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Alternative certification in New Hampshire: Perceptions of teachers and principals

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ALTERNATIVE CERTIFICATION IN NEW HAMPSHIRE: PERCEPTIONS OF TEACHERS AND PRINCIPALS

BY

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DISSERTATION

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DEDICATION

This document is dedicated to my wife

Johanne Jelmberg

a teacher for all seasons

and this author's best friend.

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ABSTRACT

ALTERNATIVE CERTIFICATION IN NEW HAMPSHIRE: PERCEPTIONS OF TEACHERS AND PRINCIPALS

by

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This study addresses the need for more research to help resolve the issues of the nationwide debate between advocates of state sponsored alternative certification programs, and advocates of collegiate sponsored, teacher education programs. The State of New Hampshire has both alternative certification and teacher education programs that are representative of those in other states.

A random sample of four hundred ninety-two teachers was selected. Two hundred ninety-five responded to the teachers' questionnaire, a 60% rate. Two hundred thirty of the respondents gave permission for their principals to rate their performance on a second questionnaire. One hundred sixty-one principals responded, a 70% response rate.

Data analysis results indicated that teachers from collegiate sponsored, teacher education programs were rated significantly higher by their principals on instruction and planning. The fact that Alternative 4 candidates had significantly more years of teaching experience at the time the judgments were made makes these two results remarkable.

Teachers from collegiate sponsored, teacher education programs rated their programs significantly higher with regard to coursework, practicum supervision, and overall preparation. They rated their preparation significantly higher than Alternative 4 teachers on ten of the fourteen competencies used by the New Hampshire Department of Education to certify all Alternative candidates. All of the significant differences relating to these competencies favored teacher education programs. Six of these competencies are the same as those rated highly by the principals when they rated the teacher education candidates more favorably on both the Instructional Skills and the Planning and Preparation subscales. This means that there is considerable agreement between teachers and principals with regard to preparation on these New Hampshire Department of Education competencies. The principals who rated teachers from teacher education programs were in agreement with them that they were prepared in these six competencies. The principals' ratings were also consistent with those of the Alternative 4 candidates that they were prepared to a significantly less degree. Teachers from teacher education programs also had more child-oriented reasons for entering teaching.

CHAPTER I

INTRODUCTION

In recent years alternative teacher certification programs have grown rapidly in numbers and variety. Alternative certification is a significant departure from the traditional undergraduate route through teacher education programs in colleges and universities. In general, these programs are designed to attract people who have college degrees but lack formal teacher preparation. These people are usually employed immediately as teachers while undergoing on-the-job training (Saunders & Smith, 1985). Since these provisional routes can lead to regular or permanent certification, they are different from short term, emergency, credentialing programs. Thirty-two states have already adopted such programs (Education Commission of the States, 1990).

There are two powerful forces that have caused the recent growth of alternative teacher certification programs in states throughout the nation. These are teacher shortages and the nationwide concern over the quality of graduates from traditional undergraduate, teacher education programs.

Historically, the most important force has been that of teacher shortages. Evidence of existing or anticipation of predicted teacher shortages has provided great impetus for establishing alternative routes to teacher certification. According to studies in the 1980's our nation faced a serious shortage of qualified teachers for its public schools. The Carnegie Forum Task Force on Teaching as a Profession (1986) warned that there would not be enough applicants to fill the openings in America's schools. According to

Murnane and Olsen (1989), the demand for new teachers to staff the nation's schools will rise as a result of increased student enrollments and increased retirements during the 1990's. Predictions of teacher shortages have often been reported for both minority and non-minority groups (Pyskowski, 1991). Contrary to these reports, a recent study states that there are increased enrollments in teacher education programs and lower teacher attrition rates than were projected earlier (Grissmer and Kirby, 1992). While these recent trends may lessen the threat of teacher shortages, many reports on teacher supply state that shortages will be an important issue during this decade and beyond.

Like the nation, New Hampshire may also be facing a serious shortage of teachers for its public schools according to the New Hampshire Legislative Task Force Study Committee On Teacher Shortages and Salaries (Daley, 1988). The National School Boards Association noted that most education analysts of teacher supply agree that the U.S. is on the verge of a serious shortage of qualified elementary and secondary teachers (cited in Daley). This national teacher shortage will be especially prolonged in the Northeast according to the Chief of the Office of Research and Evaluation in Connecticut (cited in Daley). The New Hampshire Office of State Planning projects an 18% increase in school-age children throughout the next decade (cited in Daley). These projections combined with projections of a future increase in retirements, and the possibility of decreased teacher education graduates present important implications for teacher supply in New Hampshire (Sununu, 1984).

Generally, there have been two kinds of nationwide policy responses to decreasing teacher supply (Carey, Mittmand, & Darling-Hammond, 1988). One

response has been to make teaching more attractive while maintaining or increasing certification requirements. Steps used include improving salaries and conditions, offering attractive loan and scholarship programs, and increasing entry into the profession by shifting teacher education to the graduate level. Sedlak and Schlossman (cited in Carey et al., 1988) pointed out that standards and educational levels were successfully raised in the 1950's during a time of serious teacher shortages. Explaining that salaries and conditions were also improving during that period, they concluded that standards can be raised during a teacher shortage. The other policy response has been from states that offer provisional or alternative certification programs that reduce or modify certification requirements (Darling-Hammond, Hudson & Kirby, 1989).

The second powerful force for the recent growth of alternative certification programs has been the nationwide concern over the quality of graduates from traditional, undergraduate teacher education programs. Alternative routes to teaching had been praised by former President Bush as a means to improve the quality of teaching in American schools (Zumwalt, 1991). Former President Bush identified alternative teacher certification as a national goal early in his administration. His early congressional proposals included $25 million for grants to help states develop alternative certification programs (Gursky, 1989). On April, 1989 the Bush Administration submitted to the Congress a legislative proposal entitled the "Educational Excellence Act of 1989." One of the seven program areas addressed in the Administration proposal was Alternative Certification for Teachers and Principals (Stedman and Riddle, 1989). Excerpts from George Bush's fiscal 1990 federal budget

documents also included a summary of principles underlying his education policy statements on alternative certification (1989).

Facing limited financial resources and a need to encourage large-scale school improvements, state legislators have, in turn, addressed selected educational problems through policy approaches. Alternative certification programs have been promoted in the effort to attract quality candidates to the teaching profession. These programs are a nontraditional means of recruiting educational personnel and for admitting into the profession people with degrees in other fields who do not have teacher preparation (Roth and Lutz, 1986).

The pressure to create alternative programs comes from the political arena, despite the opposition from the teacher education community. Many states have mandated alternative programs that vary from emergency or shortage-driven credentials (the process by which a person who does not meet requirements for regular certification may be hired to fill a classroom vacancy when there is a shortage of qualified personnel) and non shortage-driven alternative certification (routes to be taken by nontraditional students that provide accelerated licensing for teaching) (AACTE, 1991). This deregulation of teacher certification has brought many changes, making it difficult to identify what agency is in charge of selecting and preparing new recruits for teaching (Parramore, 1986).

Alternative certification has also brought about great controversy between state officials and the teacher education community. State officials argue that alternative certification programs are needed to address the projected teacher shortage by the year 2000. They cite that two-thirds of

prepared graduates enter the profession, that half who do enter leave after five years, and that teacher salaries are 25 percent lower than salaries of college graduates in other fields (Penning, 1990). They also claim that there has been a decline in the quality of trained, available teachers. Lack of respect for teacher preparation programs is pervasive (Roth, 1989). Advocates claim that alternative certification is a cost-effective way to train people who did not or do not wish to enroll in conventional teacher education programs (Zumwalt). Alternative routes are said to attract better candidates, more academically able people who have majored in traditional academic subjects rather than education, and more diverse candidates, minorities, males, and second-career people, than college-based programs (Zumwalt). Therefore, the alternative routes have become the state officials' answer for addressing the concerns about the quality as well as the supply of teachers for the nation's schools.

Opponents to alternative certification point to the inadequacy of the shortened preparation period and the impact these "unprepared" teachers have on their students. Others fear that some good prospective teachers will be discouraged and leave teaching because of inadequate preparation. Besides undermining the quality of teaching, alternative routes are viewed as undermining attempts to professionalize teaching, because they minimize the need for specialized knowledge and controlled entry, the hallmarks of established professions (Zumwalt).

Spokespeople from the teacher education community argue that without profession-based quality control, well-meaning legislators are actually reducing the quality of our nation's teachers by implementing alternative certification laws allowing individuals with no preparation to become

teachers. Until teachers are well educated and carefully licensed, education reform will not succeed, according to Wize (1991). Members of the teacher education community further point out that alternative certification has the effect of virtually eliminating preservice training of secondary teachers by colleges of education, and the burden of training them falls on the school district. They call for research into both the effects on students of alternatively certified teachers and the effects on teaching as a profession (Watts, 1986). The teacher educators point out that state officials seem to see no contradiction between tightening certification requirements for teacher education programs with one hand and issuing alternative certification with the other. They argue that it is the responsibility of teacher educators to develop professionally defensible routes to provide needed teachers (Culver, 1986). They also point out that certification requirements of most states allow training to take place after the teacher is put into the classroom. The position of the National Education Association acknowledges the value of alternative preparation programs, provided that they prepare individuals to meet the same standards for entry to the profession applicable to all other candidates. Their position is that programs can vary in the target audience, the training design, and the length of training, not in content, rigor, or expected outcomes (National Education Association, 1990).

The American Association of Colleges for Teacher Education points to the need for pedagogical and foundations courses, a closely supervised practicum, and the gradual assumption of classroom responsibility, all prior to employment (Smith, Nystrand, Ruch, Gideonse & Carlson, 1985). This position for strict entry level standards is corroborated by the Educational

Testing Service survey which has identified over 80 professional knowledge functions necessary prior to entry as a first year teacher (Rosenfeld, Thornton, & Skurnik, 1986). Members of the teacher education community further argue that the lasting solution to attracting teachers would require that policy makers and state officials face the hard facts of raising salaries and improving conditions instead of reducing certification requirements.

Perhaps the most prolonged and heated debate on alternative certification took place over the highly publicized New Jersey Provisional Teacher Program which began in 1985. The controversy surrounding the development and implementation of this alternative route in New Jersey arose from the opposing forces in the debate, the governor and commissioner of eduction versus the teacher educators and the National Education Association. The forces of the state government outweighed the influence of the educators, and the Provisional Teacher Program was implemented over their objections (Carlson, 1990). The following is a brief description of the New Jersey Provisional Teacher Program.

> New Jersey's alternate route program has been in operation since the 1985-86 school year. Prospective elementary and secondary teachers who have not completed a college-based teacher education program may enter New Jersey's alternate route program if they have completed a bachelor's degree with a 30-credit academic major and received a passing score on the NTE test in their teaching subject or, for elementary teachers, the NTE general knowledge test. During the first year of the program in 1985, all teachers holding an emergency teaching credential had to enter the alternate route program or a college-based teacher preparation program. Since then, no emergency to credential has been issued except in areas where no alternate route credential exists, such as special education.
>
> After meeting the entrance criteria, prospective teachers can obtain a letter of eligibility from the State Education Department that will enable

a local school district to hire them. Although many prospective teachers seek employment on their own or are hired by districts familiar with them as a substitute or emergency credential teacher, other prospective teachers are recruited by the state's Office of Teacher recruitment and Placement. This office has been recruiting provisional route teachers from selective colleges, minority organizations, corporations, and the military.

Once hired, the provisional teacher must attend 200 hours of instruction offered at a regional training center during the year. Generally, 80 hours of instruction are completed before the school year and the remaining 120 during the school year. The content of the instruction offered at the dozen or so regional training centers focuses on the Boyer Topics, a listing of generic knowledge needed by all beginning teachers. These topics were derived from a conference of nationally recognized experts and members of the profession, convened under the chairmanship of Ernest Boyer, to identify essential knowledge for beginning teachers, and those teaching skills and abilities that are most effective. The curriculum is strongly influenced by the research on effective teaching.

A school district hiring a provisional teacher must sign a supervision contract, agree to phased in teaching responsibilities, and provide a support teacher During Phase 1, which lasts 20 days, the provisional teacher works full-time with the teacher members of the support team and gradually takes more responsibility for teaching. Phase 1 generally takes place before September, but it may also take place in the preceding summer or at another time during the school year an emergency vacancy occurs. During Phase 2 which lasts 10 weeks, the provisional teacher is supervised at least once a week. At the end of Phase 2 the principal conducts a formative evaluation with the advice of the support team, determining whether the provisional teacher can move on to Phase 3. During Phase 3, which lasts 20 weeks, the provisional teacher is observed at least once a month and evaluated twice. Once provisional teachers have completed the 200 hours of instruction at the regional training center and Phase 3 of supervised teaching, they can obtain a recommendation for certification from the principal.

In 1987 the New Jersey State Department of Education issued a favorable third year report on the Provisional Teacher Program. The report addressed program growth, the various characteristics of employed provisional teachers,

and program utilization by the state's public and private schools. The backgrounds and qualifications of the 1987 "Dodge Fellows," exemplary provisional teachers who receive grants to pursue advanced study in their respective fields were also described (Schechter, 1987). This favorable report was countered by a comparative study of the state regulations regarding the provisional program (Smith, 1990). This study focused on the the initial 20-day seminar and practicum training programs conducted by the local school districts. The data indicated that the provisional teachers were not receiving the training required by the state. Supervision was not as complete as had been mandated, and provisional teachers began to teach without the gradual assumption of duties.

The teacher education community had similar concerns about insufficient supervision and evaluation of teachers. Additional concerns were the extensive use for staffing private schools, and the stress teachers experience teaching in difficult situations while they are meeting the requirements for academic seminar participation. On the other hand, they found some positive aspects. It has been a mechanism for staffing urban schools, and it has brought some capable, mature people into teaching (Carlson, 1990).

The mixed results point to the lack of definitive research to support or counter the arguments surrounding alternative certification. With this lack of definitive research, the debate between state officials and the teacher education community continues in other states.

Background of the Problem

In this nationwide discussion, specific charges have been levelled about the quality of both traditional and alternative certification programs. Many state officials say that the alternative programs are necessary, charging that traditional undergraduate teacher education programs admit inferior students, and that these programs are of little or no value in the performance of teachers (Roth, 1986). Members of the teacher education community criticize the alternative certification programs for providing inadequate courses and supervision (Smith, Nystrand, Ruch, Gideonse & Carlson, 1985), and for the contradictory practice of increasing requirements for teacher education programs on one hand and allowing alternative certification loopholes on the other hand.

Participants on both sides of the certification issue agree on the necessity to reform traditional undergraduate teacher education. Instead of reducing certification requirements through provisional programs as state officials suggest, however, the Holmes Group (1986) and the Carnegie Forum (1986) recommend increasing requirements through shifting teacher education to the graduate level. These recommendations are consistent with Sedlak's and Schlossman's (1986) finding that certification requirements can be raised during a teacher shortage.

The issues in this nationwide debate on certification are similar to those in New Hampshire. Although the types of alternative certification programs vary from state to state, the New Hampshire programs are representative of those in other states. Currently there are five methods by which the State of New Hampshire certifies teachers. The primary method is through State

Board of Education approved, regular collegiate sponsored programs of professional preparation in education, Alternative 1. These are programs that prepare teachers prior to employment and include five year, integrated, undergraduate-graduate programs, fifth-year, graduate programs and traditional, four-year, undergraduate programs. The second route is through an approved collegiate sponsored professional program from outside the state through the Interstate Certification Compact, Alternative 2. Alternative 3 is a State Board of Education sponsored program that requires a review of equivalent competencies and experiences and an examination by the Board of Examiners selected by the Office of Teacher Education and Professional Standards. Alternative 4 is a State Board of Education sponsored, on-the-job training program for program candidates recommended for employment by the district during a critical shortage and who have three years to complete an individualized professional development plan administered by the district. Alternative 5 is a new State Board of Education sponsored, on-the-job training program for candidates with a 2.5 undergraduate grade point average or significant life experience who complete an individualized pre-service professional development plan determined and administered by the school district of employment. Since this program went into effect in 1991, there are few candidates to date.

Although the New Hampshire State Board of Education refers to all of these certification routes as alternatives, the term alternative certification is commonly understood to refer to provisional, on-the-job training programs sponsored by State Boards of Education and administered by local school

districts. Alternatives 4, and 5 are examples of these alternative certification programs.

There are also many collegiate sponsored, teacher education programs that certify teachers in New Hampshire, including several graduate level or fifth year programs. The University of New Hampshire has, since 1974, also offered a five-year, integrated undergraduate-graduate teacher education program which culminates in certification and leads to a master's degree. This program includes undergraduate field experience, pedagogical and foundation courses, a liberal arts major, and a year-long graduate internship (Andrew, 1986).

The following events reveal a contradictory nature to the actions of the New Hampshire State Board of Education with regard to teacher certification. In June of 1984, the State Board of Education issued a study of teacher certification in New Hampshire. The Board's goal was to evaluate current practices and recommend revisions that would contribute to instructional excellence (Holland, 1984). It can be assumed that solving teacher shortages was also a goal, since the Board recommended to ease the interstate and critical shortage requirements of the alternative programs. Contrary to this, the Board also recommended to increase the requirements of the already stricter, collegiate sponsored teacher education programs. These recommendations for collegiate sponsored teacher education programs included closer screening of applicants, early field experience, frequent supervision from cooperating teachers and college supervisors, and an improved practicum.

In 1991, the New Hampshire State Board of Education, despite the objections of the teacher education community, instituted another alternative

certification program, Alternative 5. Interviews of five New Hampshire State Board of Education members (1990) regarding Alternative 5 revealed that perceptions of the teacher education programs had improved in recent years. The possibility of future teacher shortages was not mentioned as a reason for the new program. Only one member mentioned academic credentials of teacher education graduates as a concern. One member acknowledged that she had heard "good things" about the University of New Hampshire's Five-Year Program. Despite these improved perception, they said that Alternative 5 was necessary to enable degree holders with strong subject backgrounds or life experiences to enter the classroom without having to go through the traditional route.

Statement of the Problem

State boards of education have sponsored alternative certification programs that are challenging the collegiate sponsored, teacher education model. Research is needed to resolve the issues and to evaluate the new programs. The purpose of this study is to compare all teacher education programs to an alternative program by gathering teachers' ratings of their certification programs and principals' ratings of teacher performance. The intent of this study in New Hampshire is to focus on an alternative certification program designed to address the state's critical teaching shortages, Alternative 4.

Significance of the Study

This study addresses the need for more research to help resolve the issues of the nationwide debate on alternative certification and to evaluate the new programs. The results of this study should assist national policy makers, state boards of education, local school districts, and teacher education faculty to make more informed decisions regarding certification.

There are also related questions to be answered by this study. These questions are important from a policy standpoint to better understand what motivates people to pursue a particular certification program, and what job settings they currently have in the schools.

Definition of Terms

The study uses the following definitions of terms.

1. Alternative Certification Program. A State Board of Education sponsored, provisional, on-the-job teacher training program administered by the local school districts. The courses usually take place at the same time as the practicum which consists of being employed immediately and assuming full responsibility of the classroom for the entire year.

2. Certification. Certification is the term that has been typically used in the literature to refer to the process of obtaining the requirements for entry into the teaching profession. Licensing is a term that is currently being used to signify this entry process. The term certification will be the one used in this study, since this is the term used in New Hampshire.

3. Graduate Teacher "Fifth Year" Preparation Program. A non-traditional, collegiate sponsored, graduate entry, one year or longer, teacher

preparation program where all professional courses are taken after a liberal arts major and a bachelor's degree. This program culminates in either a semester-long or a year-long teaching practicum.

4. Integrated Undergraduate-Graduate "Five Year" Teacher Preparation Program. A collegiate sponsored, teacher preparation program that includes undergraduate field experience, an undergraduate courses in education, and an undergraduate subject field major. This program culminates in a semester or year-long graduate practicum internship, where responsibility for the classroom is assumed gradually. Further coursework leads usually to a master's degree option.

5. Internship. A year-long practicum that includes in depth experiences not offered by the shorter student teaching experience.

6. Undergraduate Teacher Preparation Program. A traditional, collegiate sponsored, undergraduate teacher preparation program, where both subject matter background and pedagogial studies, usually consisting of an education major, and a practicum are finished during the undergraduate years. The practicum is an eight to sixteen week student teaching experience where responsibility for the classroom is assumed gradually.

7. Practicum. A closely supervised, classroom teaching, training experience that occurs in school setting.

8. Student Teaching. A undergraduate, practicum that occurs over one semester or less, where responsibility for the classroom is assumed gradually.

CHAPTER II

A REVIEW OF THE LITERATURE

An Overview

Five central issues emerge from this nationwide discussion of alternative certification and teacher education programs. These central issues are academic credentials, level of inservice performance, quality of practicum supervision, quality of pre-service courses, and career retention. The following review of the literature focuses on these five issues.

One of these central issues arises from the charge from officials of some states that traditional undergraduate teacher education institutions admit students of low academic credentials. Recent studies suggest that the academic credentials of four-year teacher education students are at least as sound as those of non-education students. Olsen (1985) compared education majors at the University of Wisconsin-Parkside on high school percentile rank, English and mathematics placement scores for entering freshman, cumulative grade point average at graduation, and the grades for five introductory courses. The education graduates were found to be equal to and on some criteria superior to the non-education graduates. In a national survey of 530 institutions accredited by the National Colleges Association for Teacher Education, Fisher and Feldmann (1985) also found that teacher education graduates compare favorably on similar credentials. Both of these studies call into question the position of the officials of some state who cite the A Nation At Risk report (1983) that teacher education candidates are academically inferior to their

classmates. This conflicting research also raised the question about academic credentials of the different groups certified in New Hampshire.

The second central issue arises from the charge of some state officials that teacher education programs have little or no effect on the performance of teachers. The following conflicting studies of pre-service or first-year teachers confirm this issue of teacher performance as an important research question for this study. In a comparative analysis by Soares (1989) alternative teachers received the lowest ratings from supervisors on communication skills, instructional skills, interpersonal skills, and the ability to establish a positive learning environment, compared to undergraduate student teachers and graduate interns. The fifth-year interns maintained the highest profile in self-esteem. In another study of first-year teachers, mentors reported more success with graduate interns than with alternative teachers (Franceschini & Butler, 1987). In stark contrast to the above studies, the Dallas, Texas Independent School District reported that their alternative certification candidates received higher performance ratings than the first-year teachers from traditional, undergraduate programs (Hutton, 1987). This contrast may reflect the nature of local teacher education programs.

Adelman's work (1986) seems to support the Dallas study. Following examination of 20 certification programs which included fifth-year graduate programs and alternative certification programs, Adelman concluded that both these programs attracted subject area-proficient candidates who were rated as superior to graduates of four year programs on their instructional skills. However, since Adelman did not distinguish between alternative certification and fifth-year, graduate candidates, it is impossible to conclude

that alternative certification candidates can be judged as superior to four year program graduates.

Thus far, these have been largely studies of pre-service or first-year candidates and do not provide insights into the performance of experienced, inservice teachers. The next three studies explored this area of inservice teacher performance. Alternative certification for vocational teachers has been a practice for decades. Despite this longevity, the research within the last ten years is sparse and inconclusive as to whether alternative teachers are as effective as regularly certified instructors (Erekson & Barr, 1985). Citing agencies which train vocational teachers the authors state that prospective teachers must learn pedagogical skills in order to be effective.

A pilot study of high school mathematics instructors only showed that students of certified teachers scored significantly higher on Stanford Achievement Tests than students of non-certified teachers (Hawk, Coble, & Swanson, 1985). The authors noted that although this study supports the maintenance of pre-service requirements, more study is needed in all other subject areas.

In a larger study, the relationship between training and teacher competence was investigated with 230 beginning secondary teachers only representing most of Virginia's school districts (Dewalt & Ball, 1987). Twelve dimensions of teacher competence were measured using trained observers. The results were inconclusive. The teachers who had pre-service training scored significantly higher on providing an affective climate and meeting individual differences. Teachers without teacher training scored significantly higher on two dimensions, accountability and questioning skill. There were

no significant differences on the other eight competencies, academic learning time, clarity of structure, evaluation, learner self-concept, meaningfulness, planning, close supervision, and reinforcement. These inconclusive results continue inservice performance as the second central issue for this study.

The third and fourth central issues also emerge from the nationwide debate on alternative certification. The teacher education community charges that alternative certification programs which provide few or no courses or practicum supervision prior to assumption of full classroom responsibilities, also provide little course work or practicum supervision during the on-the-job training period.

In a study of 64 nontraditional certification programs in mathematics and science, the Rand Corporation examined fifth-year graduate level teacher education programs and alternative programs. Although both the graduate level and alternative programs stressed field experience, there was a wide range in program length, amount of practicum supervision, and number of courses provided (Darling-Hammond, Hudson, & Kirby, 1989). The fifth-year graduate programs which required more course work and gradual assumption of classroom responsibilities under the daily supervision of an experienced teacher, received higher ratings from the candidates. The alternative certification programs which were rated consistently lower, required considerably less course work and provided minimal practicum supervision while recruits were given immediate, full, classroom responsibilities.

Darling-Hammond found it inconsistent that the alternative programs, which emphasized on-the-job training over course work, provided almost no practicum supervision. The researchers' recommendations for more

challenging courses and close supervision during the internship were supported by alternative program participants who desired more subject specific mentoring and pedagogy. Since this study was limited to fifth year and alternative certification math and science teachers, further research is called for to examine a wider range of preparation programs that include elementary and secondary, core subject teachers.

The fifth, central issue for this study is the question of how long teachers from the different certification programs remain in teaching. Darling-Hammond found that many of the alternative teachers did not intend to make a career of teaching. Despite the fact that many of them had recently made a mid-career switch, only about half indicated that they would stay in teaching. Banks & Necco (1987) in a survey of 203 special education teachers showed that teachers who received more educational training stayed in teaching longer than alternative teachers.

There are educational costs to both children and taxpayers from the policy of training teachers-on-the-job. If these teachers leave soon after they are certified, then it could be argued that alternative certification is not a solution to the shortage problem. This argument would affirm the position of the AACTE that the lasting solution is to make the profession more attractive by raising salaries and improving conditions.

Summary

A review of the literature on teacher certification revealed studies on State Board of Education sponsored, alternative certification programs and collegiate sponsored, undergraduate and graduate teacher education programs.

these studies addressed one or more of the five central issues that have arisen from the nationwide debate on alternative certification. While these studies represent important beginnings, inconclusive and limited findings suggest the need for further research. Questions remain about academic credentials, inservice performance, courses, practicum supervision, and intention to remain in teaching. This study seeks to help answer these questions and related questions by examining inservice elementary and secondary teachers of mathematics, reading, English/language arts, social studies, and science in New Hampshire classrooms statewide.

Research Questions

1. Are there significant differences in the academic credentials between teachers of the teacher education programs and those of Alternative 4 Certification programs?
2. Are there significant differences in principals' ratings of teachers' inservice performance between teachers of the teacher education programs and those of Alternative 4 Certification programs?
3. Are there significant differences in teachers' ratings of courses between teachers of the teacher education programs and those of Alternative 4 Certification programs?
4. Are there significant differences in teachers' ratings of practicum supervision between teachers of the teacher education programs and those of Alternative 4 Certification programs?

5. Are there significant differences in teachers' ratings of overall preparation between teachers of the teacher education programs and those of Alternative 4 Certification Programs?
6. Are there significant differences in teachers' intentions to remain in teaching between teachers of the teacher education programs and those of Alternative 4 Certification programs?
7. Are there significant differences in teachers' career motivation between teachers of the teacher education programs and those of Alternative 4 Certification programs?
8. Are there significant differences in teachers' job settings between teachers of the teacher education programs and those of Alternative 4 Certification programs?

CHAPTER III

RESEARCH METHODS

Introduction

The purpose of this study is to address the need for more research to compare state sponsored, alternative certification programs and collegiate sponsored, teacher education programs. The results of this study should allow state officials,national policy makers, and teacher educators to make better informed decisions regarding program development and change. In particular, the focus of this study is on the comparison between the Alternative 4 certification program and the teacher education programs in New Hampshire. What differentiates these programs is the structure of the courses and the practicum supervision. A brief description of each program is as follows:

Alternative 1

The primary method for certifying teachers in New Hampshire is through State Board of Education approved, regular collegiate sponsored programs of professional preparation in education. These are programs that prepare teachers prior to employment and include traditional, four-year, undergraduate programs, and non-traditional five year and fifth-year, graduate programs. Prospective teachers in the undergraduate programs major or minor in education and are placed full-time in a school for eight to sixteen weeks of student teaching. During this student

teaching experience, the prospective teacher gradually assumes full teaching responsibilities, under the close supervision of an experienced teacher. Prospective teachers in the five year and fifth year programs major in a liberal arts subject and begin professional courses after graduation, or as in the case of the UNH five year program, both at the undergraduate and graduate level. During the graduate level internship, which is usually a full year, the prospective teacher gradually assumes full teaching responsibilities under the close supervision of an experienced teacher.

Alternative 4

Alternative 4 is a State Board of Education sponsored, on-the-job training program for candidates recommended for employment by the district during a critical shortage. In practice this policy is very liberal allowing districts to claim that they cannot find qualified candidates at any time. These candidates are employed and assume full responsibility for students prior to any preparation and have three years to complete an individualized professional development plan administered by the district. Satisfactory completion of this three year plan results in full certification.

Hypotheses

1. There are no significant differences in academic credentials between teachers of collegiate sponsored, teacher education programs and Alternative 4 Certification programs. (Null)
2. There are significant differences in principals' ratings of teachers' inservice performance in favor of collegiate sponsored, teacher education programs when compared to Alternative 4 Certification programs. (One-tailed)
3. There are significant differences in teachers' ratings of courses in favor of collegiate sponsored, teacher education programs when compared to Alternative 4 Certification programs. (One-tailed)
4. There are significant differences in teachers' ratings of practicum supervision in favor of collegiate sponsored, teacher education programs when compared to Alternative 4 Certification programs. (One-tailed)
5. There are significant differences in teachers' ratings of overall preparation in favor of collegiate sponsored, teacher education programs when compared to Alternative 4 Certification programs. (One-tailed)
6. There are no significant differences in teachers' intentions to remain in teaching between collegiate sponsored, teacher education programs and Alternative 4 Certification programs. (Null)
7. There are significant differences in teachers' career motivation in favor of collegiate sponsored, teacher education programs with

regard to child orientation when compared to Alternative 4 Certification programs. (One-tailed)

8. There are no significant differences in teachers' job status between the collegiate sponsored, teacher education programs and Alternative 4 Certification programs. (Null)

Hypotheses 2, 3, 4, and 5 are one-tailed, because it is logical to believe that the preparation prior to employment in the collegiate sponsored programs would cause those teachers to rate them higher, or in the case of performance, to be rated higher by their principals. Hypothesis 7 is also one-tailed, because it is logical to believe that teachers who originally prepared for teaching as a career would have a more child-oriented career motivation than those who did not originally prepare for teaching as a career.

Subjects

The records of the New Hampshire Department of Education revealed approximately 1488 teachers certified by New Hampshire programs between and including 1987 and 1990 and presently teaching. From these teachers, a population was identified from 660 elementary and secondary teachers of the core subjects, math, science, English/language arts, and social studies, who had no prior certification. From this total population of 660 teachers, 492 were randomly selected from a complete list provided by the State Department of Education. Two hundred ninety-five teachers' questionnaires, 60% of the sample, were collected. This sample was comprised of three of the five certification groups in New Hampshire. The first group consisted of teachers certified through Alternative 1, the teacher education programs sponsored by

New Hampshire colleges. The second group consisted of teachers certified through Alternative 3, and the third group consisted of teachers certified through Alternative 4. The Alternative 2 program was not considered since these teachers are certified outside of the state, only in-state programs are included in this study. The Alternative 5 program was not considered either, because it is a new program instituted in 1991, and there are few candidates to date.

From the collected sample, the Alternative 3 program was considered not eligible because all but nine of the teachers in this group had prior certification which would have constituted an intervening variable. Also not eligible were the teachers from the Alternative 1 group who had prior certification. This resulted in an eligible sample of 236 teachers. This left the Alternative 1 group with 202 teachers and the Alternative 4 group with 34 teachers.

Instruments

Two questionnaires were used to gather data, one to gather responses from teachers and the other to gather responses from principals. The teachers' questionnaire was designed to include teachers' evaluations of their certification programs. Categorical data has been collected on differences among the certification routes in terms of four of the five central issues for this study: academic credentials, practicum supervision, pedagogical and professional courses, and intention to remain in teaching. Related research questions on job setting, reasons for entering teaching, as well as demographic data were also included.

Most of the items have been adapted, with permission, from the Rand Corporation survey (Carey et al., 1988). The remainder of the items have been adapted with permission from the Follow-up Survey of Five-Year Program Graduates (Andrew, 1989). A copy of the teachers' questionnaire is shown in Appendix 1.

The other instrument, the principals' questionnaire, is to elicit principals' ratings of the professional performance of inservice teachers. Interval ratings were developed to measure six dimensions of professional performance. Items for this questionnaire have been chosen measure selected performance behaviors, and include the competencies for the Alternative 1, 3, and 4 candidates as required for certification by the State Board of Education. Other sources for items are the School Administrative Unit 18 evaluation form (1987), the guidelines for effective schools (Edmonds, 1979), the Copley study on teacher certification (1975), and two evaluation forms (1987) used by the Education Department at the University of new Hampshire for interns and exploring teachers. A copy of the principals' questionnaire is shown in Appendix 3.

Face and content validity for both the teachers' and the principals' questionnaires have been established. The instruments were submitted for evaluation to four professors of education, two middle school administrators, two middle school teachers (not included in the sample), and eight doctoral students in education. The middle school administrators and the two middle school teachers were given no prior information about the study. They critiqued the questions for clarity. The professors and doctoral students were given explanations of the study and both instruments. They critiqued the

instruments in terms of their correlation with the purpose of the research questions posed in the study. All recommendations were considered, and appropriate revisions were made.

Reliability for the principals' questionnaire was also established using the Cronbach alpha coefficient for each of the six subscales. The alpha values were as follows.

SCALE	ALPHA
Professional Attributes	**.9135**

1. Demonstrates commitment to teaching.
2. Shows interest and enthusiasm in work.
3. Shows leadership in curriculum development.
4. Shows leadership in staff development.
5. Demonstrates the ability to be an outstanding career educator.
6. Develops and maintains good relations with parents.
7. Keeps parents informed of child's progress including use of notes, telephone calls, and conferences.
8. Demonstrates knowledge of subject area.
9. Shows understanding of the historical, philosophical, and sociological foundations underlying public education in the United States.
10. Shows understanding of the purposes, organizations, and operation of the total educational program of the school.
11. Acts in a professional and ethical manner with regard to the rights and responsibilities of the teacher.
12. Follows the laws and regulations which prohibit discrimination on the basis of race, national origin, sex, age, or handicapping conditions.

Planning and Preparation **.9247**

13. Develops, evaluates and modifies curriculum according to student progress in academic, social and behavioral areas.
14. Plans and organizes lessons and activities effectively.
15. Relates physical, social, emotional, and intellectual development to planning and organizing instruction.
16. Identifies and sequences goals and objectives for instruction.
17. Integrates into the subject area such relevant lifelone skills as career planning, consumerism, exercising individual rights and responsibilities, and solving problems.
18. Cooperates with others in planning curriculum.
19. Is flexible in adjusting plans to deal with unplanned events.
20. Participates skillfully in the development of written individualized educational plans, showing sensitivity to all students.

Instructional Skills **.9461**

21. Presents lessons in a clear, enthusiastic and logical manner.
22. Facilitates class discussions.
23. Stimulates students' interest in the lessons and activities.
24. Employs and evaluates a variety of specific teaching techniques, materials, media, and research appropriate to given learning situations.
25. Teaches those reading, communication, and study skills essential for effective mastery of content at all grade levels.
26. Implements lesson plans in efficient manner to maximize instructional time on task.

27. Makes provisions to accommodate individual differences appropriate to the needs, interests, and abilities of students.
28. Makes sure that each student is involved in the instruction.
29. Works effectively with exceptional children in the regular classroom as required by law.

Assessment of Student Learning **.8405**

30. Uses the results of formal and informal evaluations for identifying academic, social and behavioral strengths and difficulties for all students.
31. Provides prompt, ongoing feedback to students and assists them in the evaluation of their own growth and development.
32. Clearly communicates grading.
33. Holds high by reasonable expectations.

Classroom Climate/Management **.9105**

34. Exhibits skill in managing class for type of activities in progress.
35. Uses a variety of behavioral management techniques effectively.
36. Practices democratic principles which show consideration for rights of others and encourages students to do the same.

Interpersonal Skills **.9513**

37. Shows leadership qualities among peers.
38. Is considerate and fair in relations with pupils.
39. Interacts constructively with pupils, teachers, administrators, and parents.
40. Respects each student as an individual.
41. Supports student interests, problems, and accomplishments in and out of the classroom.

Data Collection

Proposal approval was granted by the University Institutional Review Board in September of 1990. Assurances for informed consent were provided.

Four hundred ninety-two questionnaires were sent to the teachers in the sample to gather data on four of the five central research questions, three related questions, and demographic data. Permission for the principals' ratings was also requested. Strict confidentiality of responses was guaranteed. Two hundred thirty questionnaires were sent to those principals whose teachers have granted permission to be rated on their performance. Follow-up letters and telephone calls were used in order to achieve a high response rate.

The teachers' questionnaires, cover letters, and stamped, returned envelopes were mailed as packages in February, 1991. The questionnaires were coded and used to track respondents. For those who did not respond, three follow-up mail contact were made in addition to several telephone calls. Follow-up postcards were mailed in March. Another complete set of packages with revised cover letters were mailed in April. Finally a second round of postcards were mailed in May. This resulted in 295 teacher respondents, a 60% response rate. From this collected sample, an eligible sample was determined when teachers with prior certification were deleted. This eligible sample was comprised of 202 collegiate sponsored, teacher education program teachers, and 34 Alternative 4 program teachers. A copy of the cover letter is shown in Appendix 2.

For those teachers who gave permission for their principals to rate their performance, the principals' questionnaires, cover letters, and stamped, return envelopes were mailed as packages in June, 1991. These questionnaires were

also coded and used to track respondents. For those who did not respond, two follow-up mail contacts were made in addition to several telephone calls. Follow-up postcards were mailed in July. Another set of complete packages with revised cover letters were mailed in April. This resulted in 161 responding principals, a 70% response rate. From these 161 collected principals' questionnaires, an eligible subsample of teachers was determined after teachers with prior certification were deleted. This subsample was comprised of 107 collegiate sponsored program teachers, and 29 Alternative 4 program teachers. A copy of the cover letter is shown in Appendix 4.

Data Analysis

This study identifies a consensus of five issues that arise from the debate between teacher educators and advocates of alternative certification. Two related questions were also identified. The data collected on these issues from both the teachers' and the principals' questionnaires were coded and entered into the Hilbert computer system at the University of New Hampshire. The Statistical Package for the Social Sciences (SPSS) was used to run and analyze the data. Both descriptive and inferential statistics were used to analyze the differences between the two teacher groups.

Information on all but one of these issues, as well as demographic data, were gathered from responses on the teachers' questionnaire. The descriptive statistics included frequency of numbers and percentages, and was used for reporting the demographic data. The chi square test of independence, an inferential, nonparametric test, was used to determine whether frequency distributions differ significantly from each other.

inferential, nonparametric test, was used to determine whether frequency distributions differ significantly from each other.

Information on the remaining issue of teacher performance was collected from responses on the principals' questionnaire. The inferential test used was the t-test, performed on each of the following six subscales. The subscales are professional attributes, planning and preparation, instructional skills, assessment of student learning, classroom climate and management, and interpersonal skills. I have chosen the .05 level of significance as the criterion for accepting or rejecting the hypotheses in this study. Where I anticipated directionality, I used a one-tailed test.

CHAPTER IV

RESULTS

Introduction

This chapter includes characteristics of respondents to the teachers' questionnaire and analyses of data from both the teachers' questionnaire and the principals' questionnaire. Four hundred ninety-two teachers were asked to participate in this study. Two hundred ninety-five responded to the teachers' questionnaire, a 60% return rate. Two hundred thirty of the respondents gave permission for their principals to rate their performance on a second questionnaire. One hundred sixty-one principals responded to this second questionnaire, a 70% response rate.

The elimination of teachers with prior certification resulted in an eligible sample of 202 teachers certified through collegiate sponsored, teacher education programs, and 34 teachers certified through Alternative 4 programs. These totals pertain to Tables 1, 2, 3, 4, 5, 6, 7, 8, 9, 11, 12, 13, and 14, and Hypotheses 1, 3, 4, 5, 6, 7 and 8. Responding principals totaled 107 for eligible teachers certified through teacher education programs and 29 for eligible teachers certified through Alternative 4 programs. These totals pertain to Tables 10 and 15 and hypotheses 2. Any discrepancies in these totals are due to lower response rates to certain items.

Characteristics of the Respondents

Respondents in each certification group were grouped by gender. Of the 202 teacher education teachers, 43 (21.3%) were male, and 159 (78.7%) were female. Of the 33 Alternative 4 teachers, 13 (39.4%) were male, and 20 (60.6%) were female. Table 1 presents these results.

Respondents in each certification group were grouped by grade level. Of the 202 teacher education teachers, 135 (66.8%) were elementary, and 67 (33.2%) were secondary. Of the 33 Alternative 4 teachers, 3 (9.1%) were elementary, and 30 (90.9%) were secondary. Table 2 presents these results.

Respondents in each certification group were grouped by type of community. Of the 201 teacher education teachers, 152 (75.6%) were teaching in rural schools, 26 (12.9%) were teaching in suburban schools, and 23 (11.4%) were teaching in urban schools. Of the 33 Alternative 4 teachers, 22 (66.7%) were teaching in rural schools, and 5 (15.2%) were teaching in suburban schools, and 6 (18.2% were teaching in urban schools. Table 3 presents these results.

Respondents in each certification group were grouped by location of college. Of the 178 teacher education teachers, 48 (27%) graduated from the University of New Hampshire, 76 (42.7%) graduated from another college in New Hampshire, and 54 (30.3%) graduated from a college outside of New Hampshire. Of the 33 Alternative 4 teachers, 12 (41.4%) graduated from the University of New Hampshire, and 1 (3.4%) graduated from another college in New Hampshire, and 16 (55.2%) graduated from a college outside of New Hampshire. Table 4 presents these results.

Respondents in each certification group were grouped by college major. Of the 202 teacher education teachers, 99 (49%) were education majors, and 103 (51%) were non-education majors. Of the 33 Alternative 4 teachers, 1 (3%) were education majors, and 32 (97%) were non-education majors. Table 5 presents these results.

Respondents in each certification group were grouped by whether they were working on other degrees. Of the 200 teacher education teachers, 104 (52%) were working on other degrees, and 96 (48%) were not. Of the 33 Alternative 4 teachers, 18 (54.5%) were working on other degrees, and 15 (45.5%) were not. Table 6 presents these results.

Respondents in each certification group were grouped by the year of certification. Of the 202 teacher education teachers, 54 (26.7%) were certified in 1987, 69 (34.2%) were certified in 1988, 64 (31.7%) were certified in 1989, and 15 (7.4%) were certified in 1990. Of the 33 Alternative 4 teachers, 9 (27.3%) were certified in 1987, and 11 (33.3%) were certified in 1988, 10 (30.3%) were certified in 1989, and 3 (9.1%) were certified in 1990. Table 7 presents these results.

Respondents in each certification group were grouped by the number of years they were certified. Of the 199 teacher education teachers, 137 (68.8%) had been certified for 1 to 3 years, and 62 (31.2%) had been certified for longer. Of the 29 Alternative 4 teachers, 19 (65.5%) had been certified for 1 to 3 years, and 10 (34.5%) had been certified for longer. Table 8 presents these results.

Respondents in each certification group were grouped by the number of years of teaching experience. Of the 197 teacher education teachers, 126 (64%) had taught for 1 to 3 years, 49 (24.9%) had taught for 4 to 6 years, and 22 (11.1%) had taught for more than 6 years. Of the 33 Alternative 4 teachers, 6 (18.2%) had taught for 1 to 3 years and 22 (66.6%) had taught for 4 to 6 years, 5 (15.2%) had taught for more than 6 years. Table 9 presents these results.

Table 1

Demographics-Gender

		Teacher Education	Alternative 4	
Gender				
Male		43 21.3	13 39.4	
Female		159 78.7	20 60.6	
Column Total	Count Col Pct	202 86.0	33 14.0	235 100.0

Table 2

Demographics-Grade Level

		Teacher Education	Alternative 4	
Level				
Elem		135 66.8	3 9.1	
Sec		67 33.2	30 90.9	
Column Total	Count Col Pct	202 86.0	33 14.0	235 100.0

Table 3

Demographics-Community

		Teacher Education	Alternative 4	
Community				
Rural		152 75.6	22 66.7	
Suburb		26 12.9	5 15.2	
Urban		23 11.4	6 18.2	
Column Total	Count Col Pct	201 85.9	33 14.1	234 100.0

Table 4

Demographics-Institutions

		Teacher Education	Alternative 4	
Institution				
U.N.H.		48 27.0	12 41.4	
Other N.H.		76 42.7	1 3.4	
Out of N.H.		54 30.3	16 55.2	
Column Total	Count Col Pct	178 86.0	29 14.0	207 100.0

Table 5

Demographics-College Majors

		Teacher Education	Alternative 4	
Major				
Education		99.4 49.0	1 3.0	
Non Education		103 51.0	32 97.0	
Column Total	Count Col Pct	202 86.0	33 14.0	235 100.0

Table 6

Demographics-Other Degrees

		Teacher Education	Alternative 4	
Other degrees				
Yes		104 52.0	18 54.5	
No		96 48.0	15 45.5	
Column Total	Count Col Pct	200 85.8	33 14.2	233 100.0

Table 7

Demographics-Year Certified

		Teacher Education	Alternative 4	
Year Certified				
1990		15 7.4	3 9.1	
1987		54 26.7	9 27.3	
1988		69 34.2	11 33.3	
1989		64 31.7	10 30.3	
Column Total	Count Col Pct	202 86.0	33 14.0	235 100.0

Table 8

Demographics-Years Certified

		Teacher Education	Alternative 4	
Certified				
1-3 Yrs		13.7 68.8	19 65.5	
over 3 Yrs		62 31.2	10 34.5	
Column Total	Count Col Pct	199 87.3	29 12.7	228 100.0

Table 9

Demographics-Years Teaching

		Teacher Education	Alternative 4	
Taught				
1-3 Yrs		12.6 64.0	6 18.2	
4-6 Yrs		49 24.9	22 66.6	
Over 6 Yrs		22 11.1	5 15.2	
Column Total	Count Col Pct	197 85.7	33 14.3	230 100.0

Analysis of Data

All eight hypotheses were supported by the results in this study. An analysis of the items from both the teachers' and principals' questionnaires indicated significant differences for each of the five one-tailed hypotheses. No significant differences were found for the three null hypotheses.

Hypothesis 1. There are no significant differences in academic credentials between teachers of collegiate sponsored,teacher education programs and Alternative 4 Certification programs. (Null)

Chi-square analyses indicated that there were no significant differences in the responses for three individual survey items.

Hypothesis 2. There are significant differences in principals' ratings of teachers' inservice performance in favor of collegiate sponsored, teacher education programs when compared to Alternative 4 Certification programs. (One-tailed)

T-tests indicated that there were significant differences in the responses for two subscales, each comprised of several individual survey items. Principals rated the teachers from the teacher education programs significantly higher on the Instructional Skills subscale, comprised of the following items: presents lessons in a clear, enthusiastic and logical manner; facilitates class discussions; stimulates students' interest in the lessons and activities; employs and evaluates a variety of specific teaching techniques, materials, media, and research appropriate to given learning situations, teaches those reading communication, and study skills essential for effective mastery of content at all grade levels; implements lesson plans in an efficient manner to maximize instructional time on task; makes provisions to accommodate individual differences appropriate to the needs, interests, and abilities of students; makes sure that each student is involved in the instruction; works effectively with exceptional children in the regular classroom as required by law (PQ, 21-29: $x_1 = 3.67$, $x_2 = 3.41$, $t = 1.84$, $p.04 < .05$), and the Planning and Preparation subscale, comprised of the following items: develops, evaluates and modifies curriculum according to student progress in academic, social and behavioral areas; plans and organizes lessons and activities effectively; relates physical, social, emotional, and intellectual development to planning and organizing instruction; identifies

and sequences goals and objectives for instruction; integrates into the subject area such relevant life-long skills as career planning, consumerism, exercising individual rights and responsibilities, and solving problems; cooperates with others in planning curriculum; is flexible in adjusting plans to deal with unplanned events; participates skillfully in the development of written individualized educational plans, showing sensitivity to all students (PQ, 13-20: $x_1 = 3.62$, $x_2 - 3.40$, $t = 1,64$, $p.05 = .05$).

These results are presented in Table 10.

Table 10

Principals' Evaluations of Teachers' Performance

Analysis of Inservice Performance Subscales With Regard to Certification Program

Group 1 = Teacher Education Teachers
Group 2 = Alternative 4 Teachers

	X	S.D.	t	P
I. PROFESSIONAL ATTRIBUTES SUBSCALE	$x_1 = 3.59$ $x_2 = 3.52$	.71 .33	.56	.29>.05
II. PLANNING AND PREPARATION SUBSCALE	$x_1 = 3.62$ $x_2 = 3.40$	.69 .44	1.64	.05 = .05*
III. INSTRUCTIONAL SKILLS SUBSCALE	$x_1 = 3.67$ $x_2 = 3.41$	.72 .43	1.84	.04 < 05*
IV. ASSESSMENT OF STUDENT LEARNING SUBSCALE	$x_1 = 3.68$ $x_2 = 3.62$	.93 .47	3.43	.37>.05
V. CLASSROOM CLIMATE/MANAGEMENT SUBSCALE	$x_1 = 3.70$ $x_2 = 3.73$	.91 1.13	.19	.43>.05
VI. INTERPERSONAL SKILLS SUBSCALE	$x_1 = 3.74$ $x_2 = 3.75$	.87 1.98	.06	.48>.05

* Denotes significance at .05 level. See Appendix C for individual items.

Hypothesis 3. There are significant differences in teachers' ratings of courses in favor of collegiate sponsored, teacher education programs when compared to Alternative 4 Certification programs. (One-tailed).

Chi-square analyses indicated that there were significant differences in the responses for two individual survey items. Most teachers from teacher education programs reported that their courses in teaching methods were valuable, whereas most Alternative 4 teachers reported that they were not valuable (TQ, p.4, item 10a.1:$\%_1 = 69$, $\%_2 = 48$, $x^2 = 4.57$, df = 1, N = 223, p.02 < .05). A significantly higher percentage of teachers from teacher education programs rated their courses in social, historical and political foundations of education as valuable when compared to Alternative 4 teachers (TQ, p.4, item 10a .2: $\%_1 = 31$, $\%_2 = 11$, $x^2 = 4.24$, df = 1, N = 233, p. 02< .05).

These results are presented in Table 11.

Table 11

Teachers' Evaluations of Certification Programs

Analysis of Individual Questionnaire Items on Courses With Regard to Certification Program

Group 1 = Teacher Education Teachers
Group 2 = Alternative 4 Teachers

	Questionnaire Item	%	x^2	D.F.	N	P
TQ, p.4, item 10a.1,	Courses in Teaching Methods	$\%_1$=69 $\%_2$=48	4.57	1	223	.02<.05)
TQ, p.4, item 10 a.2	Courses in Foundations of Education	$\%_1$=31 $\%_2$=11	4.24	1	233	.02<.05)

Hypothesis 4. There are significant differences in teachers' ratings of practicum supervision in favor of collegiate sponsored, teacher education programs when compared to Alternative 4 Certification programs. (One-tailed)

Chi-square analyses indicated that there were significant differences in the responses for seven individual survey items. A significantly higher percentage of the teachers from teacher education programs reported that they had a practicum, defined as a closely supervised, practical, classroom training experience (TQ, p .3, item 3, $\%_1 = 98$, $\%_2 = 21$, $x^2 = 144.26$, df = 1, N = 235, p .00 < .05). Most teachers (227) from teacher education programs reported that they

had a shared practicum, while most of the remaining Alternative 4 teachers reported that they had complete responsibility from the beginning (TQ, p .3, item 4, $\%_1 = 75$, $\%_2 = 17$, $x^2 = 5.25$, df = 2, N = 204, p .04 < .05), and all teachers from teacher education programs were supervised by college supervisors. No Alternative 4 teachers were supervised by college supervisors (TQ, p .3, item 6, $\%_1 = 100$, $\%_2 = 0$, $x^2 = 32.72$, df = 1, N = 204, p .00 < .05). Most teachers from teacher education programs reported that they were observed by their cooperating teacher from 5 to 13+ hours per week, compared to 0 to 4 hours for most Alternative 4 teachers (TQ, p .3, item 7, $\%_1 = 75$, $\%_2 = 17$, $x^2 = 10.14$, df = 2, N = 196, p .01 < .05). A significantly higher percentage of teachers from teacher education programs assessed their cooperating teacher as valuable (TQ, p. 4, item 9a, $\%_1 = 91$, $\%_2 = 60$, $x^2 = 5.25$, df = 1, N = 193, p. 01 < .05). A significantly higher percentage of teachers from teacher education programs rated their practicum as valuable when compared to the Alternative 4 teachers (TQ, p .4, item 10c, $\%_1 = 95$, $\%_2 = 67$, $x^2 = 8.14$, df = 1, N = 199, p. 00 < .05).

A significantly lower percentage of teachers from teacher education programs assessed the district staff as valuable when compared to teachers from Alternative 4 programs (TQ, p. 4, item 9c,$\%_1 = 34$, $\%_2 = 100$, $x^2 = 7.40$, df = 1, N = 117, p .01 < .05). A significantly lower percentage of teachers from teacher education programs indicated they were supervised by the principal when compared to teachers from Alternative 4 programs (TQ, p .4,item 9b, $\%_1 = 27$, $\%_2 = 57$, $x^2 = 3.07$, df = 1, N = 204, p .04 < .05).

These results are presented in Table 12.

Table 12

Teachers' Evaluations of Certification Programs

Analysis of Individual Questionnaire Items on Practicum Supervision With Regard to Certification Program

Group 1 = Teacher Education Teachers
Group 2 = Alternative 4 Teachers

	Questionnaire Item	%	x^2	D.F.	N	P
TQ, p.3, item 3,	Had a Practicum	$\%_1$=98 $\%_2$=21	144.26	1	235	.00<.05)
TQ, p.3, item 4	Shared Practicum	$\%_1$=52 $\%_2$=14	5.25	2	204	.04<.05)
TQ, p.3, item 6	Supervised by College Supervisors	$\%_1$=100 $\%_2$=0	32.72	1	204	.00<.05)
TQ, p.3, item 7	Observed by Co-operating Teacher 5-13 hours	$\%_1$=75 $\%_2$=17	10.14	2	196	.01<.05)
TQ, p.4, item 9a	Assessed Co-operating Teacher as Valuable	$\%_1$=91 $\%_2$=60	5.25	1	193	.01<.05)
TQ, p.4, item 10c	Practicum Valuable	$\%_1$=95 $\%_2$=67	8.14	1	199	.00<.05)
TQ, p.4, item 9c	Alternative 4's Assessed the District Staff as Valuable	$\%_1$=34 $\%_2$=100	7.40	1	117	.01<.05)
TQ, p.4, item 9b	Alternative 4's Supervised by the Principal	$\%_1$=27 $\%_2$=57	3.07	1	204	.04<.05)

Hypothesis 5. There are significant differences in teachers' ratings of overall preparation in favor of collegiate sponsored, teacher education programs when compared to Alternative 4 Certification programs. (One-tailed)

Chi-square analyses indicated that there was a significant difference in the responses for eleven individual survey items. A significantly higher percentage of teachers from teacher education programs rated their overall certification program as valuable when compared to the Alternative 4 teachers (TQ, p .4, item 11, $\%_1 = 88$, $\%_2 = 52$, $x^2 = 27.60$, df = 1, N = 232, p. 00 < .05). Teachers from teacher education programs rated their preparation significantly higher than Alternative 4 teachers with regard to the following New Hampshire Department of Education competencies used to certify all alternative teachers: understanding the purposes, organization, and operation of the total educational program of the school (TQ, p .5, item 13c,$\%_1 = 70$, $\%_2 = 42$, $x^2 = 10.36$, df = 1, N = 233, p .00 < .05); acting in a professional and ethical manner with regard to the rights and responsibilities of the teacher (TQ, p .5, item 13c, $\%_1 = 90$, $\%_2 = 69$, $x^2 = 10.36$, df = 1, N = 233, p . 00 < .05); developing, evaluating, and modifying curriculum according to student progress in academic, social, and behavioral areas (TQ, p .5, item 13e, $\%_1 = 69$, $\%_2 = 41$, $x^2 = 9.77$, df = 1, N = 232, p .00 < .05); relating physical, social, emotional, and intellectual development to planning and organizing instruction (TQ, p .5, item 13f, $\%_1 = 76$, $\%_2 = 56$, $x^2 = 5.25$, df = 1, N = 233, p .01 < .05); integrating into the subject area such relevant life-long skills as career planning, consumerism, exercising individual rights and responsibilities, and solving problems (TQ, p. 5, item 13g, $\%_1 = 62$, $\%_2 = 41$, $x^2 = 5.37$, df = 1, N = 231, p. 01 < .05); participates skillfully in the development of written individualized educational plans,

showing sensitivity to all students (TQ, p 5, item 13h, $\%_1 = 59$, $\%_2 = 38$, $x^2 = 4.89$, df = 1, N = 227, p .02 < .05); employs and evaluates a variety of specific teaching techniques, materials, media and research appropriate to given learning situations (TQ, p .5, item 13i, $\%_1 = 82$, $\%_2 = 56$, $x^2 = 11.17$, df = 1, N = 230, p .00 < .05);.teaches those reading, communication, and study skills, essential for mastery of content (TQ, p. 5, item 13j, $\%_1 = 75$, $\%_2 = 47$, $x^2 = 10.24$, df = 1, N = 229, p.00<.05); uses the results of formal and informal evaluations for identifying academic, social, and behavioral strengths and difficulties for all students (TQ, p. 5, item 13l, $\%_1 = 65$, $\%_2 = 44$, $x^2 = 5.26$, df=1, N = 229, p.01<.05); interacts constructively with pupils, teachers, administrators, and parents (TQ, p. 5, item 13n, $\%_1 = 78$, $\%_2 = 50$, $x^2 = 11.02$, df = 1, N=230, p.00<.05).

These results are presented in Table 13.

Table 13

Teachers' Evaluations of Certification Programs

Analysis of Individual Questionnaire Items on Overall Preparation With Regard to Certification Program

Group 1 = Teacher Education Teachers
Group 2 = Alternative 4 Teachers

Questionnaire Item		%	x^2	D.F.	N	P
TQ, p.4, item 11,	Overall Certification Program Valuable	$\%_1$=88 $\%_2$=52	27.60	1	232	.00<.05
TQ, p.5, item 13b,	Understanding the Purposes, Organizations, and Operation of the Total Educational Program of the School	$\%_1$=70 $\%_2$=42	9.45	1	231	.00<.05
TQ, p.5, item 13c	Acting in a Professional and Ethical Manner with Regard to the Rights and Responsibilities of the Teacher	$\%_1$=90 $\%_2$=69	10.36	1	233	.00<.05
TQ, p.5, item 13e	Developing, Evaluating, and Modifying Curriculum According to Student Progress in Academic, Social, and Behavioral Areas	$\%_1$=69 $\%_2$=41	9.77	1	232	.00<.05
TQ, p.5, item 13f	Relating Physical, Social, Emotional, and Intellectual Development to Planning and Organizing Instruction	$\%_1$=76 $\%_2$=56	5.25	1	233	.01<.05

Table 13 (cont.)

TQ, p.5, item 13g	Integrating into the Subject Area such Relevant Life-long Skills as Career Planning, Consumerism, Exercising Individual Rights and Responsibilities, and Solving Problems	$\%_1$=62 $\%_2$=41	5.37	1	231	.01<.05
TQ, p.5, item 13h	Participates Skillfully in the Development of Written Individualized Educational Plans, Showing Sensitivity To All Students	$\%_1$=59 $\%_2$=38	4.89	1	227	.02<.05
TQ, p.5, item 13i	Employs and Evaluates a variety of Specific Teaching Techniques, Materials, Media and Research Appropriate to Given Learning Situations	$\%_1$=82 $\%_2$=56	11.17	1	230	.00<.05
TQ, p.5, item 13j	Teach Those Reading, Communication, and Study Skills, Essential for Mastery of Content	$\%_1$=75 $\%_2$=47	=10.24	1	229	.00<.05
TQ, p.5, item 13l	Use the Results of Formal and Informal Evaluations for Identifying Academic, Social, and Behavioral Strengths and Difficulties for All Students	$\%_1$=65 $\%_2$=44	5.26	1	229	.01<.05

Table 13 (cont.)

TQ, p.5, item 13n	Interact Constructively with Pupils, Teachers, Administrators, and Parents	$\%_1$=78 $\%_2$=50	11.02	1	23	.00<.05

Hypothesis 6. There are no significant differences in teachers' intentions to remain in teaching between collegiate sponsored, teacher education programs and Alternative 4 Certification programs. (Null) Chi square analyses indicated that there were no significant differences in the responses for one survey item.

Hypothesis 7. There are significant differences in teachers' career motivation in favor of collegiate sponsored, teacher education programs with regard to child orientation when compared to Alternative 4 Certification programs. (One-tailed) Chi-square analyses indicated that there were significant differences in the responses for six individual survey items. A significantly higher percentage of teachers from teacher education programs reported that they chose teaching as a career, because of the opportunity to be creative (TQ, p .2, item 1.01, $\%_1 = 60$, $\%_2 = 27$, $x^2 = 12.22$, df = 1, N = 235, p .00 < .05), the opportunity to work with young people (TQ, p .2, item 1.02, $\%_1 = 87$, $\%_2 = 67$, $x^2 = 8.95$, df = 1, N = 235, p .00 < .05), and prior experiences with youth (TQ, p .2, item 1.09, %1 = 58, %2 = 30, $x^2 = 9.04$, df = 1, N = 235, p .00 < .05). Teachers from the Alternative 4 programs reported that they chose teaching as a career because of interest in their subject matter (TQ, p .2, item 1.03, %1 = 53, %2 = 79, $x^2 = 7.70$, df = 1, N = 235, p .01 < .05), job security (TQ, p .2, item 1.04, %1 = 15, %2 = 27, $x^2 = 3.16$, df = 1, N = 235, p .04 < .05), and the current high

demand for teachers in this field (TQ, p .2, item 1.13, %1 = 6, %2 = 39, x^2 = 33.39, df = 1, N = 235, p .00 < .05).

These results are presented in Table 14.

APPENDICES

Table 14

Teachers' Evaluations of Certification Programs

Analysis of Individual Questionnaire Items on Career Motivation With Regard to Certification Program

Group 1 = Teacher Education Teachers
Group 2 = Alternative 4 Teachers

	Questionnaire Item	%	x^2	D.F.	N	P
TQ, p. 2, item 1.01	Opportunity to be Creative	$\%_1$=60 $\%_2$=27	8.95	1	235	.00<.05)
TQ, p. 2, item 1.02	Opportunity to Work with Young People	$\%_1$=87 $\%_2$=67	8.95	1	235	.00<.05)
TQ, p. 2, item 1.09	Prior Experiences with Youth	$\%_1$=58 $\%_2$=30	9.04	1	235	.00<.05)
TQ, p. 2, item 1.03	Interest in Subject Matter	$\%_1$=53 $\%_2$=79	7.70	1	235	.01<.05)
TQ, p. 2, item 1.04	Job Security	$\%_1$=15 $\%_2$=27	3.16	1	235	.08<.05)
TQ, p. 2, item 1.13	Current High Demand for Teachers in This Field	%1=6 $\%_2$=39	33.39	1	235	.00<.05)

Hypothesis 8. There are no significant differences in teachers' current job setting between the collegiate sponsored, teacher education programs and

Alternative 4 Certification programs. (Null) Chi-square analyses indicated that there were no significant differences in the responses for three individual survey items.

Summary of Results

All eight hypotheses were supported by the results in this study. No significant differences were found for the three null hypotheses. An analysis of the items from both the teachers' and principals' questionnaires indicated significant differences for each of the five one-tail hypotheses. The results for each of these five hypotheses are summarized below.

An analysis of the items from both the teachers' and principals' questionnaires indicated significant differences for five of the eight hypotheses.

The following results are related to the analysis of principals' ratings of teachers' inservice performance with regard to certification program.

1. Principals rated the teachers from the teacher education programs significantly higher than Alternative 4 teachers on the Instructional Skills subscale, comprised of the following items: presents lessons in a clear, enthusiastic and logical manner; facilitates class discussions; stimulates students' interest in the lessons and activities; employs and evaluates a variety of specific teaching techniques, materials, media, and research appropriate to given learning situations; teaches those reading, communication, and study skills essential for effective mastery of content at all grade levels; implements lesson plans in an efficient manner to maximize instructional time on task; makes provisions to accommodate individual differences appropriate to the needs, interests, and abilities of students; makes sure that each

student is involved in the instruction; works effectively with exceptional children in the regular classroom as required by law.

2. Principals rated the teachers from the teacher education programs significantly higher than Alternative 4 teachers on the Planning and Preparation subscale, comprised of the following items: develops, evaluates and modified curriculum according to student progress in academic, social and behavioral areas; plans and organizes lessons and activities effectively; relates physical, social, emotional, and intellectual development to planning and organizing instruction; identifies and sequences goals and objectives for instruction; integrates into the subject area such relevant life-long skills as career planning, consumerism, exercising individual rights and responsibilities, and solving problems; cooperates with others in planning curriculum; is flexible in adjusting plans to deal with unplanned events; participants skillfully in the development of written individualized educational plans, showing sensitivity to all students.

The following results are related to the analysis of teachers' ratings of courses with regard to certification program

1. Most teachers from teacher education programs reported that their courses in teaching methods were valuable, whereas most Alternative 4 teachers reported that they were not valuable.
2. A significantly higher percentage of teachers from teacher education programs rated their courses in social, historical and political foundations of education as valuable.

The following results are related to the analysis of teachers' ratings of practicum supervision with regard to certification program.

1. A significantly higher percentage of the teachers from teacher education programs reported that they had a practicum, defined as a closely supervised, practical, classroom training experience.
2. Most teachers from teacher education programs reported that they had a shared practicum where they assumed gradual responsibility, while most of the remaining Alternative 4 teachers who said they had a practicum (8) reported that they had complete responsibility from the beginning.
3. All teachers from teacher education programs were supervised by college faculty. No Alternative 4 teachers were supervised by college faculty.
4. Most teachers from teacher education programs reported that they were observed by their cooperating teacher from 5 to 13+ hours per week, compared to 0-4 hours for most Alternative 4 teachers.
5. A significantly higher percentage of teachers from teacher education programs assessed their cooperating teacher as valuable.
6. A significantly higher percentage of teachers from teacher education programs rated their practicum as valuable when compared to the Alternative 4 teachers.
7. A significantly lower percentage of teachers from teacher education programs assessed the district staff as valuable when compared to teachers from Alternative 4 programs.

8. A significantly lower percentage of teachers from teacher education programs indicated they were supervised by the principal when compared to teachers from Alternative 4 programs.

The following results are related to the analysis of teachers' ratings of the overall preparation with regard to certification program.

1. A significantly higher percentage of teachers from teacher education programs rated their overall certification program as valuable when compared to the Alternative 4 teachers.
2. Teachers from teacher education programs rate their preparation significantly higher than Alternative 4 teachers with regard to the following New Hampshire Department of Education competency: understanding the purposes, organization, and operation of the total education program of the school.
3. Teachers from teacher education programs rated their preparation significantly higher than Alternative 4 teachers with regard to the following New Hampshire Department of Education competency: acting in a professional and ethical manner with regard to the rights and responsibilities of the teacher.
4. Teachers from teacher education programs rated their preparation significantly higher than Alternative 4 teachers with regard to the following New Hampshire Department of Education competency: developing, evaluating, and modifying curriculum according to student progress in academic, social, and behavioral areas.

5. Teachers from teacher education programs rated their preparation significantly higher than Alternative 4 teacher with regard to the following New Hampshire Department of Education competency: relating physical, social, emotional, and intellectual development to planning and organizing instruction.
6. Teachers from teacher education programs rated their preparation significantly higher than Alternative 4 teachers with regard to the following New Hampshire Department of Education competency: integrating into the subject area such relevant life-long skills as career planning, consumerism, exercising individual rights and responsibilities, and solving problems.
7. Teachers from teacher education programs rated their preparation significantly higher than Alternative 4 teachers with regard to the following New Hampshire Department of Education competency: participate skillfully in the development of written individualized educational plans, showing sensitivity to all students.
8. Teachers from teacher education programs rated their preparation significantly higher than Alternative 4 teachers with regard to the following New Hampshire Department of Education competency: employ and evaluate a variety of specific teaching techniques, materials, media and research appropriate to given learning situations.

9. Teachers from teacher education programs rated their preparation significantly higher than Alternative 4 teachers with regard to the following New Hampshire Department of Education competency: teach those reading, communication, and study skills, essential for mastery of content.
10. Teachers from teacher education programs rated their preparation significantly higher than Alternative 4 teachers with regard to the following New Hampshire Department of Education competency: use the results of formal and informal evaluations for identifying academic, social, and behavioral strengths and difficulties for all students.
11. Teachers from teacher education programs rated their preparation significantly higher than Alternative 4 teachers with regard to the following New Hampshire Department of Education competency: interact constructively with pupils, teachers, administrators, and parents.

The following results are related to the analysis of teachers' reasons for entering teaching with regard to certification program.

1. A significantly higher percentage of teachers from teacher education programs reported that they chose teaching as a career because of the opportunity to be creative.
2. A significantly higher percentage of teachers from teacher education programs reported that they chose teaching as a career because of the opportunity to work with young people.

3. A significantly higher percentage of teachers from teacher education programs reported that they chose teaching as a career because of prior experiences with youth.
4. A significantly higher percentage of teachers from the Alternative 4 programs reported that they chose teaching as a career because of interest in their subject matter.
5. A significantly higher percentage of teachers from the Alternative 4 programs reported that they chose teaching as a career because of job security.
6. A significantly higher percentage of teachers from the Alternative 4 programs reported that they chose teaching as a career because of current high demand for teachers in this field.

Other Results

Four year program graduates versus Alternative 4: In the literature review, it was noted that researchers found differences between four year teacher education programs and alternative certification programs (Soares, 1987; Hutton, 1987; Hawk, Coble, & Swanson, 1985; Dewalt & Ball, 1987). Incidental results were also found in this study related to comparisons of four year teacher education programs to Alternative 4 programs. These results were not found when identical comparisons were made of fifth year and five year teacher education programs to Alternative 4 programs. Some of these differences favor four year teacher education programs, and some favor Alternative 4 programs. They are interesting results, however, and could lead

to further study comparing four year teacher education programs to fifth year teacher education programs.

T tests indicated that principals rated teachers from undergraduate teacher education programs higher than teachers from Alternative 4 programs on the Planning and Preparation subscales, comprised of the following items: develops, evaluates and modifies curriculum according to student progress in academic, social and behavioral areas; plans and organizes lessons and activities effectively; relates physical, social, emotional, and intellectual development to planning and organizing instruction; identifies and sequences goals and objectives for instruction; integrates into the subject area such relevant life-long skills as career planning, consumerism, exercising individual rights and responsibilities, and solving problems; cooperates with others in planning curriculum; is flexible in adjusting plans to deal with unplanned events; participates skillfully in the development of written individualized educational plans, showing sensitivity to all students (TQ, 13-20: $x_1 = 3.57$, $x_2 = 3:40$, $t = 3.0$, $p.09 < .10$).

There was a significantly higher percentage of males in the Alternative 4 programs than in the four year teacher education programs. (TQ, p.2, item m, $x^2 = 10.62$, df=1, N=154, p.00<.10).

Compared to four year teacher education programs, a significantly higher percentage of Alternative 4 teachers indicated job security as an important motivation for choosing the teaching profession. (TQ, p.5, item 1.04, $x^2 = 3.76$, df=1, N=154, p.05<.10).

Compared to four year teacher education programs, a significantly higher percentage of Alternative 4 teachers were supervised by their principals. (TQ, p.3, item 6.01, $x^2 = 3.12$, df=1, N=125, p.08<.10).

Compared to four year teacher education programs, a significantly higher percentage of Alternative 4 teachers had no cooperating teacher. (TQ, p.3, item 6.07, $x^2 = 2.94$, df=1, N=125, p.09<.10).

Compared to Alternative 4 teachers, a significantly higher percentage of four year teacher education program teachers rated their teaching methods courses as valuable. (TQ, p.4, item 10.a.1, $x^2 = 6.56$, df=1, N=144, p .01<.10).

Compared to Alternative 4 teachers, a significantly higher percentage of four year teacher education program teachers indicated that their program prepared them satisfactorily on the New Hampshire State Department of Education competency: acts in a professional manner with regard to the rights and responsibilities of the teacher. (TQ, p.5, item 13C, $x^2 = 18.48$, df=1, N=152, p.00<.10).

Compared to Alternative 4 teachers, a significantly higher percentage of four year teacher education program teachers indicated that their program prepared them satisfactorily on the New Hampshire State Department of Education competency: uses the results of formal and informal evaluations for identifying academic, social and behavioral strengths and difficulties for all students. (TQ, p.6, item 13.l, $x^2 = 6.05$, df=1, N=149, p.01<.10).

Compared to Alternative 4 teachers, a significantly higher percentage of four year teacher education program teachers were education majors. (TQ, p.1, item C, $x^2 = 56.75$, df=1, N=154, p.00<.10).

Compared to Alternative 4 teachers, a significantly higher percentage of four year teacher education program teachers indicated that improvements or increases were needed in the field or practicum experience. (TQ, p.4, item 12, $x^2 = 11.52$, df=1, N=115, p.01<.10).

Gender Differences: There were also additional findings, not central to this study, with regard to gender. Women teachers were rated significantly higher across all programs by their principals on professional attributes, planning, instruction, and assessment.

T-tests indicated that there were significant differences in the responses for four of the six subscales, each comprised of several individual survey items. Principals' ratings of female teachers were higher than principals' rating of male teachers. They rated female teachers higher on the Professional Attributes subscale, comprised of the following items: demonstrates commitment to teaching; shows interest and enthusiasm in work; shows leadership in curriculum development; shows leadership in staff development; demonstrates the ability to be an outstanding career educator; develops and maintains good relations with parents; keeps parents informed of child's progress including use of notes, telephone calls, and conferences; demonstrates knowledge of subject area; shows understanding of the historical, philosophical, and sociological foundations underlying public education in the United States; shows understanding of the purposes, organizations, and operation of the total educational program of the school; acts in a professional and ethical manner with regard to the rights and responsibilities of the teacher; follows the laws and regulations that prohibit discrimination on the basis of race, national origin, sex, age, or handicapping

conditions (PQ, 1-12:x_1 = 3.32, x_2 = 3.66, t = 2.62, p.01<.05)., on the Planning and Preparation Subscale, comprised of the following items: develops, evaluates and modifies curriculum according to student progress in academic, social and behavioral areas; plans and organizes lessons and activities effectively; relates physical, social, emotional, and intellectual development to planning and organizing instruction; identifies and sequences goals and objectives for instruction; integrates into the subject area relevant life-long skills as career planning, consumerism, exercising individual rights and responsibilities, and solving problems; cooperates with others in planning curriculum; is flexible in adjusting plans to deal with unplanned events; participates skillfully in the development of written individualized educational plans, showing sensitivity to all students (PQ, 13-20: x_1 = 3.32, x_2 = 3.65, t = 2.59, p.01<.05), and on the Instructional Skills Subscale, comprised of the following items: presents lessons in a clear, enthusiastic and logical manner; facilitates class discussions; stimulates students' interest in the lessons and activities; employs and evaluates a variety of specific teaching techniques, materials, media, and research appropriate to given learning situations; teaches those reading, communication, and study skills essential for effective mastery of content at all grade levels; implements lesson plans in an efficient manner to maximize instructional time on task; makes provisions to accommodate individual differences appropriate to the needs, interests, and abilities of students; makes sure that each student is involved in the instruction; works effectively with exceptional children in the regular classroom as required by law (PQ, 21-29: x_1 = 3.39, x_2 = 3.68, t = 2.21, p.03<.05). Principals also rated women higher on the Assessment of Student Learning Subscale, comprised of the following items:

uses the results of formal and informal evaluations for identifying academic, social, and behavioral strengths and difficulties for all students; provides prompt, ongoing feedback to students and assists them in the evaluation of their own growth and development; clearly communicates grading procedures to students; holds high but reasonable expectations (PQ, 30-33: $x_1 = 3.40$, $x_2 = 3.75$, $t = 2.01$, p.05=.05).

These results are presented in Table 15.

Table 15

Principals' Evaluations of Teachers' Performance

Analysis of Inservice Performance Subscales With Regard to Gender

Group 1 = Teacher Education Teachers
Group 2 = Alternative 4 Teachers

	X	S.D.	t	P	D.F.
I. PROFESSIONAL ATTRIBUTES SUBSCALE	$x_1 = 3.32$ $x_2 = 3.66$	.53 .66	2.62.	.01<.05*	134

Individual Questionnaire Items

1. Demonstrates commitment to teaching.
2. Shows interest and enthusiasm in work.
3. Shows leadership in curriculum development.
4. Shows leadership in staff development.
5. Demonstrates the ability to be an outstanding career educator.
6. Develops and maintains good relations with parents.
7. Keeps parents informed of child's progress including use of notes, telephone calls, and conferences.
8. Demonstrates knowledge of subject area.
9. Shows understanding of the historical, philosophical, and sociological foundations underlying public education in the United States.

Table 15 (cont.)

10. Shows understanding of the purposes, organizations, and operation of the total educational program of the school.

11. Acts in a professional and ethical manner with regard to the rights and responsibilities of the teacher.

12. Follows the laws and regulations which prohibit discrimination on sex, the basis of race, national origin, age, or handicapping conditions.

* Denotes significance at .05 level

	X	S.D.	t	P	D.F.
II. PLANNING AND PREPARATION SUBSCALE	$x_1 = 3.32$ $x_2 = 3.65$	.58 .65	2.59	.01<05*	134

Individual Questionnaire Items

13. Develops, evaluates and modifies curriculum according to student progress in academic, social and behavioral areas.

14. Plans and organizes lessons and activities effectively.

15. Relates physical, social, emotional, and intellectual development to planning and organizing instruction.

16. Identifies and sequences goals and objectives for instruction.

17. Integrates into the subject area such relevant lifelong skills as career planning, consumerism, exercising individual rights and responsibilities, and solving problems.

Table 15 (cont.)

18. Cooperates with others in planning curriculum.

19. Is flexible in adjusting plans to deal with unplanned events.

20. Participates skillfully in the development of written individualized educational plans, showing sensitivity to all students.

* Denotes significance at .05 level

	X	S.D.	t	P	D.F.
III. INSTRUCTIONAL SKILLS SUBSCALE	$x_1 = 3.39$ $x_2 = 3.68$	.60 .69	2.21	.03< =.05*	134

Individual Questionnaire Items

21. Presents lessons in a clear, enthusiastic and logical manner.

22. Facilitates class discussions.

23. Stimulates students' interest in the lessons and activities.

24. Employs and evaluates a variety of specific teaching techniques, materials, media, and research appropriate to given learning situations.

25. Teaches those reading, communication, and study skills essential for effective mastery of content at all grade levels.

26. Implements lesson plans in efficient manner to maximize instructional time on task.

Table 15 (cont.)

27. Makes provisions to accommodate individual differences appropriate to the needs, interests, and abilities of students.

28. Makes sure that each student is involved in the instruction.

29. Works effectively with exceptional children in the regular classroom as required by law.

* Denotes significance at .05 level

	X	S.D.	t	P	D.F.
IV. ASSESSMENT OF STUDENT LEARNING SUBSCALE	$x_1 = 3.40$ $x_2 = 3.75$	.62 .90	2.01	.05 =.05*	134

Individual Questionnaire Items

30. Uses the results of formal and informal evaluations for identifying academic, social and behavioral strengths and difficulties for all students.

31. Provides prompt, ongoing feedback to students and assists them in the evaluation of their own growth and development.

32. Clearly communicates grading procedures to students.

33. Holds high but reasonable expectations.

* Denotes significance at .10 level

Table 15 (cont.)

	X	S.D.	t	P	D.F.
V. CLASSROOM CLIMATE/MANAGEMENT SUBSCALE	$x_1 = 3.48$ $x_2 = 3.78$	.60 1.03	1.54	.12> .05	134
Individual Questionnaire Items					
34. Exhibits skill in managing class for type of activities in progress.					
35. Uses a variety of behavioral management techniques effectively.					
36. Practices democratic principles which show consideration for rights of others and encourages students to do the same.					

* Denotes significance at .10 level

	X	S.D.	t	P	D.F.
VI. INTERPERSONAL SKILLS SUBSCALE	$x_1 = 3.53$ $x_2 = 3.81$	.56 .99	1.54	.13>.05	134
Individual Questionnaire					
37. Shows leadership qualities among peers.					
38. Is considerate and fair in relations with pupils.					
39. Interacts constructively with pupils, teachers, administrators, and parents.					

Table 15 (cont.)

40. Respects each student as an individual.

41. Supports student interests, problems, and accomplishments in and out of the classroom.

* Denotes significance at .10 level

Since all of these results are not central to the issues in this study, future research could be designed to explore these differences more directly. (See Chapter V; Recommendations for Future Research.)

CHAPTER V

SUMMARY, DISCUSSION OF RESULTS, CONCLUSIONS, AND RECOMMENDATIONS

Summary

This study addresses the need for more research to help resolve the issues of the nationwide debate between advocates of state sponsored, alternative certification programs, and advocates of collegiate sponsored, teacher education programs. The State of New Hampshire has both alternative certification and teacher education programs that are representative of those in other states nationwide.

The population consisted of 660 elementary and secondary teachers of the core subjects, math, science, language arts, and social studies, who had no prior certification and who were certified between 1987 and 1990, inclusive. The random sample included 492 of these teachers.

Two questionnaires were used to gather data. One was to gather program evaluations from teachers and the other was to gather teacher evaluations from principals.

Data has been collected on differences between the certification routes in terms of the five central issues for this study: academic credentials, inservice performance, practicum supervision, pedagogical and professional courses, and intention to remain in teaching. Data on related research questions of current status, and reasons for entering teaching was also collected. The statistical procedures used to analyze the data were the chi-square test of independence

and the t-test. Analyses were performed on individual survey items from the teachers' questionnaire and on subscales of individual items from the principals' questionnaire.

Discussion of Results

Implications and possible explanations are discussed with regard to each of the significant differences for each of the five hypotheses, where significant differences were found.

The following discussion is related to the significant differences from the principals' ratings of teachers' inservice performance with regard to certification program.

Principals rated the teachers from the teacher education programs higher than Alternative 4 teachers on the Instructional Skills subscale.

It should be noted that three of the seven items in this subscale are competencies specified by the New Hampshire Department of Education for all alternative certification candidates. Yet teacher education programs are offering better preparation on these competencies than are the Alternative 4 programs. It should also be noted that the Alternative 4 teachers had full professional responsibilities for their first three years before being certified. They, therefore, had significantly more teaching experience than the teachers from teacher education programs.

The Instructional Skills subscale is comprised of the following items:

- *presents lessons in a clear, enthusiastic and logical manner;*
- *facilitates class discussions;*
- *stimulates students' interest in the lessons and activities;*

- **employs and evaluates a variety of specific teaching techniques, materials, media, and research appropriate to given learning situations;*
- **teaches those reading, communication, and study skills essential for effective mastery of content at all grade levels;*
- *implements lesson plans in an efficient manner to maximize instructional time on task;*
- *makes provisions to accommodate individual differences appropriate to the needs, interests, and abilities of students.*
- *makes sure that each student is involved in the instruction;*
- **works effectively with exceptional children in the regular classroom as required by law.*

Principals rated the teachers from the teacher education teachers higher than Alternative 4 teachers on the Planning and Preparation subscale.

It should be noted that half of the items (four of eight) in this subscale are competencies specified by the New Hampshire Department of Education for all alternative certification candidates. These four competencies starred below have been rated higher than teacher education program teachers despite the fact that teacher education programs do not focus exclusively on these competencies. Again, it should also be noted that the Alternative 4 teachers had an average of three years more teaching experience than the teachers from teacher education programs. One would expect the ill effects of preparation to become less significant with increased experience. Instead, they are still significant after an average of five to six years of teaching. The Planning and Preparation subscale is comprised of the following items:

- **develops, evaluates and modifies curriculum according to student progress in academic, social and behavioral areas;*
- *plans and organizes lessons and activities effectively;*
- **relates physical, social, emotional, and intellectual development to planning and organizing instruction;*

- *identifies and sequences goals and objectives for instruction;*
- **integrates into the subject area such relevant life-long skills as career planning, consumerism, exercising individual rights and responsibilities, and solving problems;*
- *cooperates with others in planning curriculum;*
- *is flexible in adjusting plans to deal with unplanned events;*
- **participates skillfully in the development of written individualized educational plans, showing sensitivity to all students.*

When considering these differences in performance, gender differences in the sample need to be taken into account. It is possible that differences in the sample account for some of the differences in principals' ratings of teachers' performance. While most of the teachers in both the teacher education and the Alternative 4 groups are female, there is a higher percentage of females in the teacher education group, (79% compared to 61%). The x^2 test shows that this is a significant difference $x^2 = 5.12$, p. .02< ,05), and it was demonstrated that there were significant differences in principals' ratings of teacher performance with regard to gender (see Other Results). All four of these differences favored female teachers. These results support the possibility that the higher ratings for teacher education teachers could be, in part, the result of gender differences.

The following discussion is related to the significant differences from teachers' ratings of courses with regard to certification program.

A significantly higher percentage of teachers from teacher education programs rated their courses in teaching methods and foundations of education as valuable.

It should be expected that teacher education programs are organized around a systematic schedule of courses and practicum experiences. Well

planned course offerings are less likely in an alternative certification program where untrained school administrators make individual decisions about which competencies need to be addressed. The competencies are also often addressed by less rigorous workshops rather than courses. The Alternative 4 programs, like many alternative certification programs also stress on-the-job training instead of courses.

The following discussion is related to the significant differences from teachers' ratings of practicum supervision with regard to certification program.

> *A significantly higher percentage of the teachers from teacher education programs reported that they had a practicum, defined as a closely supervised, practical, classroom training experience. Ninety-eight percent of the teacher education teachers reported that they had a practicum compared to 21% of the Alternative 4 teachers.*

This points out one of the most important differences between the teacher education and Alternative 4 programs. This important difference is that teacher education candidates are closely supervised during their classroom training experience, and the Alternative 4 candidates are not. It should be noted that the emphasis in most alternative programs, including the Alternative 4 Program, is on practical classroom training instead of courses. Despite this emphasis on practical training in the classroom, 79% of the Alternative 4 teachers did not receive close supervision.

> *Most teachers from teacher education programs reported that they had a shared practicum where they assumed gradual responsibility, while most of the remaining Alternative 4 teachers who said they had a practicum (8) reported that they had complete responsibility from the beginning.*

The practicum for teacher education candidates takes place both in the classroom of and under the daily supervision of a cooperating teacher. The candidate at first observes this cooperating teacher conduct classes. After this observation period of about two to three weeks, the candidate begins to teach or co-teach some of the classes under the direct supervision of the cooperating teacher. The candidate continues to observe the cooperating teacher daily, while gradually assuming more of the cooperating teacher's classes. The cooperating teacher continues to give daily feedback and coaching to the candidate throughout the practicum. While this is the norm for the teacher education candidate, none of this is true for the alternative candidate. Alternative 4 candidates have complete responsibility for a full load of classes on the first day of school, with no chance for the kind of close supervision described above for the teacher education candidate.

> *All teachers from teacher education programs were supervised by college faculty. No Alternative 4 teachers were supervised by college faculty.*

This result was expected, because the teacher education programs are designed so that their faculty become supervisors in addition to the cooperating teachers. Unlike collegiate based teacher education programs that are designed to provide that expertise, public school systems have not traditionally had the resources to provide strong supervision.

> *Most teachers from teacher education programs reported that they were observed by their cooperating teacher from 5 to 13+ hours per week, compared to 0 to 4 hours for most Alternative 4 teachers.*

The teacher education candidates were observed more by their cooperating teachers, because they were allowed to gradually share responsibilities under the hourly and daily supervision of the cooperating teacher rather than assume complete responsibilities immediately.

> *A significantly higher percentage of teachers from teacher education programs assessed their cooperating teacher as valuable.*

The cooperating teachers of Alternative 4 candidates were rated as less valuable. Because they have their own full-time responsibilities in a completely different classroom, the cooperating teachers for Alternative 4 candidates did not have anywhere near the same amount of time to observe their candidates.

> *A significantly higher percentage of teachers from teacher education programs rated their practicum as valuable when compared to the Alternative 4 teachers.*

This may be because the teachers from teacher education programs were observed more and, therefore, received more feedback from the cooperating teachers and college faculty. The fact that they were allowed to assume responsibility gradually may also be a reason why teachers from teacher education programs rated their practicum as more valuable.

> *All four (100%) Alternative 4 teachers who responded to this item assessed the district staff as valuable, compared to 75 (38%) of the teachers from teacher education programs.*

Four of seven (57%) Alternative 4 teachers indicated they were supervised by the principal compared to 53 (27%) of the teachers from teacher education programs.

The reason for these two results lies in the difference in the primary responsibility for supervision between Alternative 4 candidates and teacher education candidates. The primary responsibility for the supervision of Alternative 4 candidates lies with the principal and other district staff, whereas the primary responsibility for the supervision of teacher education candidates lies with the cooperating teacher and the college faculty.

The following discussion is related to the significant differences from teachers' ratings of the overall preparation with regard to certification program.

A significantly higher percentage of teachers from teacher education programs rated their overall certification program as valuable when compared to the Alternative 4 teachers.

Teachers from teacher education programs also rated their preparation significantly higher than Alternative 4 teachers with regard to ten specific competencies:

- *understanding the purposes, organization, and operation of the total educational program of the school;*
- *acting in a professional and ethical manner with regard to the rights and responsibilities of the teacher;*
- **developing, evaluating, and modifying curriculum according to student progress in academic, social, and behavioral areas;*
- **relating physical, social, emotional, and intellectual development to planning and organizing instruction;*

- **integrating into the subject area such relevant life-long skills as career planning, consumerism, exercising individual rights and responsibilities, and solving problems;*
- **participate skillfully in the development of written individualized educational plans, showing sensitivity to all students;*
- **employ and evaluate a variety of specific teaching techniques, materials, media and research appropriate to given learning situations;*
- **teach those reading, communication, and study skills, essential for mastery of content;*
- *use the results of formal and informal evaluations for identifying academic, social, and behavioral strengths and difficulties for all students; and*
- *interact constructively with pupils, teachers, administrators, and parents.*

These are ten of the fourteen competencies specified by the New Hampshire Department of Education to evaluate all alternative candidates for certification. These Department of Education competencies were also used by the principals to rate the teachers in this study. Six of these competencies are the same as those rated highly by the principals when they rated the teacher education candidates more favorably than the Alternative 4 candidates on both the Instructional Skills and the Planning and Preparation subscales. These six competencies are starred above. This means that there is considerable agreement between teachers and principals with regard to preparation on these New Hampshire Department of Education competencies. The principals who rated teachers from teacher education programs were in agreement with them that they were prepared in these six competencies. The principals' ratings were also consistent with those of the Alternative 4 candidates that they were prepared to a significantly less degree.

The following discussion is related to the significant differences in teachers' reasons for entering teaching with regard to certification program.

> *A significantly higher percentage of teachers from teacher education programs reported that they chose teaching as a career because of the opportunity to be creative.*
>
> *A significantly higher percentage of teachers from teacher education programs reported that they chose teaching as a career because of the opportunity to work with young people.*
>
> *A significantly higher percentage of teachers from teacher education programs reported that they chose teaching as a career because of prior experiences with youth.*
>
> *A significantly higher percentage of teachers from the Alternative 4 programs reported that they chose teaching as a career because of interest in their subject matter.*
>
> *A significantly higher percentage of teachers from the Alternative 4 programs reported that they chose teaching as a career because of job security.*
>
> *A significantly higher percentage of teachers from the Alternative 4 programs reported that they chose teaching as a career because of current high demand for teachers in this field.*

There is a distinct difference between the teachers with regard to career motivation. Teacher education teachers are more child-oriented, and Alternative 4 teachers are more oriented to job availability. There is also a clear difference in career motivation between the child-oriented teacher education program teachers and the subject-oriented Alternative 4 teachers. When considering this latter difference, the fact that most of the teachers from teacher education programs were at the elementary level, and most Alternative 4

teachers were at the secondary level needs to be taken into account. It may be that the child versus subject orientations are related more to the elementary or secondary level, rather than the different certification programs.

Conclusions

Those teachers from teacher education programs were mostly female and teaching in rural, elementary schools. Most graduated from colleges in New Hampshire, were non-education majors, and were working on other degrees. Most were certified in 1988 or 1989, had been certified for two or three years, and had been teaching for two or three years.

Those teachers from Alternative 4 programs were mostly female and teaching in rural, secondary schools. Most graduated from colleges outside of new Hampshire, were non-education majors, and were working on other degrees. Most were certified in 1988 or 1989, had been certified for two or three years, and had been teaching for five or six years. The Alternative 4 teachers had full professional responsibilities for their first three years before being certified. They, therefore, had an average of three years more teaching experience than the teachers from teacher education programs.

When the evaluations of these programs were compared, many significant differences were found. Almost all were in favor of teacher education programs. Results indicated that teachers from collegiate sponsored, teacher education programs were rated significantly higher by their principals on both instructional skills and planning and preparation. It should be noted that Alternative 4 candidates had significantly more years of teaching

experience at the time the judgments were made. This is remarkable, because one would expect the ill effects of preparation to become less significant with increased experience.

Teachers from teacher education programs rated their programs significantly higher with regard to coursework, practicum supervision, and overall preparation. They rated their preparation significantly higher than Alternative 4 teachers on ten of the fourteen competencies used by the New Hampshire Department of Education to certify all Alternative candidates. All of the significant differences relating to those competencies favored teacher education programs. Six of these competencies are the same as those rated highly by the principals when they rated the teacher education candidates more favorably than the Alternative 4 candidates on both the Instructional Skills and the Planning and Preparation subscales. This means that there is considerable agreement between teachers and principals with regard to preparation on these New Hampshire Department of Education competencies. The principals who rated teachers from teacher education programs were in agreement with them that they were prepared in these six competencies. The principals' ratings were also consistent with those of the Alternative 4 candidates that they were prepared to a significantly less degree. Teachers from teacher education programs also had more child-oriented reasons for entering teaching.

Teacher education programs were found to be superior.for twenty-seven of the twenty-nine significant differences found in this study. Two significant differences favored the Alternative 4 programs. These were that a significantly higher percentage of Alternative 4 teachers assessed the district staff as valuable, and a significantly higher percentage of Alternative 4 teachers

indicated that they were supervised by the principal. It is important to understand that only four Alternative 4 candidates responded to these two items, and their responses reflected the fact that they were supervised by district staff or principals, whereas Alternative 1 teachers were supervised by teachers and university personnel.

Even though this study was implemented in New Hampshire, the results of this study inform the issues in the nationwide debate. On the first central issue of this study, academic credentials, no significant differences were found. This counters the position supported by the Nation at Risk report that students in teacher education programs are academically inferior. This result would support the findings of Fisher and Feldman that education students compare equally to non-education students.

On the second central issue for this study, inservice performance, the results were conclusively in favor of teacher education programs, despite the fact that Alternative 4 teachers had an average of three more years of teaching experience. Significant differences were found in the areas of instructional skills and planning and preparation. No results favored Alternative 4 programs. This contradicts the Dewalt & Ball study of twelve dimensions of teacher performance that resulted in an inconclusive two dimensions in favor of alternative certification programs. This study, which includes elementary and secondary mathematics, science, social studies and English/language arts teachers, also goes further than the Hawk, Coble, & Swanson study that included only secondary mathematics teachers. This study also suggests that teachers who have undergone preparation through teacher education

programs are superior in performance to teachers from alternative programs. This refutes the notion that teacher education programs make little or no difference in the effectiveness of teachers.

On the third issue, the value of courses, significant differences were in favor of teacher education programs. This is consistent with the findings of Darling-Hammond that teachers from teacher education programs rated their courses as more valuable than alternative teachers did. Since the Darling-Hammond study was limited to secondary mathematics and science teachers, however, the findings of this study can also be extended to secondary social studies and English/language arts as well as elementary teachers.

On the fourth central issue, the value of the practicum supervision, five of seven significant differences favored teacher education programs. The most important of these differences relates to whether or not the teachers had a practicum, defined as a closely supervised, classroom training experience. while 98% of the teachers from teacher education programs felt that they had such a practicum, only 21% of the alternative teachers felt that they had. This is surprising, because alternative certification programs generally emphasize the practicum or on-the-job training over courses. Despite this emphasis, 79% of the alternative program teachers felt that they did not receive a closely supervised practicum. Furthermore, the remaining 21% of alternative program teachers who felt that they did have a practicum, rated their hours of supervision, their cooperating teacher, and the practicum as significantly less valuable when compared to the teacher education program teachers, possibly because they had to assume full classroom responsibilities immediately, while the teacher education candidates assumed responsibilities gradually, under

close supervision. These findings are also consistent with the Darling-Hammond study, and could be generalized to secondary social studies, English/language arts, as well as elementary teachers.

On the fifth central issue for this study, the intention to remain in teaching, no significant difference was found. The earlier findings of Banks and Necco indicated that alternative certification teachers were leaving significantly earlier than teachers from teacher education programs. The intention to remain in teaching was an issue in this study, because of the assumed educational costs to children of training teachers on-the-job. Also, if alternative program teachers were leaving soon after being certified, then alternative certification would not be a viable solution to teacher shortages. While this study did not directly measure retention, intention to remain in teaching suggests no differences in the two groups.

In conclusion, the teacher education programs were found to be overwhelmingly superior to the Alternative 4 programs from the perspectives of both the participants and the principals who manage them. This study lends evidence to dispel the concern over the quality of teachers from teacher education programs in terms of both academic credentials and inservice performance. This study also shows that alternative certification programs simply do not provide the resources for high quality courses and practicum supervision. The states should no longer look to the already overburdened and untrained administrators to arrange courses and provide practicum supervision to on-the-job trainee teacher candidates.

Limitations

The results of this study have been affected by the following limitations:

1. *Non-respondent bias may have affected the results of this study.*

Despite high response rates (60% for the teachers' questionnaire and 70% for the principals' questionnaire), there remains a significant potential for non-respondent bias. I find the following study, however, encouraging.

A study was conducted to determine the extent and nature on non-respondent bias in the follow-up survey in 1981 of Michigan secondary vocational education students from the class of 1980. This study addressed the degree of similarity of certain demographic and status measures between those former students who responded to the follow-up survey in 1981 and those who did not. A representative sample of non-respondents was identified, and these subjects were asked the same questions that appear in the original survey instrument. The results of the non-responder sample were then compared with the data obtained from students who responded to the original survey. Conclusions drawn from the study included: (1) district educators responsible for the follow-up did, for the most part, successfully follow-up their completers and leavers, as was evident from the high return rate on the difficult task of obtaining complete information on 1,600 non-responders; (2) the information obtained from the respondents is a highly accurate estimate of the status of the universe of former vocational students surveyed, on most of the survey items (Instructional Development and Evaluation Associates, Inc., Berkeley, Michigan, 1981).

2. *The preponderance of satisfactory and very satisfactory responses from the principals' ratings may have detracted from the reliability of the data from that questionnaire.*

A review of studies on the validity of principals' rating scales revealed both positive and negative results. A study by McMillin (1991) compared teachers and principals' perceptions of six elements of effective teaching. There was a significant mean difference between elementary teachers' and principals' value ratings on one of the six elements, classroom climate. There were no significant differences between principals' and teachers' ratings on the other five elements of effective teaching: questioning, set induction, stimulus variation, reinforcement, and closure.

Another study evaluated the performance of beginning teachers who graduated from an urban regional state university. The results of a sample of beginning teachers on the Florida performance Measurement System was compared with principals' perceptions of beginning teachers' strategies and weaknesses and with the beginning teachers' own perceptions. The ratings on the generic teaching competencies by principals and beginning teachers were also compared. A congruence was found across groups, and there was shared agreement on the major strengths of the beginning teachers, with communication and human relation skills listed as strengths by both groups (Center et. al., 1985).

Despite these studies, there is also evidence that there is little correlation between principals' assessments of teacher performance and the amount students learn (Medley & Coker, 1987). In a study undertaken to assess the accuracy of principals' judgments of the effectiveness of the teachers

they supervise, findings revealed that the relationship between principals' judgments of teacher effectiveness and pupils' gains on achievement tests is very low (Coker, 1985).

According to McGreal (1990), supervisors who use rating scales often base evaluations on overall impressions and little variation is found within ratings in separate categories. McGreal also discusses research on a variety of limitations of rating scales including the halo effect, leniency, rater bias and validity. I expect that some of the above limitations may also apply to this study.

While the use of a rating scale for teacher performance has possible limitations, it is deemed an appropriate approach for this study, given the large teacher sample (492), the large geographical area (the entire state of New Hampshire), and the limited resources available in the study. In further defense of the use of principals' rating scales in this study, an item analysis was performed on each of the six questionnaire subscales, and high reliability coefficients were found on each subscale:

Subscale	Alpha
Professional Attributes	.9135
Planning and Preparation	.9247
Instructional Skills	.9461
Assessment of Student Learning	.8405
Classroom Climate/Management	.9105
Interpersonal Skills	.9513

See Chapter III, Instruments for individual items.

Further research might well employ more holistic, site-based assessments of teacher performance.

3. *The study was based on a selected sample of elementary and secondary teachers of mathematics, science, readings, English/language arts, and social studies. The results cannot be generalized to teachers of other subjects.*
4. *The principals who received a questionnaire were only those whose teachers gave permission for their principals to rate them. Although a high percentage of the total sample of teachers gave permission, 33%, this may have biased the results of the principals' questionnaire.*

Recommendations for Certification Programs

To address the teacher shortage, I would recommend the following:

1. Attract college students of the shortage subject areas to collegiate sponsored, teacher education programs with state funded loans and scholarships.
2. Attract recent Bachelor of Arts degree holders of the shortage subject areas to collegiate sponsored, teacher education programs with state funded loans and scholarships.
3. Attract and recruit mid-career, transition professionals to collegiate sponsored, teacher education programs and accept company outplacements funds for tuition. Several large computer companies provide funds for outplacement and retraining of employees who are losing their positions. Many of these people have math and

science backgrounds that are subject areas of traditional teacher shortage. Also make course schedules flexible to accommodate time constraints of candidates making the transition.

Recommendations for Further Research

1. This study should be replicated in other states in order to support the generalizability of these findings.
2. Another study should be conducted to directly research similar questions to those in this study with regard to comparing four year, fifth year, and five year, integrated, teacher education programs.
3. Another study should be conducted to directly research questions of inservice performance with regard to gender.collegiate
4. Other studies should be conducted to determine which sponsored, teacher education programs are of the highest quality. The highest quality programs could then serve as models for other programs.
5. Another study should be conducted to compare the collegiate sponsored, teacher education programs to the newly instituted State Board of Education sponsored Alternative 5 Program.

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APPENDICES

APPENDIX A

Teachers' Questionnaire

QUESTIONNAIRE A **Teacher Number**

DEMOGRAPHIC DATA

Please answer the following questions. Any comments you wish to add on the back of the page would be appreciated. Confidentiality is guaranteed on all responses. Thank you for your assistance.

a) How many full years have you taught?

0 1 2 3 4 5 6 7 8 9 10

b) How many full years have you been a certified teacher?

0 1 2 3 4 5 6 7 8 9 10

c) What was your undergraduate major? _____

minor?_____ institution?_____

d) What type of certification program were you involved in? (Circle one)

1) Four year collegiate 2) Five year collegiate 3) Alternative 3

4) Alternative 4 5) Other; Please specify _____

e) What was your undergraduate grade point average? _____

f) Did you graduate with academic honors? ____ yes ____ no

g) Have you received, or are you working on any other degrees?____ yes ____ no
If yes, what degree? _____

h) In what type of school are you currently teaching? (Circle one)
1) Private, religious affiliated school 2) Private, not religious affiliated 3) Public School

i) In what type of community is your current school located? (Circle one)
1) Rural area / Small Town 2) Suburb 3) Urban area

j) The number of students in the school is? (Circle one)
1) under 100 2) 100-500 3) 500-1000 4) 1000-3000 5) over 3000

k) What is the socioeconomic status of most of the students in your current school? (Check one)
1) Lower or lower middle class_____ 2) Middle class_____
3) Upper middle or upper class_____ 4) Wide range of class levels_____

l) What is your age? _____

m) What is your sex? _____M _____F

n) What best describes you? (Check one)
1) ____American Indian or Alaskan native
2) ____Hispanic (regardless of race)
3) ____White (not of Hispanic origin)
4) ____Asian or Pacific Islander
5) ____Black (not of Hispanic origin)
6) ____Other

o) What was your main work activity if any BEFORE you entered your teacher training/certification program?_____
(If your main work activity was as a student, omit the next question.)

p) How many years had you been in the above field?_____

q) Prior to entering your recent teacher training program, had you ever held a certificate for teaching at any grade level from K-12? Please check one.
Yes_____ No_____
If yes, what was your area of certification? _____

r) Prior to entering your recent teacher training/certification program, had you ever taken education courses? Please check one. Yes_____ No_____
If you checked yes, please circle the number of courses.
0 1-2 3-4 5-6 More than 6

PART 1: THE REASONS THAT INITIALLY ATTRACTED YOU TO TEACHING AS A CAREER

1. **Which of the following reasons were <u>most</u> <u>important</u> in initially attracting you to teaching?** **(circle all that apply)**

Opportunity to be creative	01
Opportunity to work with young people	02
Interest in subject-matter field	03
Job security	04
Good working hours	05
Good vacation time	06
Provides added income	07
Good salary	08
Prior experiences with youth	09
The status and prestige of being a teacher	10
Contributes to the betterment of society	11
Others that I respect encouraged me to teach	12
Current high demand for teachers in this field	13
Compatibility of career and family	14
Other (please specify)	15

2. **Which of the above is the ONE MOST IMPORTANT REASON you were initially attracted to teaching?** **(Enter code from Question 1)** ___ ___

PART 2: YOUR TEACHER TRAINING/CERTIFICATION PROGRAM

3. How many weeks of teaching practicum (closely supervised classroom teacher training experience) were required by your teacher training/certification program? (If you did NOT have a teaching practicum component in your teacher training/ certification program, please check here _____and go to question 10).

a. Student teaching (4 Year Program): _____weeks
b. Teaching internship (5 Year Post Baccalaureate Program): _____weeks
c. Alternative 3 Program: _____weeks
d. Alternative 4 Program: _____weeks

4. Which was your primary level of responsibility as part of this teaching practicum? (Circle the one that most applies)

Complete responsibility for classroom teaching _____01
Shared responsibilities with classroom teacher _____02
Other arrangement (please specify) _____03

_____

5. On average, how many hours per week did you spend:
a. Teaching in a class during your practicum? _____
b. Observing teachers? _____

6. Who supervised your teaching practicum? (If you received no supervision, check here _____ and go to Question 10.)

(Circle all that apply)

Principal _____ 01
Other district personnel _____ 02
University supervisors _____ 03
Other university faculty _____ 04
Other students in the program _____ 05
Cooperating teacher(s) in the district (including master/mentor)
Supervising teachers _____ 06

(If you did not have a cooperating teacher, check here _____and go to Question 8)

7. On average, how many hours per week were you observed by or in discussion with the cooperating teacher(s) during your teaching practicum? (Circle one)

1) 0 hours 3) 5-8 hours 5) 13-16 hours 7) 21 hours or more
2) 1-4 hours 4) 9-12 hours 6) 17-20 hours

8. **On average, how many hours per week were you observed by or in discussion with supervisors (other than cooperating teachers) during your teaching practicum?**

1) 0 hours
2) 1-2 hours
3) 3-4 hours
4) 5-6 hours
5) 7-8 hours
6) 9-10 hours
7) 11 hours or more

9. **Please indicate your assessment of the supervision and/or assistance you received from the following personnel during your teaching practicum?**
(Circle NA if not applicable)

	Not at All Valuable			Extremely Valuable	Not Applicable
a. Cooperating teachers in the district	1	2	3	4	NA
b. Principal	1	2	3	4	NA
c. Other district personnel	1	2	3	4	NA
d. University supervisors	1	2	3	4	NA
e. Other university faculty	1	2	3	4	NA
f. Other students in the program	1	2	3	4	NA

10. **Please rate each of the following components of your teacher training/certification program in terms of its value in preparing you for a career in teaching. (Circle NA to indicate any components which were not part of your program.)**

	Not at All Valuable			Extremely Valuable	Not Applicable
a. Education coursework					
1. Pedagogy/teaching methods	1	2	3	4	NA
2. Courses in social, historical and political foundations of education	1	2	3	4	NA
3. Courses in human learning and development	1	2	3	4	NA
b. Subject area coursework	1	2	3	4	NA
c. Teaching practicum	1	2	3	4	NA

11. **Please rate the overall value of your training/certification program. (Circle one)**

Not at All Valuable			Extremely Valuable
1	2	3	4

12. **What recommendations would you make for improving the effectiveness of your teacher training/certification program?**

_____

_____

13. On the scale from 1 to 4, please rate how well your teacher training certification program (including both coursework and teaching practicum) prepared you to handle each of the following aspects of teaching.

SCALE: 1, 2, 3, or 4.

1 Very Unsatisfactory

2 Unsatisfactory

3 Satisfactory

4 Very Satisfactory

		(Circle one)			
		Very Unsatis-factory (1)	Unsatis-factory (2)	Satis-factory (3)	Very Satis-factory (4)
a.	Show understanding of the historical, philosophical, and sociological foundations underlying public education in the United States.	1	2	3	4
b.	Show understanding of the purposes, organizations and operation of the total educational program of the school.	1	2	3	4
c.	Act in a professional and ethical manner with regard to the rights and responsibilities of the teacher.	1	2	3	4
d.	Follow the laws and regulations which prohibit discrimination on the basis of race, national origin, sex, age, or handicapping conditions.	1	2	3	4
e.	Develop, evaluate, and modify curriculum according to student progress in academic, social, and behavioral areas.	1	2	3	4
f.	Relate physical, social, emotional, and intellectual development to planning and organizing instruction.	1	2	3	4
g.	Integrate into the subject area such relevant life-long skills as career planning, consumerism exercising individual rights and responsibilities, and solving problems.	1	2	3	4

		Very Unsatis-factory (1)	Unsatis-factory (2)	Satis-factory (3)	Very Satis-factory (4)
h.	Participate skillfully in the development of written individualized educational plans, showing sensitivity to all students.	1	2	3	4
i.	Employ and evaluate a variety of specific teaching techniques, materials, media and research appropriate to given learning situations.	1	2	3	4
j.	Teach those reading, communication, and study skills essential for effective mastery of content at all grade levels.	1	2	3	4
k.	Work effectively with exceptional children in the regular classroom as required by law.	1	2	3	4
l.	Use the results of formal and informal valuations for identifying academic, social, and behavioral strengths and and difficulties for all students.	1	2	3	4
m.	Use a variety of behavioral management techniques effectively	1	2	3	4
n.	Interact constructively with pupils, teachers, administrators, and parents.	1	2	3	4

PART 3: YOUR FUTURE PLANS

14. Which of the following statements characterize your current thinking about your career in elementary or secondary teaching? (Circle one)

I plan to make teaching my career_____ 1

I plan to leave teaching soon_____ 2

(please describe your reasons)_____

_____

_____

_____

Please estimate the total number of years that you plan to teach in the future.

_____

15. We request your permission to send another questionnaire to your principal or a supervisor most familiar with your performance. Data on your professional characteristics and performance as seen by others is critical to this study. As in the first questionnaire, all information regarding you will be strictly confidential. Principal's data will be coded anonymously. Your signature below will allow us to send the questionnaires to principals and complete this study.

I consent to have my principal/supervisor rate my performance.

Signature: _____

I do not consent to have my principal or supervisor rate my performance.

Signature: _____

Please understand that participation is voluntary, and you can withdraw from the study at any time.

THIS COMPLETES QUESTIONNAIRE A. THANK YOU FOR ASSISTING US IN THIS RESEARCH. YOUR TIME AND EFFORT ARE MUCH APPRECIATED.

We welcome your questions or comments. Please contact Jim Jelmberg at 868-7083.

ACKNOWLEDGEMENT

Several items on this questionnaire were originally used by the Rand Corporation in their 1988 survey of non-traditional math/science training programs. We are grateful to Rand for permission to use these items.

APPENDIX B

Teachers' Cover Letter

UNIVERSITY OF NEW HAMPSHIRE

Department of Education
College of Liberal Arts
Morrill Hall
Durham, New Hampshire 03824-3595
(603) 862-2310

February 15, 1991

Dear Madam:

We are asking for your help with a research study that is being conducted by the Education Department at the University of New Hampshire. This study seeks to answer the following question. "How do the different routes to teacher certification compare in terms of professional preparation?

This research is part of an ongoing nation-wide discussion about preparing teachers for the future. A large random sample of teachers certified in New Hampshire since 1986 has been selected from a list provided to us by the New Hampshire Department of Education.

Since you are one of the teachers in the sample, your role in this study is critical and may help shape policy in this area of education. Questionnaires will be sent to other teachers and administrators and your responses will become part of a database for this study. All information on all questionnaires will be coded anonymously and will be treated as group data. No attempt will be made to identify you as a respondent, and all information regarding you will be strictly confidential.

We certainly hope you will participate, and we want to thank you in advance for taking the time to help with this study.

Sincerely yours,

James R. Jelmberg
Graduate Student

Michael D. Andrew
Professor of Education

ab

enclosure: Questionnaire

UNIVERSITY OF NEW HAMPSHIRE

Department of Education
College of Liberal Arts
Morrill Hall
Durham, New Hampshire 03824-3595
(603) 862-2310

February 15, 1991

Dear Sir:

We are asking for your help with a research study that is being conducted by the Education Department at the University of New Hampshire. This study seeks to answer the following question. "How do the different routes to teacher certification compare in terms of professional preparation?

This research is part of an ongoing nation-wide discussion about preparing teachers for the future. A large random sample of teachers certified in New Hampshire since 1986 has been selected from a list provided to us by the New Hampshire Department of Education.

Since you are one of the teachers in the sample, your role in this study is critical and may help shape policy in this area of education. Questionnaires will be sent to other teachers and administrators and your responses will become part of a database for this study. All information on all questionnaires will be coded anonymously and will be treated as group data. No attempt will be made to identify you as a respondent, and all information regarding you will be strictly confidential.

We certainly hope you will participate, and we want to thank you in advance for taking the time to help with this study.

Sincerely yours,

James R. Jelmberg
Graduate Student

Michael D. Andrew
Professor of Education

ab

enclosure: Questionnaire

APPENDIX C

Principals' Questionnaire

QUESTIONNAIRE B FOR PRINCIPALS

EXPLANATION OF TEACHER RATING SCALE

To the principal:

Please rate each teacher in accordance with the following guidelines.

CRITERION: The reference point used in this scale is all the teachers you have ever supervised

SCALE: 1, 2, 3, or 4. Circle one.

1 Very Unsatisfactory
The teacher demonstrates this behavior seldom or never, or has acquired this attribute to a slight degree, and ranks in the lowest quarter of teaching performance, which falls at or below the first quartile or 25th percentile.

2 Unsatisfactory
The teacher demonstrates this behavior occasionally, or has acquired this attribute to some degree, and ranks in the second quarter of teaching performance, which falls between the first quartile and the second quartile (from the 26th to the 50th percentile).

3 Satisfactory
The teacher demonstrates this behavior often, or has acquired this attribute to a considerable degree, and ranks in the third quarter of teaching performance, which falls between the second quartile and the third quartile (from the 51st to the 75th percentile).

4 Very Satisfactory
The teacher demonstrates this behavior very often, or has acquired this attribute to a great degree, and ranks in the highest quarter of teaching performance, which falls above the third quartile (above the 75th percentile).

Teacher Name_____

Teacher Number_____

TEACHER CHARACTERISTICS AND PERFORMANCE BEHAVIORS

Please rate this teacher in accordance with the previous guidelines.

I. PROFESSIONAL ATTRIBUTES

Circle one:

	Very Unsatisfactory Lowest 25%	Unsatisfactory Next 25%	Satisfactory Next 25%	Very Satisfactory Highest 25%
1. Demonstrates commitment to teaching.	1	2	3	4
2. Shows interest and enthusiasm in work.	1	2	3	4
3. Shows leadership in curriculum development.	1	2	3	4
4. Shows leadership in staff development	1	2	3	4
5. Demonstrates the ability to be an outstanding career educator.	1	2	3	4
6. Develops and maintains good relations with parents.	1	2	3	4
7. Keeps parents informed of child's progress including use of notes, telephone calls, and conferences.	1	2	3	4
8. Demonstrates knowledge of subject area.	1	2	3	4
9. Shows understanding of the historical, philosophical, and sociological foundations underlying public education in the United States.	1	2	3	4

Circle one:

	Very Unsatisfactory Lowest 25%	Unsatisfactory Next 25%	Satisfactory Next 25%	Very Satisfactory Highest 25%
10. Shows understanding of the purposes, organizations, and operation of the total educational program of the school.	1	2	3	4
11. Acts in a professional and ethical manner with regard to the rights and responsibilities of the teacher.	1	2	3	4
12. Follows the laws and regulations which prohibit discrimination on the basis of race, national origin, sex, age, or handicapping conditions.	1	2	3	4

II. PLANNING AND PREPARATION

13. Develops, evaluates and modifies curriculum according to student progress in academic, social and behavioral areas.	1	2	3	4
14. Plans and organizes lessons and activities effectively.	1	2	3	4
15. Relates physical, social, emotional, and intellectual development to planning and organizing instruction.	1	2	3	4
16. Identifies and sequences goals and objectives for instruction.	1	2	3	4
17. Integrates into the subject area such relevant life-long skills as career planning, consumerism, exercising individual rights and responsibilities, and solving problems.	1	2	3	4

Circle one:

	Very Unsatisfactory Lowest 25%	Unsatisfactory Next 25%	Satisfactory Next 25%	Very Satisfactory Highest 25%
18. Cooperates with others in planning curriculum.	1	2	3	4
19. Is flexible in adjusting plans to deal with unplanned events.	1	2	3	4
20. Participates skillfully in the development of written individualized educational plans, showing sensitivity to all students.	1	2	3	4

III. INSTRUCTIONAL SKILLS

21. Presents lessons in a clear, enthusiastic and logical manner.	1	2	3	4
22. Facilitates class discussions.	1	2	3	4
23. Stimulates students' interest in the lessons and activities.	1	2	3	4
24. Employs and evaluates a variety of specific teaching techniques, materials, media, and research appropriate to given learning situations.	1	2	3	4
25. Teaches those reading, communication, and study skills essential for effective mastery of content at all grade levels.	1	2	3	4
26. Implements lesson plans in efficient manner to maximize instructional time on task.	1	2	3	4

Circle one:

	Very Unsatisfactory Lowest 25%	Unsatisfactory Next 25%	Satisfactory Next 25%	Very Satisfactory Highest 25%
27. Makes provisions to accommodate individual differences appropriate to the needs, interests, and abilities of students.	1	2	3	4
28. Makes sure that each student is involved in the instruction.	1	2	3	4
29. Works effectively with exceptional children in the regular classroom as required by law.	1	2	3	4

IV: ASSESSMENT OF STUDENT LEARNING

30. Uses the results of formal and informal evaluations for identifying academic, social and behavioral strengths and difficulties for all students.	1	2	3	4
31. Provides prompt, ongoing feedback to students and assists them in the evaluation of their own growth and development.	1	2	3	4
32. Clearly communicates grading procedures to students.	1	2	3	4
33. Holds high but reasonable expectations.	1	2	3	4

V. CLASSROOM CLIMATE/MANAGEMENT

Circle one:

	Very Unsatisfactory Lowest 25%	Unsatisfactory Next 25%	Satisfactory Next 25%	Very Satisfactory Highest 25%
34. Exhibits skill in managing class for type of activities in progress.	1	2	3	4
35. Uses a variety of behavioral management techniques effectively.	1	2	3	4
36. Practices democratic principles which show consideration for rights of others and encourages students to do the same.	1	2	3	4

VI. INTERPERSONAL SKILLS

37. Shows leadership qualities among peers.	1	2	3	4
38. Is considerate and fair in relations with pupils.	1	2	3	4
39. Interacts constructively with pupils, teachers, administrators, and parents.	1	2	3	4
40. Respects each student as an individual.	1	2	3	4
41. Supports student interests, problems, and accomplishments in and out of the classroom.	1	2	3	4

VII. GENERAL EVALUATION

1. If this teacher stands out from your faculty in any particular ways, please list two or three skills, deficiencies, attitudes or attributes which have come to your attention.

APPENDIX D

Principals' Cover Letter

Department of Education
College of Liberal Arts
Morrill Hall
Durham, New Hampshire 03824-3595
(603) 862-2310

June 6, 1991

Dear Principal:

We are asking for your help with a research study that is being conducted by the Education Department at the University of New Hampshire. This study seeks to answer the following question: How do the different routes to teacher certification compare in terms of teacher characteristics and performance?

This study is part of an ongoing national discussion about preparing teachers for the future. A large random sample of teachers certified in New Hampshire since 1986 has been selected from a list provided to us by the New Hampshire Department of Education. The teacher whose name is enclosed has given permission to have their principal rate them on this questionnaire. Your role in this study is critical and may help shape policy at both the state and national level on this important educational issue.

The teacher names and code numbers are:

No attempt will be made to identify you or the teacher as respondents. Upon receipt of the responses, all information will be coded.

Please complete the enclosed form prior to August 15 and return it in the stamped, self-addressed envelope enclosed. Other phases of the research cannot be carried out until we complete analysis of the survey data. Thank you for your cooperation.

Sincerely yours,

James R. Jelmberg
Graduate Student

Michael D. Andrew
Professor of Education
Director of Teacher Education

MDA:acb

enclosure