and over 16% claiming over 13 years experience. Pre-service and in-service teachers did not differ significantly in terms of prior non-teaching occupational experience. The average SES level of the schools in which the teachers in this study were employed, which is inversely related to the percent

of students eligible for free reduced lunch, was somewhat higher (33.8% eligible) than the Georgia state average for 2003-2004 (46%). Here again, there was no significant difference between pre-service and in-service program participants.

Nearly 9 in 10 (88.2%) of the participants in this study indicated that they were teaching at the time of the study; and 79.4% of the study participants were not only teaching, but indicated that they had no plans to leave the profession within the next 5 years. A small percentage (4.9%) had previously taught, but had already left teaching. The remainder (6.9%) indicated that they had never held a teaching position. All of those in the latter group were pre-service program participants. The average professional commitment score was 36.8 with a standard deviation of 8.3. Professional commitment scores ranged from 8 to 48, which also represents the extremes of the scale used. The average organizational commitment score was 66.5 with a standard deviation of 15.0, and scores ranged from 27 to 87 (scale range = 15 to 90). Job satisfaction scores averaged 72.8 with a standard deviation of 13.6, and those scores ranged from 41 to 100 (scale range = 20 to 100).

There were no significant differences in teaching status, occupational commitment, organizational commitment, or job satisfaction based upon preparation program, age, teaching tenure, or years of prior non-teaching occupational experience. The only independent variable that did have a significant impact was the SES of the school in which the teacher was employed. While the SES of the school did not appear to be related to either professional commitment or teaching status, it did make a significant difference in the teacher's level of job satisfaction. Teachers teaching in affluent schools were significantly more satisfied with their jobs than were those in non-affluent schools. Although results with respect to the effects of school SES upon organizational commitment did not reach the level of significance established for this study, the effect size measure ($\eta^2 = .068$) suggests that there may indeed be a relationship between school SES and organizational commitment that this study was not powerful enough to identify.

Based upon Dillman's (1978) recommendations, an open-ended question was placed on the back cover of the questionnaire inviting participants to offer any comments "about their experiences as a career and technical educator" or that might help the researcher "in our future efforts to learn more about the experiences of new teachers". Forty-seven of the study participants provided some comment in response to that question. Those responses provided some context for the quantitative results and highlight some of the joys and frustrations these teachers face in their work. In response to this question, participants spoke often of their frustrations with the poor image of CTE. Career and technical education, they said, is seen as a dumping ground for students with behavioral problems or low ability. As a result CTE teachers are looked down upon, and CTE classes get lower priority than do academic classes. Another theme that arose in these open-ended responses was the joys and rewards of being a CTE teacher. Many participants wrote that they enjoyed teaching and found it rewarding. They said the best parts of the job were the opportunity to work with students and the satisfaction of seeing them learn and succeed. Some commented that their life experiences and professional knowledge prepared them well for the classroom, and that they enjoyed sharing their experience and insights. The challenges that these teachers confront were yet another recurrent theme. They expressed frustration with the heavy demands placed on them, especially in the first year. They also perceived that they did not get the support from other staff and administration that they needed and that the resources they were given were inadequate. Few participants made specific suggestions for teacher training. The only suggestion made more than once was that prospective teachers receive more preparation in the area of classroom management. Only 4 participants responding to this question offered any reaction to the CTE teacher preparation program in which they participated. Two in-service program participants said that their teacher preparation program was ineffective in preparing them to teach. Two teachers prepared in the pre-

service program thought that program was very good. All 4 of these participants, however, were teaching at the time of the study and had no plans to leave the profession.

Conclusions

The two alternative teacher preparation programs studied in this research had retention levels much higher than would have been expected based upon prior studies. The results indicate that the two programs function at equivalent levels in terms of the dependent variables studied. There were no significant differences found across the two programs in the teaching status, professional commitment, organizational commitment, or job satisfaction of their participants. Contrary to prior research, age and teaching tenure had no significant effects upon any of the four independent variables included in this study. Prior research also suggested that teachers with skills or experience that could provide employment alternatives in other fields would be more likely to leave the profession. This study did not support that hypothesis. Prior non-teaching work experience was unrelated to teaching status, and unrelated to professional commitment, organizational commitment, and job satisfaction as well. Consistent with the findings of Shen (1998b) the SES of the school in which the teacher was employed did have a significant positive effect on job satisfaction. Teachers employed in affluent schools were more satisfied than were teachers in non-affluent schools. School SES did not have any significant effect upon professional commitment, organizational commitment, or teaching status. The results, however, do suggest that there may be a relationship between the SES of the school and the organizational commitment of the teacher that this study was not sufficiently powerful to detect.

Discussion and Implications

Perhaps one of the most impressive findings of this study is that the teacher preparation programs studied produced exceptionally high levels of retention. Reported attrition rates among new teachers vary, but most suggest that 20 to 25% leave the profession within their first 2 years and 40 to 50% leave within 5 years (Camp & Heath-

Camp, 1991; Colbert & Wolff, 1992; Gold, 1996; Haselkorn, 1994; Ingersoll, 2001; Karge, 1993; Merseth, 1992; Odell & Ferraro, 1992). Participants in this study had completed their teacher preparation programs from 1 to 3 years prior to the study, and 88.2% of them were still teaching. Even more impressive is the fact that 79.4% were teaching and had no plans to leave the profession during the next 5 years. Clearly these programs are both preparing teachers who are quite likely to stay in the classroom. The high retention levels observed may, in part, be a function the type of individuals that a university-based post-graduate program is likely to attract. They are rigorous programs with high entrance standards that may attract high quality participants with a strong desire to teach.

The strong retention level obtained is also likely to be due, in part, to the quality of the programs themselves. Both of these programs have the features that Darling-Hammond (1992) found to be characteristic of alternative teacher preparation programs that produced relatively high levels of both retention and satisfaction: graduate level programs that are longer, include substantial pedagogical and subject matter coursework, and feature extended supervised field experiences. In addition, both programs include other elements that have frequently been identified in the literature as typical of effective alternative certification programs.

1. There are strong partnerships between those responsible for the preparation programs and the school district (Allen, 2003).
2. The programs have high entrance standards (Allen, 2003; Legler, 2002; Wilson et al., 2001).
3. Both programs provide extensive mentoring and supervision with a trained mentor (Allen, 2003; Legler, 2002; Wilson et al., 2001).
4. Practice in lesson planning and teaching with observation and assistance in the classroom are provided (Allen, 2003; Legler, 2002; Wilson et al., 2001).

5. Ongoing professional development and reflection opportunities are provided after the teacher takes full control of the class (Legler, 2002).
6. The programs provide continuous monitoring, evaluation, and feedback (Legler, 2002; Wilson et al., 2001.).

The in-service program is also a cohort program, which research has demonstrated to be an important element in preparing teachers who perform well in the classroom and stay in the profession (Hawk & Schmidt, 1989; Jorissen, 2002; Knauth & Kamin, 1994).

The absence of any significant differences across the in-service and pre-service preparation programs in terms of teaching status, professional commitment, organizational commitment, and job satisfaction is a very interesting result that may have a number of explanations. It is a finding that is consistent with prior studies that have found no difference between teachers prepared in-service alternative route programs and those prepared in undergraduate pre-service programs on a variety of measures including retention, intent to remain in teaching, student achievement, and measures of teacher performance in the classroom. (Cornett, 1992; Darling-Hammond et al., 1989; Feistritzer, 1990; Guyton et al., 1991; Hawk & Schmidt, 1989; Houston et al., 1993; Miller et al., 1998; Ruhland & Bremer, 2003). The finding could suggest that in strong university-based programs, like the two in this study, pre-service and in-service instruction are equally effective in preparing teachers who are satisfied, committed to their profession and school, and apt to stay in the classroom. An alternative explanation may be that these two programs attract different types of people who have different preparation needs. For instance, the results showed that in-service program participants tended to be older and have more teaching experience than did those who participated in the pre-service program. More mature individuals with some exposure to the classroom may not require as much additional pre-service preparation; and thus, may be well served by an in-service program. In contrast, younger individuals with no prior teaching experience may choose, and benefit more from, a pre-service program.

Another alternative explanation is that there may have been an interaction between the type of preparation program chosen and other independent variables. An interaction would exist if the impact one independent variable (i.e., program type) varied depending upon the level of one or more of the other independent variables (i.e., age, teaching experience, years of non-teaching work experience, or the SES of the school [Keppel, 1991]). Due to the limited sample size in this study, the effect of each independent variable was assessed in a separate analysis of variance; therefore, it is not possible to detect potential interaction effects. Additional research with larger samples that would allow the identification and quantification of such effects is needed.

The results also showed no significant effects upon any of the four dependent variables based upon either age or teaching tenure. These findings are in conflict with prior studies which showed that age and teaching tenure are related to job satisfaction, organizational commitment, and retention (Allen & Meyer, 1996; Boe et al., 1997; Brush et al., 1987; Darling-Hammond & Sclan, 1996; Grissmer & Kirby, 1987; Hrebiniak & Alutto, 1972; Mathieu & Zajac, 1990; Mowday et al., 1982; Murmane et al., 1989, 1991; Shen, 1998b; Spector, 1997). None of those prior studies, however, dealt specifically with second career teachers, who comprise most of the sample in this study. It is possible that age and teaching tenure have little or no effect upon these dependent variables among career changers, especially in the early years of their new career. Prior studies investigating the effects of tenure on job satisfaction, organizational commitment, and retention also looked at those effects over a broad range of tenure levels. In this study, teaching tenure was comparatively restricted (6 months to 14 years). That restriction in the variability of teaching tenure may have limited its effects. As previously noted, it is also possible that interactions among these variables made it impossible to detect their individual effects upon the dependent variables.

No research was found that directly addressed the effect that prior non-teaching experience upon retention, job satisfaction, professional commitment, or organizational

commitment. Some research, however, did suggest that possession of skills that are easily applied in non-teaching fields and perceived ease of finding alternative employment were negatively related to teacher retention (Chapman & Green, 1986; Kirby & Grissmer, 1993). Logically then, those with more extensive work experience in a non-teaching field should possess skills that would facilitate finding alternative employment, and, therefore, be less likely to stay in the classroom. The results of this study do not support that contention. Prior non-teaching experience had no effect on retention. Neither did such experience have any significant effect upon job satisfaction, professional commitment, or organizational commitment.

The SES of the school in which the teacher was employed has been shown in previous research to impact retention levels, though the direction of the effect has varied across studies. Shen (1998b) found that retention levels were lower in socially disadvantaged schools, while the work of Heyns (1988) and Theobald (1990) indicated that retention levels were at their lowest in wealthy school districts. In contrast, this study found no SES effect upon teacher retention. That discrepancy may be a function of the fact that those previous studies examined long term retention effects, while this research was limited to a relatively short period of time. The socioeconomic status of the school in which the participants in this study taught was, however, positively related to job satisfaction, even in the comparatively high SES schools represented in this sample, and the effect was substantial. That finding is consistent with Shen's (1998b) study. It is possible that over a longer period of time the job satisfaction differences found across schools of differing SES levels might lead to differences in retention, and perhaps organizational commitment as well. Several studies have concluded that organizational commitment is a consequence of job satisfaction (Brown & Peterson, 1994; DeCotiis & Summers, 1987; Mathieu & Hamel, 1989; Reichers, 1985; Testa, 2001).

Clearly, teachers in disadvantaged schools are confronted with a challenging work environment – limited resources, frequent lack of parental involvement and support,

absenteeism, discipline issues, fewer opportunities for professional development, frequent school changes among students, and cultural and community issues (Lippman, Burns, & McArthur, 1996; Miller, Duffy, Rohr, Gasparello, & Mercier, 2005). Specific instruction for teachers concerning the challenges of teaching in disadvantaged schools and strategies for dealing with those challenges may help in preparing teachers to better meet those challenge. For instance, Miller et al. reported on a partnership between high poverty public schools and the University of North Carolina using a professional development school model that provides such preparation and practice for pre-service teachers that has been successful in raising student achievement rates at the public schools involved. No literature was found that investigated the outcomes of this professional development school with respect to the teachers who have participated in it.

Recommendations

The following recommendations for practice and further research are made based upon the findings and conclusion of this study.

1. The in-service and pre-service programs appear to serve different types of prospective teachers and this research found no differences between the two programs in terms of retention, professional commitment, organizational commitment, or job satisfaction. Pre-service and in-service CTE teacher preparation options should both be offered.
2. Explore the addition of instruction in teaching in disadvantaged schools to the teacher preparation programs at the University of Georgia.
3. Additional research using larger samples of teachers prepared in pre-service and in-service alternative teacher preparation programs is recommended in order to investigate potential interactions among the independent variables. Such research may help to isolate the effects of preparation program upon professional commitment, organizational commitment, job satisfaction, and retention from the effects of other variables such as school SES, teaching tenure, and age.

4. Follow-up research among the teachers participating in this study to track their retention, professional commitment, organizational commitment, and job satisfaction levels over time would be a useful extension to this study.
5. This research raised questions concerning potential differences in prospective teachers who choose pre-service and in-service preparation programs. In order to answer those questions, research should be conducted among those entering the pre-service and in-service alternative teacher preparation programs to investigate how those who choose those programs differ in terms of experiences, demographics, attitudes, and motivation for program choice.
6. The relative classroom performance of teachers participating in pre-service versus those participating in-service preparation programs was not addressed in this study, but it is an area in which research is needed.

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APPENDIX A

SUBJECTS AREAS TAUGHT BY PARTICIPANTS

Subject Areas Taught By Participants	
Subject Area	Number Reporting
CTE	
Business	35
Business and Computer Information Technology	9
Marketing	8
Business and Marketing	8
Family and Consumer Sciences	6
Healthcare Science	5
Computer Information Technology	2
Video Production	2
Early Childhood Education	1
Public Safety	1
Agriculture	1
Food Service	1
Graphic Arts	1
Technology Education and Engineering	1
Technology Education	1
Business and Reading	1
Reading, Technology Education, and Video Production	1
Family and Consumer Science and Reading	1
Non-CTE	
Math	1
Special Education and Math	1
Special Education and Spanish	1
English	1

APPENDIX B

COUNTIES IN WHICH PUBLIC SCHOOLS EMPLOYING PARTICIPANTS

WERE LOCATED

 Counties in Which Public Schools Employing Participants Were Located

County	Number Reporting
Gwinnett	16
Rockdale	7
Hall	6
Henry	4
Newton	4
Walton	4
Barrow	3
Clarke	3
Habersham	3
Baldwin	2
Cobb	2
Dekalb	2
Elbert	2
Forsyth	2
Oconee	2
Paulding	2
Banks	1
Cherokee	1
Clinch	1
Fayette	1
Fulton	1
Gilmer	1
Lumpkin	1
Madison	1
McDuffie	1
Murray	1

Richmond	1
Taliaferro	1
Union	1
Upton	1
Whitfield	1
White	1
Teaching in a public school outside of Georgia	2

APPENDIX C

INITIAL COVER LETTER AND QUESTIONNAIRE

Initial Cover Letter

March 8, 2005

Participant Name
Street Address
City, GA Zip Code

Dear Participant Name

Many communities in Georgia are experiencing shortages of career and technical education teachers, because there aren't enough people entering career and technical education and because some who do enter don't stay in the classroom. Developing a better understanding how teachers feel about their jobs and the schools in which they work is an important part of finding a solution to that problem and to developing effective teacher preparation programs. The purpose of this study is to contribute to that understanding. Because you have recently completed your teacher education and been certified to teach, your insight and opinions are very valuable to us.

I am a doctoral student in Career and Technical Education at the University of Georgia. I have chosen to investigate recently certified Career and Technical Education teachers for my dissertation research. This study titled "Job satisfaction, commitment, and teaching status among alternatively certified career and technical education teachers" is being conducted under the direction of Dr. Elaine Adams. You are one of a very small number of recently certified Career and Technical Education teachers being asked to participate in this study. In order for the study to truly represent the experience of Career and Technical Education teachers, it is very important that each questionnaire be completed and returned.

The enclosed questionnaire will take only about 20 minutes to complete. A pre-addressed stamped envelope is included for your convenience. Please take the time today to fill the questionnaire out and drop it in the mail. You can be assured of complete confidentiality. Absolutely no names will be identified or used in the analyses of data. The questionnaire has an identification number for mailing and follow-up purposes only. Identification numbers and contact information will be destroyed at the end of this study. Your responses will not be identified with your name in any way, except as required by law.

Your participation in this study is entirely voluntary. You may decline to participate without penalty, or skip any questions you feel uncomfortable answering. By completing and returning this survey you are agreeing to participate in this study.

When the study is completed it will be submitted for publication and I will be glad to share a summary of the results with you. If you would like a summary, please print your name and address on the back of the return envelope. Please do not put your name or address on the questionnaire itself. If you have any questions about the study, either now or at a later date, please do not hesitate to ask. You may contact Gwen Moran at 770-949-3475 or gmoran@uga.edu.

Thank you for your help. I have enclosed a small token of my appreciation for your participation.

Sincerely,

Gwen Moran, Research Assistant
Ph.D. Candidate
Department of Workforce Education, Leadership and Social Foundations
University of Georgia
109 River's Crossing
Athens, Georgia 30602-4809
gmoran@uga.edu
770-949-3475

Faculty Advisor

Elaine Adams, Ph.D.

Doctoral Committee Chairperson

Department of Workforce Education, Leadership and Social Foundations

College of Education

University of Georgia

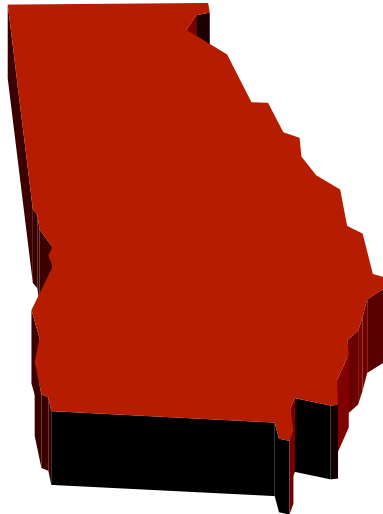
206 River's Crossing

Athens, Georgia 30602-4809

Additional questions or problems regarding your rights as a research participant should be addressed to Chris A. Joseph, Ph.D., Human Subjects Office, University of Georgia, 612 Boyd Graduate Studies Research Center, Athens, Georgia 30602-7411; Telephone (706) 542-3199; E-Mail Address IRB@uga.edu.

Questionnaire

Job satisfaction, commitment, and teaching status
among alternatively certified Career and Technical
Education teachers in Georgia



Please return your completed questionnaire to:
Gwen Moran
4332 Stratford Drive
Douglasville, GA 30135

Are you currently teaching? (Check one)

☐ Yes
☐ No

Please answer the following if you are NOT currently teaching:

Have you ever held a teaching position?

☐ Yes
☐ No

If you have held a teaching position, how long did you teach?

Years _____ Months _____

Do you plan to teach in the next five years?

☐ Yes
☐ No

Please continue to the next page

Blau's Professional Commitment Scale

Listed below are a series of statements that represent possible feelings that individuals might have about their profession. With respect to your own feelings about the teaching profession please indicate the degree of your agreement or disagreement with each statement by checking one of the six alternatives beside each statement.

St. D means I strongly disagree with this statement

MD means I moderately disagree with this statement

Sl. D means I slightly disagree with this statement

Sl. A means I slightly agree with this statement

MA means I moderately agree with this statement

St. A means I strongly agree with this statement

	St. D	MD	Sl. D	Sl. A	MA	St. A
If I could get another job different from being a teacher, I would probably take it.						
I definitely want a career for myself in teaching.						
If I could do it all over again, I would not choose to work in the teaching profession.						
If I had all the money I need without working, I would probably still continue to work in the teaching profession.						
I like this vocation too well to give it up.						
This is the ideal vocation for a life work.						
I am disappointed that I ever entered the teaching profession.						
I spend a significant amount of time reading teaching-related journals or books.						

(Blau, G.L. (1985). The measurement and prediction of career commitment. *Journal of Occupational Psychology*, 58, 277-288. Reproduced with permission from G.L. Blau)

If you are currently teaching, please continue to the next page

If you are not currently teaching, please skip to page 7 of this questionnaire

Organizational Commitment Scale

Listed below are a series of statements that represent possible feelings that individuals might have about the school for which they work. With respect to your own feelings about the particular school for which you are now working please indicate the degree of you agreement or disagreement with each statement by checking one of the six alternatives beside each statement.

St. D means I strongly disagree with this statement

MD means I moderately disagree with this statement

Sl. D means I slightly disagree with this statement

Sl. A means I slightly agree with this statement

MA means I moderately agree with this statement

St. A means I strongly agree with this statement

	St. D	MD	Sl. D	Sl. A	MA	St. A
I am willing to put in a great deal of effort beyond that normally expected in order to help this school be successful						
I talk up this school to my friends as a great organization to work for.						
I feel very little loyalty to this school.						
I would accept almost any type of job assignment in order to keep working for this school.						
I find that my values and this school's values are very similar.						
I am proud to tell others that I am part of this school.						
I could just as well be working for a different school as long as the type of work were similar.						
This school really inspires the very best in me in the way of job performance.						
It would take very little change in my present circumstances to cause me to leave this school.						
I am extremely glad that I chose this school to work for over others I was considering at the time I joined.						
There's not too much to be gained by sticking with this school indefinitely.						
Often, I find it difficult to agree with this school's policies on important matters relating to its employees.						
I really care about the fate of this school.						
For me this is the best of all possible schools for which to work.						
Deciding to work for this school was a definite mistake on my part.						

(Mowday, R., Steers, R., & Porter, L. (1979). The measurement of organizational commitment. *Journal of Vocational Behavior*, 14, 224-247.)

Please continue to the next page

Minnesota Satisfaction Questionnaire

The purpose of the following questions is to give you a chance to tell how you feel about your present job, what things you are satisfied with and what things you are not satisfied with. On the basis of your answers and those of people like you, we hope to get a better understanding of the things people like and dislike about their jobs. On the next page you will find statements about your present job. Read each statement carefully.

Decide how you feel about the aspect of your job described by the statement.

- Check the box under "1" if you are **not satisfied** (if that aspect is much poorer than you would like it to be)
- Check the box under "2" if you are **only slightly satisfied** (if that aspect is not quite what you would like it to be)
- Check the box under "3" if you are **satisfied** (if that aspect is what you would like it to be)
- Check the box under "4" if you are **very satisfied** (if that aspect is even better than you expected it to be)
- Check the box under "5" if you are **extremely satisfied** (if that aspect is much better than you hoped it could be)

Be sure to keep the statement in mind when deciding how you feel about that aspect of your job. Do this for all statements. Answer every item. Be frank. Give a true picture of your feelings about your present job.

Please continue to the next page

Ask yourself: How **satisfied** am I with this aspect of my job?

1 means I am **not satisfied** (this aspect of my job is much poorer than I would like it to be).

2 means I am **only slightly satisfied** (this aspect of my job is not quite what I would like it to be).

3 means I am **satisfied** (this aspect of my job is what I would like it to be).

4 means I am **very satisfied** (this aspect of my job is even better than I expected it to be).

5 means I am **extremely satisfied** (this aspect of my job is much better than I hoped it could be).

Please place a check in the box that corresponds to your answer for each statement

	1	2	3	4	5
Being able to keep busy all the time					
The chance to work on the job alone					
The chance to do different things from time to time					
The chance to be "somebody" in the community					
The way my boss handles his/her workers					
The competence of my supervisor in making decisions					
Being able to do things that don't go against my conscience					
The way my job provides for steady employment					
The chance to do things for other people					
The chance to tell people what to do					
The chance to do something that makes use of my abilities					
The way school policies are put into practice					
My pay and the amount of work I do					
The chances for advancement on this job					
The freedom to use my own judgement					
The chance to try my own methods of doing the job					
The working conditions					
The way my co-workers get along with each other					
The praise I get for doing a good job					
The feeling of accomplishment I get from the job					

(Copyright 1977, Vocational Psychology Research, University of Minnesota. Reproduced by permission)

Please continue to the next page

At what school do you teach? _____

How long have you been teaching? Years _____ Months _____

In how many different schools have you taught? _____

How long have you taught at the school where you are currently teaching?

Years _____ Months _____

How would you describe the location of the school where you currently teach?

(Check one)

_____ Urban

_____ Suburban

_____ Rural

What subjects do you teach? (Please list all)

How many classes per day do you teach? _____

Do you intend to continue teaching? (Check one)

_____ Yes

_____ No

How long do you plan to continue teaching? _____

Please continue to the next page

Check one: _____ Male _____ Female

What is your current age? _____

What is the highest degree you have completed? (Check one)

- _____ Bachelors
_____ Masters
_____ Educational Specialist
_____ Doctorate (Ed.D or Ph.D.)

What was your occupation during the five years before you became certified to teach?

How long did you work in that occupation? Years _____ Months _____

Which of the following best describes the teacher preparation program in which you participated? (Check one)

_____ A two week summer training program followed by a one-year supervised internship,
during which I functioned as teacher of record under a provisional or non-renewable certification.

_____ A graduate level program in which I completed all coursework required for certification
and did student teaching for one semester.

_____ An undergraduate program in which I earned a degree in education.

Is there anything else that you would like to say about your experience as a career and technical education teacher? If so, please use this space for that purpose. Also, any comments you might want to make that would help us in our future efforts to learn more about the classroom experiences of new teachers would be appreciated.

Your contribution to this study is greatly appreciated. If you would like a summary of the results please print your name and address on the back of the return envelope (NOT on this questionnaire). We will see to it that you receive a summary.

APPENDIX D

REQUEST FOR APPROVAL OF RESEARCH AND APPROVAL LETTER

Request for Approval of Research

Check OneNew Application: ☐Resubmission: ☐ Revision ☐ (All changes must be highlighted)

Human Subjects Office

University of Georgia

612 Boyd CSR C

Athens, GA 30602-7411

(706) 542-3198

NOTE: A new application is required every five years.*IRD APPLICATION**

MAIL 2 COPIES OF APPLICATION TO ABOVE ADDRESS

(Check One) Dr. <input type="checkbox"/> Mr. <input type="checkbox"/> Ms. <input type="checkbox"/>		(Check One) Dr. <input type="checkbox"/> Mr. <input type="checkbox"/> Ms. <input type="checkbox"/>	
(Check One) Faculty <input type="checkbox"/> Undergraduate <input type="checkbox"/> Graduate <input type="checkbox"/>		(Check One) Faculty <input type="checkbox"/> Undergraduate <input type="checkbox"/> Graduate <input type="checkbox"/>	
Principal Investigator	UGA ID - last 10 digits only	Co-Investigator	UGA ID - last 10 digits
UGA Department, Building and Floor <i>(Include department even if listing off campus or out of town)</i>		UGA Department, Building and Floor	
Mailing Address (if you prefer not to receive mail in dept.)		Mailing Address (if you prefer not to receive mail in dept.)	
Phone Number (s)	E-Mail (REQUIRED)	Phone Number (s)	E-Mail
**Signature of Principal Investigator		Signature of Co-Investigator (use additional cover sheets for more than one Co-Investigator)	
UGA Faculty Advisor:			
Name	Dept.	Building	Phone No.
**Signatures:		UGA ID - last 10 digits only	
Date:			
**Your signature indicates that you have read the human subjects guidelines and accept responsibility for the research described in this application.			

If funded:

***Sponsored Programs Proposal#

Name of Funding Agency

**By listing a proposal number, you agree that this application matches the grant application and that you have disclosed all financial conflicts of interest (see Q6a)

TITLE OF RESEARCH:

NOTE: SUBMIT 4-6 WEEKS PRIOR TO YOUR START DATE
APPROVAL IS GRANTED ONLY FOR 1 YEAR AT A TIMECHECK ALL THAT APPLY:Investigational New Drug ☐ Exceptions to/waivers of Federal regulations ☐

If yes to the above, provide details:

Data Sets ☐ RP Pool ☐ Deception ☐Illegal Activities ☐ Minors ☐ Moderate Exercise ☐ Audio/Video taping ☐MRI/EEG/NIRS/Ultrasound/ Blood Draw ☐ X RAY/DEXA ☐ Pregnant Women/Prisoners ☐

IRBAPP (www.uga.edu) Page number 1

HUMAN SUBJECTS RESEARCH APPLICATION

INSTRUCTIONS:

1. Type responses to all 11 questions (all parts) listed below (12 pt. font only).
2. Do not answer any question with “see attachments” or “not applicable”.
3. Submit original plus one copy to the Human Subjects Office.
4. We will contact you via email if changes are required. Allow 4-6 weeks.

IMPORTANT: Before completing this application, please determine if the project is a research project. Check the federal definition of research at <http://www.ovpr.uga.edu/faqs/hso.html#7> or call the Human Subjects office at 542-3199. The IRB only reviews research projects.

1. Problem Abstract: State rationale and research question or hypothesis (why is this study important and what do you expect to learn?)

Teacher retention in our public schools is a serious and ongoing problem in this country. It has been estimated that 50% of all new teachers leave the profession within 5 years. As a result of low retention rates, growing student populations, rising teacher retirements, and programs to reduce class sizes there are currently shortages of teachers in some regions of the country and some subject areas. Current forecasts project a need for over two million new teachers in the next ten years. In response to the growing need for teachers, and concerns in some quarters about teacher quality, alternative routes to teacher certification have been established in 43 states.

In Georgia 19 different subjects, including 4 CTE subject areas, have been designated by the U.S. Department of Education as having critical teacher shortages for the 2003-2004 school year. Currently the state of Georgia has seven alternative teacher certification routes. The Department of Workforce Education, Leadership, and Social Foundations at the University of Georgia (UGA) offers two alternate route CTE preparation programs for potential teachers from industry, both post-baccalaureate programs. One is an in-service preparation program instituted in 2001. This in-service program includes an intensive two and one-half week training course during the summer and a one-year supervised teaching internship in a public secondary school. After completing the internship, participants may teach without supervision on a non-renewable certificate, but must complete all required education courses within a 5-year period to obtain full certification. The second UGA certification program for CTE teachers is a pre-service program. In this program students obtain full certification by first completing all of the education courses required for their certification and then student teaching at a public secondary school for one semester. Upon satisfactory completion of the student teaching experience, the student is eligible for full, renewable teacher certification. The primary differences between the two programs lie in whether or not student teaching is required and whether or not all

required education course work is completed prior to assuming responsibilities as teacher of record.

There is a considerable amount of research on alternative certification programs, most of which has compared alternatively certified teachers with those prepared to teach via 4- year undergraduate teacher preparation programs. The results of that research, however, are mixed with respect to retention. Some studies suggest that alternatively certified teachers stay in the classroom longer than do those completing 4-year undergraduate programs, while others suggest that the opposite is true, and still others found no difference between the two groups of teachers. Little of that research is specific to CTE.

There is a broad body of research available on teacher retention and the variables that influence it. That research consistently suggests that age and tenure are positively associated with retention. It also indicates that the socioeconomic status of the school in which the teacher is employed and the availability of non-teaching employment opportunities are factors in explaining retention. The latter is likely to be an important factor for CTE teachers entering the field as mid-career changers, since their non-teaching work experience is likely to provide employment options outside the teaching professional. In addition, numerous studies across a variety of fields, including education, have shown professional commitment, organizational commitment, and job satisfaction to be mediators of retention. Several models of teacher retention in the literature incorporate job satisfaction and professional commitment, but organizational commitment has not been widely studied among teachers.

The purpose of this causal comparative study will be to compare participants of the two post-baccalaureate CTE teacher preparation programs at UGA in terms of teaching status, job satisfaction, organizational commitment, and professional commitment. In addition to type of teacher preparation program, four additional independent variables—age, teaching tenure, the socioeconomic status of the school in which the participants taught, and the years of non-education work experience—will be included. Results of this study will add to the existing body of research on teacher retention, particularly with respect to alternatively certified and CTE teachers. It will also help to inform alternate route teacher training practices.

2. Research Design: Identify specific factors or variables, conditions or groups and any control conditions in your study. Indicate the number of research participants assigned to each condition or group, and describe plans for data analysis.

Groups: 1) Teachers completing the post-baccalaureate in-service CTE teacher preparation program, since its inception in 2001 (N = 95); 2) Teachers completing the post-baccalaureate pre-service CTE teacher preparation program since 2001 (N = 43).

Independent variables: 1) preparation program; 2) teacher age; 3) teaching tenure; 4) years of non-teaching work experience; 5) school socioeconomic status (as measured by percent of the school's student body receiving free or reduced price meals)

Dependent variables: 1) teaching status; 2) job satisfaction; 3) occupational commitment; and, 4) professional commitment.

Teaching status will be measured by a combination of three variables: 1) whether or not an individual is teaching in a secondary school at the time of the study; 2) how long they taught after completing the certification program; and 3) whether or not the individual intends to remain in the teaching profession. Using these three variables respondents will be placed in one of four retention groups: 1) never taught; 2) taught, but have left the profession; 3) still teaching, but intend to leave; 4) still teaching and intend to stay. Job satisfaction (intrinsic and extrinsic) will be assessed by the Minnesota Satisfaction Questionnaire (MSQ; Buros, 1978), organizational commitment to teaching will be measured via the Organizational Commitment Scale (OCS; Mowday et al., 1982), and professional commitment will be measured using the Blau's Career Commitment scale (Blau, 1985).

Data analysis will include descriptive statistics for all independent and dependent variables. A series of analyses will be conducted assessing the effect of each independent variable on each dependent variable, using a family wise alpha level of .05. Analyses for each independent variable will include a chi-square for teaching status, ANOVA's for organizational commitment and professional commitment, and a ANOVA for intrinsic and extrinsic job satisfaction.

3. Research Subjects:

- a. List maximum number of subjects , targeted age group (this must be specified in years) and targeted gender ;
The maximum number of study participants from the in-service program is 95 and the maximum number from the pre-service program is 43. There will be no age or gender targets.
- b. Method of selection and recruitment - list inclusion and exclusion criteria. Describe the recruitment procedures (including all follow-ups).
All of those completing either of these teacher preparation programs since 2001 who hold a baccalaureate degree will be included in the study. All of those who completed either program during the specified period who hold a bachelor's degree will be mailed a questionnaire and asked to participate in the study. One week after the initial mail-out a follow-up post card will be mailed to all potential participants who have not yet returned their questionnaire. Follow-up letters and replacement questionnaires will be mailed to non-responders three weeks after the initial mail-out.

- c. The activity described in this application involves another institution (e.g. school, university, hospital, etc.) and/or another country. Yes___ No___
If yes, provide the following details:
- 1) Name of institution:
 - 2) County and state:
 - 3) Country:
 - 4) Written letter of authorization (on official letterhead only) IRB approval:
Attached: _____
Pending: _____
- d. Is there any working relationship between the researcher and the subjects?
Yes___ No___, If yes, explain.
- e. Describe any incentives (payments, gifts, extra credit). Extra credit cannot be offered unless there are equal non-research options available.
A token gift, a UGA bookmark, will be included in the initial mail-out packet to all potential study participants.

4. Procedures: State in chronological order what a subject is expected to do and what the research will do during the interaction. Indicate time commitment for each research activity. And detail any follow-up.
The study participant will only be required to fill out a questionnaire and return it to the principal researcher in a postage paid pre-addressed envelope.
Duration of participation in the study: Approximately 20 minutes Months
No. of testing/training sessions: None Length of each session: none
Start Date: January 11, 2005

Only if your procedures include work with blood, bodily fluids or tissues, complete below: Submit a MUA from Biosafety: Attached___ Pending___
If you are exempted from obtaining a MUA by Biosafety, explain why?

Total amount of blood draw for study: ml Blood draw for each session: ml

5. Materials: Itemize all questionnaires/instruments/equipment and attach copies with the corresponding numbers written on them.

Check all other materials that apply and are attached:

Interview protocol____ Debriefing Statement____ Recruitment flyers or advertisements
Consent/Assent forms

If no consent documents are attached, justify omission under Q. 8

6. Risk: Detail risks to a subject as a result of data collection and as a direct result of the research and your plans to minimize them and the availability and limits of treatment for sustained physical or emotional injuries.

NOTE: REPORT INCIDENTS CAUSING DISCOMFORT, STRESS OR HARM TO THE IRB IMMEDIATELY!

The proposed research presents no known to the study participants.

- a. CURRENT RISK: Describe any psychological, social, legal, economic or physical discomfort, stress or harm that might occur as a result of participation in research. How will these be held to the absolute minimum?
No known risk
Is there a financial conflict of interest (see UGA COI policy)? Yes____
No____ If yes, does this pose any risk to the subjects?

- b. FUTURE RISK: How are research participants to be protected from potentially harmful future use of the data collected in this project? Describe your plans to maintain confidentiality, including removing identifiers, and state who will have access to the data and in what role. Justify retention of identifying information on any data or forms. DO NOT ANSWER THIS QUESTION WITH "NOT APPLICABLE"! Anonymous____ Confidential_x__ Public____ Check one only and explain below.
Once the participant's questionnaire is received, data will be recorded in a database and all identifying codes will be omitted. Identifying codes will be used only for the purposes of non-respondent follow-up. They will be destroyed when the data collection phase of the study is complete. It will be necessary to include a respondent code on questionnaires for follow-up purposes. All identifiers will be omitted when the data is entered in the database.
Audio-taping____ Video-taping____
If taping, how will tapes be securely stored, who will have access to the tapes, will they be publicly disseminated and when will they be erased or destroyed? Justify retention.
None

7. Benefit: State the benefits to individuals and humankind. Potential benefits of the research should outweigh risks associated with research participation.
- a. Identify benefits of the research participants, e.g., course credit, educational benefits:
There are no known risks associated with participation in this study. Participants have the opportunity to contribute to our understanding of teacher preparation practices. Participants requesting study findings will be forwarded this information. Also, individuals being mailed the questionnaire are being given a University of Georgia bookmark to encourage completion of the survey.
- b. Identify any potential benefits of this research for humankind in general, e.g., advance our knowledge of some phenomenon or help solve a practical problem.
The potential benefit of this research is two fold. First, it will add to the

existing body of literature on teacher retention and alternative teacher certification. Teacher retention has been a serious problem for quite some time and there has been a great deal of research published on the issue. Little of that research, however, is specific to CTE teachers. In addition, the research sheds little light on the issue of professional preparation and how it relates to not only retention, but commitment and satisfaction as well. This study is intended to help to fill those gaps. Secondly, the results of this study will help to inform teacher preparation practices. An understanding of teacher commitment levels, and the aspects of the job for which satisfaction levels are low will allow identification of areas that need to be addressed in the teacher preparation process. If teachers know better what to expect and are better prepared to meet the challenges of the classroom, they may be more likely to stay in the classroom. Society in general benefits if more qualified teachers stay in the profession. Teacher shortage conditions are improved, school districts devote fewer resources to recruitment and training, teacher preparation resources are better utilized, and students get more continuity in the classroom.

8. Consent Process:

- a. Detail how legally effective informed consent will be obtained from all research participants and, when applicable, from parent(s) or guardian(s). Potential participants will be informed of the purpose of the research in the cover letter included in their questionnaire packet and given assurance of the confidentiality of their responses. Return of a completed questionnaire will be assumed to imply consent to participate.

Will subjects sign a consent for? Yes ___ No x___

If No, request for waiver of signed consent – Yes x___

Justify the request, including an assurance that risk to the participant will be minimal. Also submit the consent script or cover letter that will be used in lieu of a form.

Participants are all adults, and their responses will be confidential.

Participants will be advised of the purpose of the study and the confidentiality of their response in a cover letter. All participants have already completed their teacher preparation programs, their employers have no access to their responses, and all data will be reported only in aggregate. Thus, there is no known risk to the participant and their participation in the study is entirely voluntary.

- b. Deception Yes___ No x___

If yes, describe the deception, why it is necessary, and how you will debrief them. The consent form should include the following statement: “In order to make this study a valid one, some information about my participation will be withheld until completion of the study.”

9. Vulnerable Participants: Yes___ No x
 Minors___ Prisoners___ Pregnant women/fetuses___ Elderly___
 Immigrants/non-English speakers___ Mentally/Physically incapacitated___
 Others___ List below: Outline procedures to obtain their consent/assent to participate. Describe the procedures to be used to minimize risk to these vulnerable subjects.
10. Illegal Activities: Yes___ No x
 If yes, explain how subjects will be protected.

NOTE: Some ILLEGAL ACTIVITIES must be reported, e.g. child abuse.

11. Students The IRB only accepts students as the Principal Investigator (PI) if the research is for a degree requirement, such as a thesis or dissertation. All other projects should be submitted with the advisor as PI or as Class Projects.

This application is being submitted for:

Undergraduate Honors Thesis ___

Masters Applied Project, Thesis or Exit Exam Research ____

Doctoral Dissertation Research x

Has the student's thesis/dissertation committee approved this research? Yes X
 No ___

The IRB recommends submission for IRB review only after the appropriate committee have conducted the necessary scientific review and approved the research proposal.

Approval of Research Request



Office of The Vice President for Research
DHHS Assurance ID No. : FWA00003901

Institutional Review Board
Human Subjects Office
612 Boyd GSRC
Athens, Georgia 30602-7411
(706) 542-3199
Fax: (706) 542-5638
www.ovpr.uga.edu/hso

APPROVAL FORM

Date Proposal Received: 2004-12-01

Project Number: 2005-10350-0

Name	Title	Dept/Phone	Address	Email
Ms. Gwen A. Moran	PI	Workforce Education, Leadership, and Social Foundations River's Crossing +4809	4332 Stratford Drive Douglasville, GA 30135 770-949-3475	gwen_moran@yahoo.com
Dr. Joyce Elaine Adams	CO	Workforce Education, Leadership, and Social Foundations River's Crossing +4809 542-4204		jadams@coe.uga.edu

Title of Study: Job Satisfaction, Commitment, and Teaching Status Among Alternately Certified Career and Technical Education Teachers.

45 CFR 46 Category: Administrative 2

Parameters:
Waiver of Signed Consent 46.117 (c) (2);

Change(s) Required for Approval and Date Completed: 2004-12-17

Revised Application;
Revised Consent Document(s);

Approved : 2004-12-17 Begin date : 2004-12-17 Expiration date : 2005-12-16

NOTE: Any research conducted before the approval date or after the end data collection date shown above is not covered by IRB approval, and cannot be retroactively approved.

Number Assigned by Sponsored Programs:

Funding Agency:

Form 310 Provided: No

Your human subjects study has been approved.

Please be aware that it is your responsibility to inform the IRB:

... of any adverse events or unanticipated risks to the subjects or others within 24 to 72 hours;
... of any significant changes or additions to your study and obtain approval of them before they are put into effect;
... that you need to extend the approval period beyond the expiration date shown above;
... that you have completed your data collection as approved, within the approval period shown above, so that your file may be closed.

For additional information regarding your responsibilities as an investigator refer to the IRB Guidelines.

Use the attached Researcher Request Form for requesting renewals, changes, or closures.

Keep this original approval form for your records.

Christina A. Joseph, Ph.D.
Chairperson, Institutional Review Board

APPENDIX E

TEXT OF POSTCARD FOLLOW UP

March 29, 2005

Last week a questionnaire asking about your experiences as a Career and Technical Education teacher was mailed to you. You are one of a very small number of recently certified Career and Technical Education teachers being asked to participate in this study.

If you have already completed and returned the survey to me, please accept my sincere thanks. If not, please take the time to fill out the questionnaire and return it today. In order for the study to truly represent the experience of Career and Technical Education teachers, it is very important that each questionnaire be completed and returned. If you did not receive the questionnaire, or it was misplaced, please call me now at 770-949-3475 or send an e-mail to gmoran@uga.edu, and I will put another one in the mail to you today.

Sincerely,

Gwen Moran, Research Assistant
Ph.D. Candidate
Department of Workforce Education, Leadership and Social Foundations
University of Georgia
109 River's Crossing
Athens, Georgia 30602-4809
gmoran@uga.edu
770-949-3475

APPENDIX F

TEXT OF LETTER FOR SECOND FOLLOW UP

March 29, 2005

Participant Name
Street Address
City, GA Zip Code

Dear Participant Name,

About three weeks ago I wrote you asking for your opinions about your experiences as a Career and Technical Education teacher. As of today, I have not yet received your completed questionnaire.

I know how valuable your time is and that you are very busy as an educator. However, your responses are extremely vital to this study. This study is being done because an understanding of how Career and Technical Educators feel about teaching and the schools in which they teach is important to developing strong teacher preparation programs, and to keeping good teachers in our classrooms. Since only a small number of recently certified teachers were asked to participate in this study, it is essential that each person in the study complete and return their questionnaire. I greatly appreciate your willingness to assist me in gathering the information needed to complete my doctoral study. This study titled "Job satisfaction, commitment, and teaching status among alternatively certified career and technical education teachers" is being conducted under the direction of Dr. Elaine Adams.

The enclosed questionnaire will take only about 20 minutes to complete. In the event that your questionnaire has been lost, a replacement is enclosed. Please take the time to fill it out and return it today. A pre-addressed stamped envelope is included for your convenience. You can be assured of complete confidentiality. Absolutely no names will be identified or used in the analyses of data. The questionnaire has an identification number for mailing and follow-up purposes only. Identification numbers and contact information will be destroyed at the end of this study. Your responses will not be identified with your name in any way, except as required by law.

Your participation in this study is entirely voluntary. You may decline to participate without penalty, or skip any questions you feel uncomfortable answering. By completing and returning this survey you are agreeing to participate in this study.

When the study is completed it will be submitted for publication and I will be glad to share a summary of the results with you. If you would like a summary, please print your name and address on the back of the return envelope. Please do not put your name or address on the questionnaire itself. If you have any questions about the study, either now or at a later date, please do not hesitate to ask. You may contact Gwen Moran at 770-949-3475 or gmoran@uga.edu.

Thank you for your much needed responses, your time, and your assistance. These are all very much appreciated.

Sincerely,

Gwen Moran, Research Assistant
Ph.D. Candidate
Department of Workforce Education, Leadership and Social Foundations
University of Georgia
109 River's Crossing
Athens, Georgia 30602-4809
gmoran@uga.edu
770-949-3475

Faculty Advisor

Elaine Adams, Ph.D.

Doctoral Committee Chairperson

Department of Workforce Education, Leadership and Social Foundations

College of Education

University of Georgia

206 River's Crossing

Athens, Georgia 30602-4809

Additional questions or problems regarding your rights as a research participant should be addressed to Chris A. Joseph, Ph.D., Human Subjects Office, University of Georgia, 612 Boyd Graduate Studies Research Center, Athens, Georgia 30602-7411; Telephone (706) 542-3199; E-Mail Address IRB@uga.edu.

APPENDIX G

REQUEST FOR APPROVAL TO USE THE MINNESOTA SATISFACTION QUESTIONNAIRE AND LETTER OF APPROVAL

Request for Approval to use the Minnesota Satisfaction

November 17, 2004

Dr. David J. Weiss
Psychology Department
N218 Elliott Hall
75 East River Road
Minneapolis, MN 55455-0344

Dear Dr. Weiss,

The purpose of this letter is to request your permission to use the short form of the Minnesota Satisfaction Questionnaire in my doctoral research. A summary of my proposed dissertation study, "Job satisfaction, commitment, and teaching status among alternatively certified career and technical education teachers", is attached. This causal comparative study will include three published instruments: the Minnesota Satisfaction Questionnaire (MSQ) short form; the Organizational Commitment Questionnaire developed by Mowday, Steers, and Porter (1979); and Occupational Commitment Scale developed by Blau (1985). It will also include additional questions designed to address retention, demographics, school environment factors, motivations for program choice, and attitudes toward preparation programs and their teaching experiences. I would like permission to reproduce the short form MSQ as a part of a questionnaire booklet to be mailed to study participants. My understanding from my conversation with Ms. Pat Hanson is that the fee for reproducing the short form MSQ is \$.17 per copy. I anticipate making approximately 450 copies of the questionnaire, enough for an initial mailing plus two follow up copies for each respondent and additional copies to be used in pre-testing of the questionnaire as well as final report production.

I would also like your permission to make two modifications to the short form MSQ for this study. First, I would like to use the 1967 version response scale (1 = not satisfied; 5 = extremely satisfied) instead of the 1977 version (1 = very satisfied; 5 = very dissatisfied). Secondly, I would like to modify the item "The way company policies are put into practice" to read "The way that school policies are put into practice".

Your response to this request may be mailed to me at 4332 Stratford Drive, Douglasville, GA, 30135 or via email at gwen_moran@yahoo.com. If you have questions, I can be reached at 770-949-3475. I hope to begin data collection on my study in early January, 2005. My completed Qualifications and Registration Form is attached. I appreciate your assistance and look forward to hearing from you.

Sincerely,

Gwen Moran

Approval to Use the Minnesota Satisfaction Questionnaire

UNIVERSITY OF MINNESOTA

Twin Cities Campus

Department of Psychology
College of Liberal ArtsElliott Hall
75 East River Road
Minneapolis, MN 55455-0344
612-625-4042
Fax: 612-626-2079

Dec. 8, 2004

Gwen Moran
4332 Stratford Drive
Douglasville, GA 30135

Dear Gwen Moran:

We are pleased to grant you permission to use the Minnesota Satisfaction Questionnaire 1977 short form in the modified version that you requested for your research.

Please note that each copy that you make must include the following copyright statement:

Copyright 1977, Vocational Psychology Research
University of Minnesota. Reproduced by permission.

Vocational Psychology Research is currently in the process of revising the MSQ manual and it is very important that we receive copies of your research study results in order to construct new norm tables. Therefore, we would appreciate receiving a copy of your results including 1) Demographic data of respondents, including age, education level, occupation and job tenure; and 2) response statistics including, scale means, standard deviations, reliability coefficients, and standard errors of measurement.

Your providing this information will be an important and valuable contribution to the new MSQ manual. If you have any questions concerning this request, please feel free to call us at 612-625-1367.

Sincerely,

Dr. David J. Weiss, Director
Vocational Psychology Research

APPENDIX H

REQUEST FOR APPROVAL TO USE THE BLAU CAREER COMMITMENT SCALE

AND NOTE GRANTING APPROVAL

REQUEST FOR APPROVAL TO USE THE BLAU CAREER COMMITMENT SCALE

November 28, 2004

Dr. Gary Blau
 359 Speakman Hall
 School of Business and Management
 Temple University
 Philadelphia, PA 19122

Dear Dr. Blau,

The purpose of this letter is to request your permission to use the 1985 version of your occupational commitment questionnaire in my doctoral research. A summary of my proposed dissertation study, "Job satisfaction, commitment, and teaching status among alternatively certified career and technical education teachers", is attached. This causal comparative study will include three published instruments: the 1985 version of your occupational commitment instrument; the Minnesota Satisfaction Questionnaire (MSQ) short form; and the Organizational Commitment Questionnaire developed by Mowday, Steers, and Porter (1979). It will also include additional questions designed to address retention, demographics, school environment factors, motivations for program choice, and attitudes toward preparation programs and their teaching experiences. I would like permission to reproduce your 1985 instrument as a part of a questionnaire booklet to be mailed to study participants. I anticipate making approximately 450 copies of the questionnaire, enough for an initial mailing plus two follow up copies for each respondent and additional copies to be used in pre-testing of the questionnaire as well as final report production. For purposes of this study the eight items will be worded as follows:

- | |
|---|
| 1. If I could get another job different from being a teacher, I would probably take it. |
| 2. I definitely want a career for myself in teaching. |
| 3. If I could do it all over again, I would not choose to work in the teaching profession. |
| 4. If I had all the money I need without working, I would probably still continue to work in the teaching profession. |
| 5. I like this vocation too well to give it up. |
| 6. This is the ideal vocation for a life work. |
| 7. I am disappointed that I ever entered the teaching profession. |
| 8. I spend a significant amount of time reading teaching-related journals or books. |

I would also like your permission to make a modification in the response scale of your 1985 instrument. I would like to use a six point agree – disagree scale with no mid-point. First, I would like to use the 1967 version response scale (1 = strongly disagree; 2 = moderately disagree; 3 = slightly disagree; 4 = slightly agree; 5 = moderately agree; 6 =

strongly agree). This response scale will also be used for the Occupational Commitment Scale for this study.

Your response to this request may be mailed to me at 4332 Stratford Drive, Douglasville, GA, 30135 or via email at gwen_moran@yahoo.com. If you have questions, I can be reached at 770-949-3475. I hope to begin data collection on my study in early January, 2005. I appreciate your assistance and look forward to hearing from you.

Sincerely,

Gwen Moran

Approval to Use the Blau Career Commitment Scale

Your response to this request may be mailed to me at 4332 Stratford Drive, Douglasville, GA, 30135 or via email at gwen_moran@yahoo.com. If you have questions, I can be reached at 770-949-3475. I hope to begin data collection on my study in early January, 2005. I appreciate your assistance and look forward to hearing from you.

Sincerely,

Gwen Moran

Hi Gwen- you have my permission to use my measure in whatever form best suits your research purpose.

I will send an email followup
good luck with your research
Sincerely

✓ 12/6/04

APPENDIX I

VERBATIM RESPONSES TO OPEN ENDED QUESTION

When I first entered Technology Education, I honestly didn't know what I was in for. Knowing what I know now regarding Tech Ed, I would have chosen a different teaching career path. I hated the module system that has taken over Technology Ed. There is no freedom of problem solving within these classes that require students to work in a workbook and do basic tasks. What have they learned? NOTHING! I would do everything I could to bring multi-disciplinary thinking to my Tech Ed class. We would incorporate math, science, history, and language arts skills to the class in creating project based learning assignments.

I answered these questions based only on my school & administration at my school. If I had to answer them based on the county office administration some of my responses would be different.

My school is in the process of getting a new headmaster. The incoming headmaster is already employed by the school. There is a lot of unrest amongst the faculty and staff as a whole. This is the cause for my unhappiness.

CTE teachers are often used as a dumping ground for students who can't (or won't) do anything else. CTE teachers are asked to teach multi-levels of the same course at the same time, at different grade levels, and at levels varying from special ed to gifted. Often, not enough special CTE courses are offered. For example, the demographics at our school cry out for automotive and/or construction. Those programs no longer exist, because they could not "afford" them or, in the case of construction and IMI, they could not keep the teachers who became so disgusted with the quality of students and the enormous paperwork involved, they quit. At the present time, I will be leaving my position at the end of the school year. I may return to journalism, or someday be back in teaching, provided I can ascertain if the situation improves. My situation is not unique. The tension at the PACTE courses at UGA this past year was palpable. The educational system insists they try to get professionals to leave business and teach, then make it tough to stay in. I was told to achieve full certification, I needed more course work; this after all of the PACTE work, seminars, etc. All of the above, plus the endless surveys and meetings and so on have led to my decision.

CTE teachers do not receive the respect (of parents, students, & other faculty) that "Academic" teachers receive. We are thought of as for "the students who can't go to college." I believe this is one factor contributing to CTE teachers not remaining in the classroom. I enjoy my job but not as much as I'd like, but I must admit that for the hours the pay is excellent (w/ a specialist degree) - this [hours good for family + excellent pay] is what keeps me where I am. Also, there are so much paperwork & "extras" placed on teachers these days that I think many find it overwhelming.

There are very few Marketing positions available in high schools and none in middle schools. This makes it very difficult to teach in my certified area.

Teachers are never given enough time to plan. Coming from other positions, it is startling

how our professional opinions are not respected, and we are instead controlled by school boards & parents.

An extremely rewarding occupation both inside and out! Love it!

Colleges need to require teachers to take more technical classes, e.g. web design & programming. The days of the business teacher who teaches textbook classes only are gone! Also- people need to stop assuming that all Career Tech programs are the same from school to school. At my school only 3% of kids graduate w/ a career tech diploma (that's right- 97% are college prep). We don't teach the "dregs"- our kids go to college too! Also, I thought the PACTE program at UGA was very ineffective in preparing me to teach. It needs to be taught by a classroom teacher who's in the trenches not a theory-based professor.

The amount of time spent on non-productive meetings and paperwork is incredible. There is no coordination of what is asked of teachers. Demands come from every direction. CTE is still viewed as an "also ran" as compared to academics. The news we have from a financial aspect of the Carl Perkins Act is discouraging. Especially to new teachers.

As an ag-ed teacher who never participated in ag-ed as a student (went to private school) I did not major in ag... I have always felt excluded by the state-wide ag-ed community. This doesn't include my fellow county hort. teachers; they have been great! But I have always felt like I didn't belong, or that I wasn't "in the club."

My experience as a career and technical education teacher has opened my eyes to the level of education our students are receiving. I was shocked to learn that some of the seniors that I taught last year couldn't read a ruler, or even write an essay in correct form. I think that the lack of accountability in students is a problem which drives teachers out of the classroom. Students feel that as long as they make a "D" and pass, that is all that matters. The lack of motivation and desire to learn causes teachers, especially new teachers, to feel that the hard work they put in does not matter. I enjoy teaching, but feel that I would be better suited for the college level because of the level of work and participation that I expect in my class.

I love to teach! I believe that working in a job other than school taught me to be ready to become a teacher. Life experience has prepared me for the classroom. I believe it has given me the skills to bring real life experience to my students.

I have been in education for 4 years now. The first two years was in high school as an HSTE teacher. The last 2 years have been in a technical state college teaching adults in my field of medical imaging, CAT scan. I enjoyed teaching in high school but the requirements on being a high school teacher today is exhausting. I had to set up a new program at a new high school which was more than I ever want to do again. I suffered a broken foot and physical exhaustion from all that was required of me. I was threatened by students, abused mentally by my principal. I gave this job all I had to give for two years. I worked twelve hour days, leave at 6:15 a.m. return home usually at 5:30 or 6:00 p.m. I

never want to teach high school again. I now understand why there is a teacher shortage in high school. The flip side is I love teaching college, having adult students, the best manager possible, flexible hours and days, being respected and appreciated, being my own boss, running my own program.

Lack of funds make teaching difficult especially in Lab CTE courses. CTE should not have to raise funds for programs. CTE courses sometimes get lost in academic world - have to promote classes for students which means it becomes a numbers game. Some of my answers probably influenced that I am considering an administrative position and not teach.

Career and technical educators contribute greatly to a students' overall educational experience. Standards and accountability will be important in the future. It has been my experience the middle school career and technical educators are in a particularly difficult situation with regard to the pressure to perform in academic areas. Career and technical teachers should work more closely with academic teachers so that each is more informed concerning curriculum of the other. I feel that "connections" classes are at risk at the middle school level, which is distressing.

Great source of dissatisfaction is lack of emphasis and respect for vocational education. Also, classes tend to become a "catch-all" or dumping ground for students with behavioral problems or low-ability.

I came from retail environment where I received instant gratification or disappointment - based on the satisfaction of my customers. I am having a hard time adjusting to never really knowing where I stand with my students, or the administration until the school year ends. Many of the students are lazy. It is a constant struggle to motivate them. Most of the time I do not feel like the UGA classes in education prepared me for the classroom. I love seeing a student happy and fulfilled at their job! I love seeing them become proud of themselves when I have good things to tell them - that their employer has shared with me! I am getting better in the classroom - but the 90 minute (block schedule) is hard! I hate grading papers! I enjoy the energy and laughter - most high school students have. Overall - I enjoy my job! Hope this helps!

(I also taught at Appalachian Technical College for 5 years as an Adjunct Instructor)
Teaching is the hardest job I have ever had, but the most rewarding. One thing I especially like is functioning as an advisor to students and helping them explore ideas for their future. Many of them do not have anyone except a teacher they can share their career "dreams" with.

I was very excited about teaching in public school when I began. However, after the first three months I was ready to quit. I began my career as an older adult and in an alternative setting- the 2 don't mix. You need stamina to endure this environment. The building I work in has lead paint peeling from all walls & is asbestos ridden - the building should be condemned. The BOE does not invest a dime in this school. We buy our own supplies &

we pay for any copies of materials with our own funds. I'm still at 95% of teacher's salary because I have not acquired full certification. I spend the majority of paycheck trying to supply students' needs - this is a low income environment. The principal doesn't have the backbone to stand up for issues here, nor is he supportive of staff. Many teachers are leaving because conditions are poor! I expected the teaching environment to be different from corporate. However, that is not true. Politics are still the same and the students are mere pawns in the game. Some teachers grade students according to how they feel about the student. They don't encourage students or find creative ways to teach. You must find non-traditional ways sometimes. My advice would be to pray everyday!

I have truly loved my teaching experience in the classroom for the most part. Unfortunately my county does not seem to value Career and Technical Education and at a more local level, my C & T administrator either doesn't understand or care about our programs. In the past year, our department has had equipment seized and allocated to others, prerequisites abolished and all the work that had been accomplished over the past four years in developing our programs wiped away in a matter of months. I believe in the importance of the C & T ed and in my kids, but I no longer feel that my position is valued by the county or current administration and am currently pursuing other options. I would also like to add that our county C & T supervisor works very hard for us and continues to stand up for us and try to justify our existence to those who think we are a dumping ground for kids who are behavior problems and have considerable special needs.

I enjoy my work very much and believe that CTE programs are very important, especially for those students who do not desire to pursue post-secondary education. The only real disappointment I have with my school is that there are not enough different CTE programs offered (i.e. auto mechanics, early childhood, cosmetology, etc.)

We are the second class citizens of the school. We teach 7 classes a day, 30 students per class. We have morning duty and afternoon duty. And we have 63 minutes per day that serves as our lunch and planning period. I enjoy the teaching aspect of the job, but feel we are being abused and taken advantage of. I won't be back in this position to allow the school to take advantage of me like this. There should some legal way of protecting teachers from this type of abusive situation.

I am very happy in my decision to change careers and become an educator especially after 26 years in the corporate arena. I feel that I am highly qualified to prepare my students for the challenges that they will face in the very competitive world of work. I am very excited to bring my experience to them and share my insights so that they can achieve.

The first year is definitely difficult. It has become easier each year. There is more work to do after hours. I spent more time teaching, grading papers, preparation for teaching, making tests, etc. than I did when I worked as an accountant. The teaching profession is more rewarding and I really enjoy the high school students. You learn from them along with you teaching them. I will continue to teach until I retire. The state has cut the budget so much that it difficult to purchase many items we need.

My experience thus far as a CTE teacher has been a positive one. I like the school in which I teach and I love the employees who work there. I have a great Business Education department in which every one is very helpful and supportive. The students are what bring me to school everyday, though. I have a wide range of student abilities in my classes which is what makes my job so interesting. I believe that some of these lower level students are learning things in my classes that are applicable and hands-on. They are able to take these skills with them and realize that they have actually learned something, and possibly been very good at the subject. The higher achieving students are still taking important skills with them to a 2-year or 4-year college where they will need to know how to use numerous computer/technological outlets. Though many of the "academic" teachers look down on CTE teachers and think of our classes as a "dumping ground", I actually believe we are teaching students the most applicable and realistic and realistic skills and knowledge they will need in the future.

I believe having a supportive administration is an essential component of retaining any type(s) of subject teachers. Furthermore it might be true, that everyone is not fit to be a teacher. And finally, there may be a difference in job satisfaction, between public and private teachers.

Although I am currently in the process of moving to a different state (Bluffton S.C.). I wanted you to know about my experience because it was so unusual and with extenuating circumstances. I became an Art Ed teacher in 1992. It is very competitive in this teaching field, especially in the Athens area. Therefore, I always was a little too late for the opening of a position, or the principle let a student-teacher acquire the job as an older teacher left/retired. I could not afford to work as a para-pro for too many years, but when I decided to give my application another try in 2000, I was called by the director of Career-Tech at Clarke Central High. The current teacher of Graphic Arts and also the Yearbook Advisor became ill, and was going to be out indefinitely. I only was certified in Art Education and not in Graphic Arts/Communication. I attended classes during the summer and some week nights in order to become certified. I helped produce 3 yearbooks for the school. Inheriting the yearbook class was my downfall in this particular situation of employment. Producing a yearbook is also like running a small business. The curriculum for graphic arts (standards) were being updated and not posted on web or in print. I had to contact other teachers in the region to create my own (QCC's) guide to teach with. Technology and software changed each year that I taught I worked at nights on educating myself so that I could teach students during the day and some weekends if the yearbook deadlines had to be made. The principal at my school thought I was weak in certain areas. She was unaware of what I had to undertake. My computer lab was outdated and computers froze constantly. My room did not have the internet connections until two months before I resigned in March. I had a dark room laboratory, screen print room, press room, and computer lab to maintain. It was overwhelming. But now it is probably great due to all my hard work. Need I say more? Knowledge of the subject area was not a problem for me. I needed help in classroom management skills when I entered the field.

CTE is a great area to teach because as an elective, students must choose to be in your class. This reduces behavioral situations due to apathy or boredom.

I have a great principal who supports my program (I have a lot more support than surrounding schools).

I recommend that everyone do the practicum and student teaching. It really gave me a good insight to what a typical school year is like. It's also helpful to see as many different teaching styles & classrooms as possible. As a CTE teacher you often feel "alone" because no one else teaches what you do - so it's hard to share ideas with "co-workers" about lesson plans - so mandatory visits as a college/grad student to multiple classrooms/teachers in your field is the most valuable suggestion I can make. I wish I could give more advice for improvement as a CTE teacher - but since it is my first year I am just making it day by day - it is so much work to do all aspects of the job! It really takes 2-3 people.

I started grad school at age 27 for business education. At the time I had a 1 and 4 year old. I am currently in my 2nd year of teaching with a 1st and 4th grader. My school is 30 miles from where I live. I have already told my administrators that I will not be returning next year. It has nothing to do with my liking to teach. I love the classroom and the students. I love the fact that I take students who know very little about Microsoft Word and in 18 weeks they know a lot. I like the fact that my students trust me and like my class. We have fun, but get the work done. My problems with teaching are outside the classroom as my family has suffered from me working so far from home and their school. My only other negative aspect of work is the fact that I float to 3 different computer labs, hence the answer of 3 on "being able to work alone". Many times the class I am in, the other teacher stays and I feel like my every action is watched. I have a hard time because my students want to touch things in other teachers' classroom and I constantly feel like a "guest". Also, many of the teaching ideas I have involve posting things on the wall, which is very hard for me as I have to do it 3x and get permission from the other teacher. I think many of my answers would be different if I didn't already have children of my own.

As a FCS teacher and a mother with 2 grown children, I am positive that the skills that I teach in class are the same skills needed in life. The ability to work with others, use money wisely, comparison shop, evaluate clothing construction, as well as work safely in the kitchen is as important now as it was 30 years ago. Ah experience! Classroom management skills could be an entire college level course involving role playing & videos reviewing management techniques. Listening to lectures about management is not helpful. Easy for instructors - but not helpful.

Having a mentor or a teacher in the department to take you under their wing is very important to insure successes in the first few years of teaching. Year 1 is by far the hardest and additional sponsorships (co-curricular clubs) and coaching assignments can lead to increased stress/ burn out. I have become dept head for this new school after only

two years of teaching. This new role is a challenge but I feel very supported and trusted by my administration to carry these responsibilities. I believe this is one of the keys to my job satisfaction and commitment.

Teachers outside of the academic curriculum are always treated equally. Connections courses are not considered as important and therefore, teachers may sometimes not feel as important or appreciated. I feel teachers (college students) need more education in the area of working with middle school students.

It was my experience when searching for a teaching job. That the majority of vacancies are in south Georgia.

I have learned through two new school systems that the graduate Business Ed. program at UGA was very good & benefits students. The reason I say this is that both systems do new teacher classes and I would say 70 - 80% of the material is made up of my graduate work at UGA.

I wish there was a way to ease the overwhelming stress level of student teaching/first year teaching. If you asked me based on work load if I enjoy being a teacher I would say "no" (which is why it was so hard for me to answer some of your questions). But I believe in my heart that it will get better and I will be able to spend time with my family again. If situations do not improve I will either go part-time or back to industry. I love the joy of teaching and the results I see with the students but right now the stress/work loads is smothering the reward/joys. I pray next year is better.

I love what I do! The best part of my job is preparing high school students for the workforce and, giving them the necessary skills to be successful in life.

I graduated with my degree in August, 2004; however principals were not that receptive to me in interviews. I would like to teach in the right situation, and the reasons I have not yet acquired a job include: 1) I didn't receive a teaching certificate for the GPSC until September, 2004. Positions were filled by then, and some principals told me straight up they did not want to hire someone without a certificate number as the state would not pay the salary if there was a problem with certification. 2) I wondered how much my age had to do with it, i.e. they want younger hires and may feel uncomfortable with a 50+ person. Private industry discriminates. 3) I have been taking the 3 course endorsement curriculum in ESOL to help qualify a position in another area if business education does not offer one.

I am a "second career" teacher and chose this path after working in corporate America for years and witnessing the poor quality of individuals entering the force within several years of high school graduation. My intention is to make a positive impact.

I believe that it would benefit alternative certified career & technical educators to attend a conference (or make it a part of the curriculum) on the process of seeking a teaching position in the world of (red tape) education. It is a very different process from seeking a position in private industry. I attended a SPAGE meeting conducted by the UGA career department that (with hindsight) lacked sufficient detailed information about the application, interview, and hiring process. I am still learning the in's and out's of what I consider a confusing and time consuming (not to mention financial) process. When I attend a job fair it becomes difficult to believe there is a teacher shortage! Surely, there is a productive system that could be utilized in matching the qualified applications to qualified openings!

I love being a career and technical educator. I work hard in my school to improve the image of CTE and have made significant progress in the two years I have been teaching. I was frustrated with the feelings of CTE being a "lesser" school area. I appreciate the freedom I have been given to change things within my school. However, I feel that the leadership from administrators should be more involved. Why should the staff listen to me if the administrators don't express their support.

The schools are not getting the career message out - we need to show them the difference in salaries between career-tech education and academics. We should put very loudly on giant posters and displays of the top 5 jobs and salaries in the county - they are technical. We are still not good at telling them the truth! It's been 50 years later and the same attitude about career/tech ed exists and it's pathetic.

Student teaching in high school convinced me I wanted to teach post-secondary (where I am now). Responses may have been very different if teaching k-12.

When training to teach, try not to focus so much on the teaching aspect. Give more examples of behavioral issues, example modifications to lessons pertaining to BIT. I would also train students how to align the curriculum you use with local, state & national standards. I was not versed enough on standards (overall) at UGA. Great & nurturing program though!