

2009

The Impact of Traditional and Alternative University Teacher Preparation Program Options on Secondary Teacher Candidates' Knowledge, Skills, Dispositions, and Employment

Rebecca B. Schnabel

Follow this and additional works at: <http://digitalcommons.unomaha.edu/studentwork>

 Part of the [Educational Administration and Supervision Commons](#)

Recommended Citation

Schnabel, Rebecca B., "The Impact of Traditional and Alternative University Teacher Preparation Program Options on Secondary Teacher Candidates' Knowledge, Skills, Dispositions, and Employment" (2009). *Student Work*. Paper 25.

This Dissertation is brought to you for free and open access by DigitalCommons@UNO. It has been accepted for inclusion in Student Work by an authorized administrator of DigitalCommons@UNO. For more information, please contact unodigitalcommons@unomaha.edu.



The Impact of Traditional and Alternative University Teacher
Preparation Program Options on Secondary Teacher
Candidates' Knowledge, Skills, Dispositions, and Employment

By

Rebecca B. Schnabel

A Dissertation

Presented to the Faculty of

The Graduate College of the University of Nebraska

In Partial Fulfillment of Requirements

For the Degree of Doctor of Education

In Educational Administration

Omaha, Nebraska

2009

Supervisory Committee

Dr. John W. Hill, Chair

Dr. Kay A. Keiser

Dr. Neal F. Grandgenett

Dr. Larry L. Dlugosh

UMI Number: 3379932

All rights reserved

INFORMATION TO ALL USERS

The quality of this reproduction is dependent upon the quality of the copy submitted.

In the unlikely event that the author did not send a complete manuscript and there are missing pages, these will be noted. Also, if material had to be removed, a note will indicate the deletion.



UMI 3379932

Copyright 2010 by ProQuest LLC.

All rights reserved. This edition of the work is protected against unauthorized copying under Title 17, United States Code.



ProQuest LLC
789 East Eisenhower Parkway
P.O. Box 1346
Ann Arbor, MI 48106-1346

Abstract

THE IMPACT OF TRADITIONAL AND ALTERNATIVE UNIVERSITY TEACHER
PREPARATION PROGRAM OPTIONS ON SECONDARY TEACHER
CANDIDATES' KNOWLEDGE, SKILLS, DISPOSITIONS AND EMPLOYMENT

Rebecca B. Schnabel

University of Nebraska

Advisor: Dr. John W. Hill

The preparation of secondary teacher candidates through traditional ($n = 13$) or alternative ($n = 15$) options did not statistically significantly impact knowledge, skills or dispositions. Results for content knowledge, as measured at entrance to the program based on the Pre-Professional Skills Test, indicate that candidates who entered the traditional secondary teacher preparation program begin their studies with measured content knowledge in reading, writing, and mathematics that was congruent with the content knowledge of post-baccalaureate candidates who entered the alternative secondary teacher preparation program. Furthermore, content knowledge, based on cumulative grade point averages calculated upon completion of all content area coursework in the arts and sciences' discipline just prior to student teaching results indicated that traditionally prepared candidates entered the student teaching experience with an overall measured cumulative grade point average that was congruent with the alternatively prepared candidates. The traditional candidates' cumulative grade point average, 3.39 was .39 mean points above the cut score of 3.00 for admission to graduate school. The alternative candidates' cumulative grade point average, 3.42 was .42 mean points above the cut score of 3.00 for admission to graduate school. Traditional and

alternative candidates had congruent mastery of required content knowledge in subject matter and successful course completion for both groups of candidates as they begin their student teaching capstone experience. The overall pretest-posttest results for traditional and alternative candidates' initial mid-term student teaching evaluation ratings compared to final student teaching evaluation ratings of teacher effectiveness based on cooperating teacher judgments, indicated statistically improved in all six domains: knowledge base, instructional skills, assessment and evaluation skills, classroom management skills, communication and interpersonal skills and disposition/professionalism. The overall pretest-posttest results for traditional and alternative candidates' initial mid-term student teaching evaluation ratings compared to final student teaching evaluation ratings of teacher effectiveness based on university supervisor judgments, indicated statistically improved in five of the six domains. Positive statistical growth of this magnitude suggests real world mastery of teaching effectiveness based on the observations of cooperating teachers and university supervisors. Finally, the overall, observed levels of fulltime teaching employment six months after program completion for traditionally (85%) and alternatively (73%) prepared candidates represents a commendable level of employment for both groups.

Acknowledgements

A journey worth embarking upon involves taking a risk knowing there is potential for growth, along with overwhelming challenges, and in the end, lasting insight, and personal rewards. In this journey I never walked alone. I am incredibly thankful to everyone who stood beside me on this journey with words of encouragement, professional expertise, enthusiasm, patience, and understanding.

First of all, my gratitude goes to the faculty and staff of the Department of Educational Administration and Supervision for their genuine interest and for the quality of their work that goes into every element of this educational experience. To Dr. John W. Hill, my committee chair, for his guidance, direction, and expertise throughout the process I offer my sincere appreciation. I also want to thank my committee members, Dr. Kay A. Keiser, Dr. Neal F. Grandgenett, and Dr. Larry L. Dlugosh along with Dr. Hill, for their interest, support, and enthusiasm for my research topic.

Secondly, my appreciation goes to the leadership of the College of Education and the University of Nebraska at Omaha, who throughout this journey motivated me to continue, encouraged me to look beyond the obvious, and challenged me to prioritize ideas in order to accomplish more than I ever thought possible. I will always be indebted to my colleagues in the Office of Student Services for their humor, caring and support during this journey. Special thanks go to my long-time mentor and friend, Dr. John T. Langan for believing in me, and encouraging me to always keep my eye on the prize, that is--the children of our public schools.

Finally, to family and friends, without you life is nothing. This work is dedicated to my daughters, Corie and Stephanie. This journey might have been longer than

anticipated but thank you for being there for me all along the way. You are the best. To my parents who taught me to love learning and value education I thank you for this life-long gift. To my siblings, nieces, and nephews who were interested in the process and attempted to understand the time and dedication it takes to complete this work thank you for your interest and love. To many special friends who at times walked ahead while leading me, those who walked beside me while encouraging me, and those who sometimes walked behind me when I need an extra push--thank you. I feel so fortunate to have each of you in my life.

Table of Contents

| | |
|---|-----------------|
| Abstract | <i>ii</i> |
| Acknowledgements | <i>iv</i> |
| Table of Contents | <i>vi</i> |
| List of Tables | <i>xi</i> |
| Chapters | |
| 1. Introduction | <i>1</i> |
| Literature Related to the Study Purpose | <i>1</i> |
| The Impact of Qualified, Effective Teachers | <i>2</i> |
| Defining Qualified, Effective Teachers | <i>3</i> |
| Critical Shortage of Qualified, Effective Teachers | <i>5</i> |
| Factors Contributing to the Shortage | <i>7</i> |
| The Challenges of Preparing Qualified, Effective Teachers | <i>8</i> |
| Purpose of the Study | <i>10</i> |
| Research Questions | <i>11</i> |
| Importance of the Study | <i>24</i> |
| Assumptions of the Study | <i>24</i> |
| Delimitations of the Study | <i>26</i> |
| Limitations of the Study | <i>26</i> |
| Definition of Terms | <i>26</i> |
| Significance of the Study | <i>36</i> |
| Contribution to research | <i>37</i> |
| Contribution to practice | <i>37</i> |

| | |
|---|-----------|
| Contribution to policy | 37 |
| Organization of the Study | 37 |
| 2. Review of Literature | 39 |
| A Review of Selected Literature and Research | 39 |
| Teacher shortages and alternative teacher preparation | 39 |
| Alternative Teacher Preparation | 40 |
| Defining alternative teacher preparation programs | 40 |
| Participants in alternative teacher preparation | 41 |
| Structure of alternative teacher preparation programs | 41 |
| Elements of alternative teacher preparation programs | 42 |
| Research Findings | 43 |
| Teacher attrition | 46 |
| Final Thoughts | 46 |
| 3. Methodology | 48 |
| Participants | 48 |
| Number of participants | 48 |
| Gender of participants | 49 |
| Age range of participants | 49 |
| Racial and ethnic origin of participants | 49 |
| Inclusion criteria for participants | 49 |
| Method of participant identification | 50 |
| Description of Procedures | 50 |
| Research design | 50 |

| | |
|--|-----------|
| Independent Variable Descriptions | 52 |
| Traditional secondary teacher preparation program requirements | 52 |
| Alternative secondary teacher preparation requirements | 54 |
| Dependent Variable Descriptions | 55 |
| Research Questions and Data Analysis | 55 |
| Research Question #1 | 56 |
| Research Question #2 | 57 |
| Research Question #3 | 57 |
| Research Question #4 | 59 |
| Research Question #5 | 61 |
| Research Question #6 | 63 |
| Research Question #7 | 65 |
| Research Question #8 | 66 |
| Research Question #9 | 68 |
| Research Question #10 | 70 |
| Research Question #11 | 72 |
| Data Collection Procedures | 72 |
| Performance sites | 72 |
| Confidentiality | 73 |
| Human Subjects Approval Category | 73 |
| 4. Results | 74 |
| Purpose of the Study | 74 |
| Research Question #1 | 75 |

| | |
|--------------------------------------|------------|
| Research Question #2 | 77 |
| Research Question #3 | 78 |
| Research Question #4 | 80 |
| Research Question #5 | 88 |
| Research Question #6 | 84 |
| Research Question #7 | 86 |
| Research Question #8 | 88 |
| Research Question #9 | 90 |
| Research Question #10 | 92 |
| Research Question #11 | 94 |
| 5. Conclusions and Discussion | 109 |
| Conclusions | 109 |
| Research Question #1 | 110 |
| Research Question #2 | 111 |
| Research Question #3 | 111 |
| Research Question #4 | 112 |
| Research Question #5 | 113 |
| Research Question #6 | 113 |
| Research Question #7 | 114 |
| Research Question #8 | 114 |
| Research Question #9 | 115 |
| Research Question #10 | 116 |
| Research Question #11 | 116 |

Discussion *117*

Teacher shortages *117*

Mid-term to final evaluations *118*

Employment *119*

Implications for future research *120*

References *122*

List of Tables

Tables

- Table 1 Demographic Information of TSTP Candidates and
ASTP Candidates 95
- Table 2 Educational Testing Service Pre-Professional Skills
Test Means and Standard Deviations of TSTP
Candidates and ASTP Candidates 96
- Table 3 Independent t test Analysis of Educational Testing Service
Pre-Professional Skills Test Means and Standard Deviations
of TSTP Candidates' and ASTP Candidates' Program
Entrance Scores 97
- Table 4 Content Coursework Cumulative Grade Point Average
of TSTP Candidates and ASTP Candidates 98
- Table 5 Independent t test Analysis of Content Coursework
Cumulative Grade Point Average of TSTP Candidates
and ASTP Candidates 99
- Table 6 Dependent t test Analysis of TSTP Candidates' Initial
Mid-Term Student Teaching Evaluation Ratings Compared
to Final Student Teaching Evaluation Ratings of Teaching
Effectiveness Based on Cooperating Teacher Judgments 100

| | | |
|----------|---|-----|
| Table 7 | Dependent t test Analysis of ASTP Candidates' Initial Mid-Term Student Teaching Evaluation Ratings Compared to Final Student Teaching Evaluation Ratings of Teaching Effectiveness Based on Cooperating Teacher Judgments | 101 |
| Table 8 | Dependent t test Analysis of TSTP Candidates, Initial Mid-Term Student Teaching Evaluation Ratings Compared to Final Student Teaching Evaluation Ratings of Teaching Effectiveness Based on University Supervisor Judgments | 102 |
| Table 9 | Dependent t test Analysis of ASTP Candidates' Initial Mid-Term Student Teaching Evaluation Ratings Compared to Final Student Teaching Evaluation Ratings of Teaching Effectiveness Based on University Supervisor Judgments | 103 |
| Table 10 | Independent t test Analysis of TSTP Candidates' and ASTP Candidate's Final Student Teaching Evaluation Ratings of Teaching Effectiveness Based on Cooperating Teacher Judgments | 104 |
| Table 11 | Independent t test Analysis of TSTP Candidates' and ASTP Candidates' Final Student Teaching Evaluation Ratings of Teaching Effectiveness Based on University Supervisor Judgments | 105 |

| | | |
|----------|---|-----|
| Table 12 | Independent t test Analysis of Cooperating Teachers’ and University Supervisors’ Final Student Teaching Evaluation Ratings of TSTP Candidates | 106 |
| Table 13 | Independent t test Analysis of Cooperating Teachers’ and University Supervisors’ Final Student Teaching Evaluation Ratings of ASTP Candidates | 107 |
| Table 14 | Chi-Square Analysis of TSTP Candidates’ and ASTP Candidate’s Employment in Education Six-Months After Program Completion | 108 |

CHAPTER ONE

Introduction

Literature Related to the Study Purpose

Research demonstrates that teachers' preparation and qualifications are the most predictive indicators of student achievement and lasting academic success (Darling-Hammond & Youngs, 2002; Goldhaber & Brewer, 2000; Heck, 2007; Laczko-Kerr & Berliner, 2002; Sanders & Horn, 1998; Wilson, Floden & Ferrini-Mundy, 2001). The National Commission on Teaching and America's Future asserts that what teachers know and can do is the most important influence on students' learning (Darling-Hammond, 1997). No one disputes that every child deserves a qualified effective classroom teacher (NCLB, 2002). However, for many K-12 school districts across the country there are increasing classroom teacher vacancies and an inadequate pool of qualified, effective candidates' to fill these open positions. The National Center for Educational Statistics reports that public schools educate 88% of America's 54.9 million school age children (as cited in Kober, 2006). Approximately 3.2 million teachers are working in public school classrooms (USDOE NCES, 2008). Unfortunately, not all of the students served in these classrooms have qualified, effective teachers. In the 2000-2001 school year, 6 percent of classroom teachers did not meet the preparation requirements necessary to hold a valid teaching certificate (USDOE Title II, 2002). Considering the number of classroom teachers, this means that children in more than 190,000 classrooms across the country were taught by non-certified and/or under qualified teachers. The shortage of qualified, effective teachers is very real.

The Impact of Qualified, Effective Teachers

The long-term effects of students being taught by under qualified teachers may be expressed in tragically low graduation rates and correspondingly low post-secondary enrollments. For instance, in California, the overall high school graduation rate is 71% for all students, however, for Latino students the graduation rate is 60% and for African American students the graduation rate is 57%. Of those students completing high school, fewer than 20% of the African American and Latino students are eligible for admission to the California State University system (Esch et al., 2005). The shortage of teachers in urban, high-poverty schools is critical and is reflected in the overwhelming number of out-of-field, non-certified, and inexperienced teachers being assigned to teach our neediest children (Greenberg, Rhodes, Ye, & Stancavage, 2004; Kober, 2006). The shortage of qualified, effective teachers results in the kind of *savage inequalities* described by Kozol (1991). In a global economy, our children must be prepared through a strong education to keep themselves successful and our nation competitive (Office of Post Secondary Education, 2005). Taking rigorous course work taught by qualified teachers in high school increases the likelihood of persistence toward a bachelor's degree, especially for first generation students. Taking advanced mathematics specifically increases the likelihood of enrollment in a 4-year institution, especially for first generation students (USDOE The Condition of Education, 2001). Research shows that teacher quality contributes more to student achievement than any other factor, including student background, class size, or class composition (Sanders & Horn, 1998). Student performance is shaped by the quality of teaching. High school academic preparation has an impact on the likelihood that perspective first generation college students whose

parents did not attend college will enroll and persist in postsecondary education. Higher education is key to success in the 21st century. Post-secondary education, that presupposes high school success, provides many lasting benefits including: (a) adults with a bachelor's degree who are three times more likely than people with less than a high school diploma to read regularly, (b) adults who report themselves to be in better health, regardless of income, (c) and adults with higher earnings levels (USDOE The Condition of Education, 2001). In a national poll, Americans identified public education as critical to giving youth an even playing field and a chance to get ahead, to keeping America strong and competitive, to provide the skills necessary to participate in a democracy as adults, and to preparing tomorrow's workforce (Kober, 2007). With these expectations all citizens clearly want to know what defines a qualified, effective teacher?

Defining Qualified, Effective Teachers

The body of research on effective and qualified teachers clearly identifies skilled teachers as those who know their content and know how to effectively teach it to their students (Darling-Hammond, 2000a; Heck, 2007; Shulman, 1986; Wenglinsky, 2000). No Child Left Behind (NCLB) defines a highly qualified teacher as one who has a bachelor's degree, full state certification, and knowledge in the content areas to be taught. NCLB specifically identifies qualified, effective secondary school teachers as those who have either passed a state academic test or successfully completed an academic major or equivalent in their assigned teaching area (USDOE NCLB, 2006). Heck (2007) defines fully qualified teachers as those who meet all requirements for state licensure. To be fully qualified, teachers must graduate from a state-approved teacher preparation program or alternative teacher preparation program. Individuals hired on provisional or

emergency credentials are not defined as fully qualified (Heck, 2007). Good teaching is complex work that requires expertise in at least three areas: (a) content knowledge, which is being familiar with the subject being taught, (b) skill in teaching or knowing how to teach, and (c) pedagogical knowledge or knowing techniques for effectively teaching with particular kinds of students in various settings (Shulman, 1987). The Interstate New Teacher Assessment and Support Consortium (INTASC, 1992) identifies an effective teacher as one who embodies the knowledge, skills, and dispositions that are needed to practice responsibly in a student-centered school. The essential knowledge, skills, and dispositions also encompass knowledge of student's learning and development, curriculum and teaching, professional dispositions, and a strong commitment to the profession. The National Board for Professional Teaching Standards (NBPTS) are comprised of five propositions that identify effective teachers as those who: (a) are committed to students and their learning, (b) know the subjects they teach and how to teach those subjects to diverse learners, (c) are responsible for managing and monitoring student learning, (d) think systematically about their practice and learn from their experience, and (e) are members of learning communities (NBPTS, 2002). Learning is a dynamic process and in order to measure student success, the school, the student and the effectiveness and qualification of the teacher must all be included as part of assessment (Ding & Sherman, 2006). In 1983 (Sparks) synthesis of research on teacher effectiveness, identified classroom management, instructional techniques, expectations of learning, interpersonal skills, and a positive room environment as elements strongly related to student learning, issues extant and more than relevant even today.

Critical Shortage of Qualified, Effective Teachers

Data show that the difficulty of staffing classrooms with qualified, effective teachers is unevenly distributed across the country. Teacher shortages are specific to regions of the country, to subject areas, and to school location (US Bureau of Labor Statistics, 2009; Ingersoll & Perda, 2006; Murphy, DeArmond, & Guin, 2003; Wayne, 2000). Regionally, 60% of the nation's public school children live in the southern and western states and enrollments in these areas are expected to continue to rise, increasing the need for classroom teachers (Kober, 2006). For example California, serves nearly 6 million students with a teacher workforce of over 300,000 teachers, and in the 2000-2001 school year, 42,000 California teachers were working without full credentials, primarily in the areas of mathematics, science, and special education (Esch et al., 2005). In addition to the regional need for classroom teachers, the shortage of classroom teachers is more dramatic in specific academic areas. Nationally, teaching areas with extreme shortages include special education, foreign language, mathematics, and science (Boe, 2006; Bergert & Brunette, 2001; Blank, Langesen, Laird, & Toyne, 2004; Billingsley & McLesky, 2004). An examination of mathematics teachers revealed that 63% of 7-12 mathematics teachers have a major and full certification. Only 12 states report having more than 75% of all teachers of mathematics in grades 7-12 that have a college major in mathematics and teacher certification. Data on teachers of science show only slightly better results with 18 states having 75% or more of the science teachers with a major and full certification (Blank et al., 2004). Based on the Schools and Staffing Survey (SASS) national data, 54% of secondary schools had openings in mathematics, 40% had positions to be filled in science, and 35% needed foreign language teachers (Ingersoll, 2003).

Nationwide in 2000, less than 60% of mathematics and science teachers in grades 7-8 had a major in the field and full teacher certification (Blank et al., 2004). The shortage of special education teachers has increased annually since 1987. As recently as the 2002-2003 school year a shortage of 54,000 special education teachers was reported (Boe, 2006; McLeskey, Tyler, & Flippin, 2004). And finally, in addition to the regional shortages and the content area shortages, schools in low-socioeconomic areas, both urban and rural, experience great difficulty attracting qualified teachers in many subject areas, but especially in mathematics, science, foreign language, and special education (Murphy et al., 2003; Felter, 1999; McLeskey et al., 2004). During the 2003-2004 school year the demographics of the teachers hired on waivers, because they lacked criteria for certification, showed that nearly one third taught in high-poverty schools; 5.5% of the waivers were for foreign language; 6.3% were for special education; and 3.6% were for mathematics and science (Office of Post Secondary Education, 2005). During the 2004–2005 school year, the number of teachers on waivers reached 81,000 teachers, with 37% of those teachers residing in California, Texas, Maryland, and North Carolina (Office of Post Secondary Education, 2006). Unfortunately, the greatest concentrations of these under-prepared teachers are employed in urban, low income, low performing, and majority-minority schools. For example, a study of teacher qualification in the state of New York found non-white, poor, and low performing students, particularly those in urban areas, attended schools with less qualified teachers (Lankford, Loeb & Wyckoff, 2002). Considering the increase in the percentage of teachers teaching out-of-field, it has been suggested that teacher quality rather than teacher quantity is the problem (Ingersoll, 1999). In addition to the shortages described related to geographic regions, high demand

subject areas, and school demographics, the teaching pool also lacks gender and ethnic/racial diversity. The teaching profession is no more diverse now than a decade ago and schools are finding it increasingly difficult to hire a diverse teaching staff (Gitomer, 2007; Kirby, Berends & Naftel, 1999). Moreover, few minorities and males are currently entering the teaching profession (Gitomer, 2007; Kober, 2006).

Factors Contributing to the Shortage

A variety of factors are contributing to the teacher shortage, including increasing student enrollments, teacher retirements, and recruitment and retention trends. Student enrollments are projected to increase 10-12% through 2017 (Hussar & Bailey, 2008; U.S. Bureau of Labor Statistics, 2009). Frequently, increasing student enrollments and teacher retirements are identified as sources of the current teacher shortage--however, data show these are not the primary causes of the high demand for teachers (Ingersoll, 2003). Research on teacher supply, demand, quality, and shortages demonstrates that simply recruiting more teachers will not fill the need for effective qualified classroom teachers (Ingersoll, 1999). The revolving door of teacher migration and attrition are issues leading to staffing classrooms with unqualified teachers. High rates of teacher migration to other schools and the attrition of teachers leaving the profession are the main reasons for teacher shortages. Migration, the movement of teachers from school to school and district to district accounts for more than half of the turnover that schools and districts experience (Ingersoll & Perda, 2006). Schools serving high-poverty communities are particularly vulnerable to this revolving door effect. Teacher turnover is as much as 50% higher in high-poverty schools and new teachers in urban districts leave the profession or transfer at higher rates than their suburban counterparts (Hanushek, Kain, & Rivkin,

1999; Ingersoll, 2002; Olson, 2003). Special education teachers are 2.5 times more likely to change positions or leave teaching than are general educators, especially when they work in high-poverty schools (Boe, 2006; Boe & Bobbitt, 1997). Initially, fewer than 50% of traditionally prepared teachers enter the profession after graduation and of the newly trained teachers many leave the profession before reaching the five-year milestone in their career (Ingersoll, 2003; Henke, Chen, & Geis, 2000). Thirty-three percent of new teachers leave teaching during the first three years and 46% leave in the first five years (USDOE Center on Education Policy, 2006). Teacher attrition is related to issues of low pay, large class size, location, inadequate facilities, lack of preparation, school safety, and increasing opportunities in other fields (Boyd, Lankford, Loeb, & Wyckoff, 2005; Futernick, 2007; Gritz & Theobald, 1996; Loeb & Page, 2000; Washburn-Moses, 2005). Increasing the retention of quality teachers could lead the way to meeting our goal of a qualified, effective teacher in every classroom for every child.

The Challenge of Preparing Qualified, Effective Teachers

The National Commission on Teaching and America's Future and the No Child Left Behind legislation placed the improvement of teachers and the quality of teaching at the center of school reform (Darling-Hammond, 2000a; NCLB, 2002). Numerous studies have shown a positive relationship between teacher qualifications and student outcomes. This relationship supports the view that teacher preparation and certification are legitimate criteria for entry into the profession (Fetler, 1999; Goldhaber & Brewer, 2000; Wilson et al., 2002). NCLB has two objectives as it applies to classroom teaching: (1) to ensure that all teachers are highly qualified in the subjects they teach, and (2) to reduce the barriers to becoming a teacher by reframing traditional teacher education programs

and opening up alternative routes to the profession (Office of Postsecondary Education, 2005). The increased emphasis on improving teacher quality conflicts with the chronic teacher shortages. The shortages have encouraged some policymakers and educational leaders to create faster, cheaper routes that offer fewer barriers to teacher certification (Rosenberg and Sindelar, 2001). Virginia established the first statewide alternative teacher option in 1982, California followed in 1983, and Texas and New Jersey in 1984 (Zeichner & Schulte, 2001). New Jersey now leads the country with approximately 25% of its new teachers entering the classroom through alternative methods (Feistritzer, 2005). Alternative programs vary widely in requirements, agency responsibility, length, and intensity. Programs range from 2 weeks of training prior to a classroom assignment to 2 years of coursework and up to 3 years of mentoring. The agency responsible for the program may be a school district, regional service center, university, teacher union, business community, or a combination of these agencies (Feistritzer & Harr, 2008; Suell & Piotrowski, 2007).

Much has been written regarding the need for qualified, effective teachers and the various approaches to preparing them for the task. Advocates for both traditional teacher preparation and alternative training provide data that support their position as the best way to provide qualified, effective teachers for every classroom (Boyd, Grossman, Lankford, Loeb & Wyckoff, 2006; Darling-Hammond, 2000b; Darling-Hammond, Holtzman, Gatlin, & Heilig, 2005; Harrell & Harris, 2006; Qu, Becker, 2003; Rosenberg & Sindelar, 2001; Sayler, 2003 Shen, 1998; Suell & Piotrowski, 2006; Walsh, 2001). If each child is to have access to a qualified, effective teacher and schools are to have adequate candidate pools, it is imperative that stakeholders develop teacher preparation

programs, whether traditional or alternative, that give candidates' the knowledge, skills and dispositions needed for a career in teaching. (Huling, Resta, & Rainwater, 2001). Ensuring an adequate teacher pool will take effort and innovation on the part of all who have a stake in our schools (Darling-Hammond, 2000a).

This study evaluates the underlying conditions thought to contribute to prepared and motivated new teachers in two programs, one traditional and the other alternative, at a midwestern metropolitan university. Future teacher preparation programs, both traditional and alternative, must enroll the best, brightest, most highly motivated and dedicated candidates' possible--and their progress through the various pathways must be evaluated and informed by research.

Purpose of the Study

The purpose of this study was to determine the impact of traditional and alternative university teacher preparation program options on secondary teacher candidates' measured content knowledge, pedagogical skills, dispositions, and employment. The study analyzed achievement for each group, traditionally prepared secondary teacher (TPST) candidates' and alternatively prepared secondary teacher (APST) candidates' in the areas of content knowledge, pedagogical skills, dispositions, and employment status.

Research Questions

Research questions were used to determine the impact of traditional and alternative university teacher preparation program options on secondary teacher candidates' measured content knowledge, pedagogical skills, dispositions, and employment.

The following research questions were used to analyze candidate participation in TSTP and ASTP measuring content knowledge PPST Scaled Scores.

Overarching Pretest-Pretest Content Knowledge Research Question #1. Do teacher candidates who participate in the TSTP program and the ASTP program have congruent or different content knowledge as measured by their Pre-Professional Skills Test (PPST) Scaled Scores in Mathematics, Writing, and Reading?

Sub-Question 1a. Is there a significant difference between TSTP candidates' PPST Scaled Scores in Mathematics compared to ASTP candidates' PPST Scaled Scores in Mathematics?

Sub-Question 1b. Is there a significant difference between TSTP candidates' PPST Scaled Scores in Writing compared to ASTP candidates' PPST Scaled Scores in Writing?

Sub-Question 1c. Is there a significant difference between TSTP candidates' PPST Scaled Scores in Reading compared to ASTP candidates' PPST Scaled Scores in Reading?

The following research questions will measure TSTP and ASTP candidates' content knowledge using the cumulative grade point average (CGPA) in content endorsement area.

Overarching Pretest-Pretest Content Knowledge Research Question #2. Do teacher candidates who participate in the TSTP program and the ASTP program have congruent or different content knowledge as measured by their CGPA in their content endorsement area?

Sub-Question 2a. Is there a significant difference between TSTP candidates' content knowledge CGPA compared to ASTP candidates' content CGPA?

The following research questions were used to analyze candidate participation in TSTP program measuring pedagogical skills based on cooperating teacher judgments.

Overarching Pretest-Posttest Pedagogical Skills Research Question #3. Do teacher candidates who participate in the TSTP program lose, maintain, or improve their initial mid-term student teaching evaluation of teaching effectiveness ratings compared to their final student teaching evaluation of teaching effectiveness ratings based on cooperating teacher judgments for (a) knowledge base, (b) instructional skills, (c) assessment and evaluation skills, (d) classroom management skills, (e) communication and interpersonal skills, and (f) disposition/professionalism?

Sub-Question 3a. Is there a significant difference between TSTP candidates' initial mid-term student teaching evaluation of teaching effectiveness ratings compared to TSTP candidates' final student teaching evaluation of teaching effectiveness ratings based on cooperating teacher judgments for (a) knowledge base?

Sub-Question 3b. Is there a significant difference between TSTP candidates' initial mid-term student teaching evaluation of teaching effectiveness ratings compared to TSTP candidates' final student teaching evaluation of teaching effectiveness ratings based on cooperating teacher judgments for (b) instructional skills?

Sub-Question 3c. Is there a significant difference between TSTP candidates' initial mid-term student teaching evaluation of teaching effectiveness ratings compared TSTP candidates' final student teaching evaluation of teaching effectiveness ratings based on cooperating teacher judgments for (c) assessment and evaluation skills?

Sub-Question 3d. Is there a significant difference between TSTP candidates' initial mid-term student teaching evaluation of teaching effectiveness ratings compared to TSTP candidates' final student teaching evaluation of teaching effectiveness ratings based on cooperating teacher judgments for (d) classroom management skills?

Sub-Question 3e. Is there a significant difference between TSTP candidates' initial mid-term student teaching evaluation of teaching effectiveness ratings compared to TSTP candidates' final student teaching evaluation of teaching effectiveness ratings based on cooperating teacher judgments for (e) communication and interpersonal skills?

Sub-Question 3f. Is there a significant difference between TSTP candidates' initial mid-term student teaching evaluation of teaching effectiveness ratings compared to TSTP candidates' final student teaching evaluation of teaching effectiveness ratings based on cooperating teacher judgments for (f) disposition/professionalism?

The following research questions were used to analyze candidates' participation in the ASTP program measuring pedagogical skills based on cooperating teacher judgments.

Overarching Pretest-Posttest Pedagogical Skills Research Question #4. Do teacher candidates who participate in the ASTP program lose, maintain, or improve their initial mid-term student teaching evaluation of teaching effectiveness ratings compared to their final student teaching evaluation of teaching effectiveness ratings based on cooperating teacher judgments for (a) knowledge base, (b) instructional skills, (c) assessment and evaluation skills, (d) classroom management skills, (e) communication and interpersonal skills, and (f) disposition/professionalism?

Sub-Question 4a. Is there a significant difference between ASTP candidates' initial mid-term student teaching evaluation of teaching effectiveness ratings compared to ASTP candidates' final student teaching evaluation of teaching effectiveness ratings based on cooperating teacher judgments for (a) knowledge base?

Sub-Question 4b. Is there a significant difference between ASTP candidates' initial mid-term student teaching evaluation of teaching effectiveness ratings compared to ASTP candidates' final student teaching evaluation of teaching effectiveness ratings based on cooperating teacher judgments for (b) instructional skills?

Sub-Question 4c. Is there a significant difference between ASTP candidates' initial mid-term student teaching evaluation of teaching effectiveness ratings compared to ASTP candidates' final student teaching evaluation of teaching effectiveness ratings based on cooperating teacher judgments for (c) assessment and evaluation skills?

Sub-Question 4d. Is there a significant difference between ASTP candidates' initial mid-term student teaching evaluation of teaching effectiveness ratings compared to ASTP candidates' final student teaching evaluation of teaching effectiveness ratings based on cooperating teacher judgments for (d) classroom management skills?

Sub-Question 4e. Is there a significant difference between ASTP candidates' initial mid-term student teaching evaluation of teaching effectiveness ratings compared to ASTP candidates' final student teaching evaluation of teaching effectiveness ratings based on cooperating teacher judgments for (e) communication and interpersonal skills?

Sub-Question 4f. Is there a significant difference between ASTP candidates' initial mid-term student teaching evaluation of teaching effectiveness ratings

compared to ASTP candidates' final student teaching evaluation of teaching effectiveness ratings based on cooperating teacher judgments for (f) disposition/professionalism?

The following research questions were used to analyze candidate participation in the TSTP program measuring pedagogical skills based on university supervisor judgments.

Overarching Pretest-Posttest Pedagogical Skills Research Question #5. Do teacher candidates who participate in the TSTP program lose, maintain, or improve their initial mid-term student teaching evaluation of teaching effectiveness ratings compared to their final student teaching evaluation of teaching effectiveness ratings based on university supervisor judgments for (a) knowledge base, (b) instructional skills, (c) assessment and evaluation skills, (d) classroom management skills, (e) communication and interpersonal skills, and (f) disposition/professionalism?

Sub-Question 5a. Is there a significant difference between TSTP candidates' initial mid-term student teaching evaluation of teaching effectiveness ratings compared to TSTP candidates' final student teaching evaluation of teaching effectiveness ratings based on university supervisor judgments for (a) knowledge base?

Sub-Question 5b. Is there a significant difference between TSTP candidates' initial mid-term student teaching evaluation of teaching effectiveness ratings compared to TSTP candidates' final student teaching evaluation of teaching effectiveness ratings based on university supervisor judgments for (b) instructional skills?

Sub-Question 5c. Is there a significant difference between TSTP candidates' initial mid-term student teaching evaluation of teaching effectiveness ratings

compared to TSTP candidates' final student teaching evaluation of teaching effectiveness ratings based on university supervisor judgments for (c) assessment and evaluation skills?

Sub-Question 5d. Is there a significant difference between TSTP candidates' initial mid-term student teaching evaluation of teaching effectiveness ratings compared to TSTP candidates' final student teaching evaluation of teaching effectiveness ratings based on university supervisor judgments for (d) classroom management skills?

Sub-Question 5e. Is there a significant difference between TSTP candidates' initial mid-term student teaching evaluation of teaching effectiveness ratings compared to TSTP candidates' final student teaching evaluation of teaching effectiveness ratings based on university supervisor judgments for (e) communication and interpersonal skills?

Sub-Question 5f. Is there a significant difference between TSTP candidates' initial mid-term student teaching evaluation of teaching effectiveness ratings compared to TSTP candidates' final student teaching evaluation of teaching effectiveness ratings based on university supervisor judgments for (f) disposition/professionalism?

The following research questions were used to analyze candidate participation in the ASTP program measuring pedagogical skills based on university supervisor judgments.

Overarching Pretest-Posttest Pedagogical Skills Research Question #6. Do teacher candidates who participate in the ASTP program lose, maintain, or improve their initial mid-term student teaching evaluation of teaching effectiveness ratings compared to their final student teaching evaluation of teaching effectiveness ratings based on university supervisor judgments for (a) knowledge base, (b) instructional skills, (c)

assessment and evaluation skills, (d) classroom management skills, (e) communication and interpersonal skills, and (f) disposition/professionalism?

Sub-Question 6a. Is there a significant difference between ASTP candidates' initial mid-term student teaching evaluation of teaching effectiveness ratings compared to ASTP candidates' final student teaching evaluation of teaching effectiveness ratings based on university supervisor judgments for (a) knowledge base?

Sub-Question 6b. Is there a significant difference between ASTP candidates' initial mid-term student teaching evaluation of teaching effectiveness ratings compared to ASTP candidates' final student teaching evaluation of teaching effectiveness ratings based on university supervisor judgments for (b) instructional skills?

Sub-Question 6c. Is there a significant difference between ASTP candidates' initial mid-term student teaching evaluation of teaching effectiveness ratings compared to ASTP candidates' final student teaching evaluation of teaching effectiveness ratings based on university supervisor judgments for (c) assessment and evaluation skills?

Sub-Question 6d. Is there a significant difference between ASTP candidates' initial mid-term student teaching evaluation of teaching effectiveness ratings compared to ASTP candidates' final student teaching evaluation of teaching effectiveness ratings based on university supervisor judgments for (d) classroom management skills?

Sub-Question 6e. Is there a significant difference between ASTP candidates' initial mid-term student teaching evaluation of teaching effectiveness ratings compared to ASTP candidates' final student teaching evaluation of teaching effectiveness ratings based on university supervisor judgments for (e) communication and interpersonal skills?

Sub-Question 6f. Is there a significant difference between ASTP candidates' initial mid-term student teaching evaluation of teaching effectiveness ratings compared to ASTP candidates' final student teaching evaluation of teaching effectiveness ratings based on university supervisor judgments for (f) disposition/professionalism?

The following research questions were used to analyze teacher candidates' pedagogical skills based on final cooperating teacher judgments following participation in student teaching.

Overarching Posttest-Posttest Pedagogical Skills Research Question #7. Do teacher candidates who participate in the TSTP program and the ASTP program have congruent or different student teaching evaluation of teaching effectiveness ratings based on final cooperating teacher judgments for (a) knowledge base, (b) instructional skills, (c) assessment and evaluation skills, (d) classroom management skills, (e) communication and interpersonal skills, and (f) disposition/professionalism?

Sub-Question 7a. Is there a significant difference between TSTP candidates' compared to ASTP candidates' final student teaching evaluation of teaching effectiveness ratings based on cooperating teacher judgments for (a) knowledge base?

Sub-Question 7b. Is there a significant difference between TSTP candidates' compared to ASTP candidates' final student teaching evaluation of teaching effectiveness ratings based on cooperating teacher judgments for (b) instructional skills?

Sub-Question 7c. Is there a significant difference between TSTP candidates' compared to ASTP candidates' final student teaching evaluation of teaching effectiveness ratings based on cooperating teacher judgments for (c) assessment and evaluation skills?

Sub-Question 7d. Is there a significant difference between TSTP candidates' compared to ASTP candidates' final student teaching evaluation of teaching effectiveness ratings based on cooperating teacher judgments for (d) classroom management skills?

Sub-Question 7e. Is there a significant difference between TSTP candidates' compared to ASTP candidates' final student teaching evaluation of teaching effectiveness ratings based on cooperating teacher judgments for (e) communication and interpersonal skills?

Sub-Question 7f. Is there a significant difference between TSTP candidates' compared to ASTP candidates' final student teaching evaluation of teaching effectiveness ratings based on cooperating teacher judgments for (f) disposition/professionalism?

The following research questions were used to analyze teacher candidates' pedagogical skills based on final university supervisor judgments following participation in student teaching.

Overarching Posttest-Posttest Pedagogical Skills Research Question #8. Do teacher candidates who participate in the TSTP program and the ASTP program have congruent or different student teaching evaluation of teaching effectiveness ratings based on final university supervisor judgments for (a) knowledge base, (b) instructional skills, (c) assessment and evaluation skills, (d) classroom management skills, (e) communication and interpersonal skills, and (f) disposition/professionalism?

Sub-Question 8a. Is there a significant difference between TSTP candidates' compared to ASTP candidates' final student teaching evaluation of teaching effectiveness ratings based on university supervisor judgments for (a) knowledge base?

Sub-Question 8b. Is there a significant difference between TSTP candidates' compared to ASTP candidates' final student teaching evaluation of teaching effectiveness ratings based on university supervisor judgments for (b) instructional skills?

Sub-Question 8c. Is there a significant difference between TSTP candidates' compared to ASTP candidates' final student teaching evaluation of teaching effectiveness ratings based on university supervisor judgments for (c) assessment and evaluation skills?

Sub-Question 8d. Is there a significant difference between TSTP candidates' compared to candidates' ASTP final student teaching evaluation of teaching effectiveness ratings based on university supervisor judgments for (d) classroom management skills?

Sub-Question 8e. Is there a significant difference between TSTP candidates' compared to ASTP candidates' final student teaching evaluation of teaching effectiveness ratings based on university supervisor judgments for (e) communication and interpersonal skills?

Sub-Question 8f. Is there a significant difference between TSTP candidates' compared to ASTP candidates' final student teaching evaluation of teaching effectiveness ratings based on university supervisor judgments for (f) disposition/professionalism?

The following research questions were used to analyze the TSTP candidates' pedagogical skills based on final cooperating teacher judgments compared to final university supervisor judgments following participation in student teaching.

Overarching Posttest-Posttest Pedagogical Skills Research Question #9. Do teacher candidates who participate in the TSTP program have congruent or different student teaching evaluations of teaching effectiveness ratings based on final cooperating teacher judgments compared to final university supervisor judgments for (a) knowledge base, (b) instructional skills, (c) assessment and evaluation skills, (d) classroom management skills, (e) communication and interpersonal skills, and (f) disposition/professionalism?

Sub-Question 9a. Is there a significant difference between cooperating teacher judgments compared to university supervisor judgments for TSTP candidates' final student teaching evaluations of teaching effectiveness ratings for (a) knowledge base?

Sub-Question 9b. Is there a significant difference between cooperating teacher judgments compared to university supervisor judgments for TSTP candidates' final student teaching evaluations of teaching effectiveness ratings for (b) instructional skills?

Sub-Question 9c. Is there a significant difference between cooperating teacher judgments compared to university supervisor judgments for TSTP candidates' final student teaching evaluations of teaching effectiveness ratings for (c) assessment and evaluation skills?

Sub-Question 9d. Is there a significant difference between cooperating teacher judgments compared to university supervisor judgments for TSTP candidates' final student teaching evaluations of teaching effectiveness ratings for (d) classroom management skills?

Sub-Question 9e. Is there a significant difference between cooperating teacher judgments compared to university supervisor judgments for TSTP candidates' final student teaching evaluations of teaching effectiveness ratings for (e) communication and interpersonal skills?

Sub-Question 9f. Is there a significant difference between cooperating teacher judgments compared to university supervisor judgments for TSTP candidates' final student teaching evaluations of teaching effectiveness ratings for (f) disposition/professionalism?

The following research questions were used to analyze the ASTP candidates' pedagogical skills based on final cooperating teacher judgments compared to final university supervisor judgments following participation in student teaching.

Overarching Posttest-Posttest Pedagogical Skills Research Question #10. Do teacher candidates who participate in the ASTP program have congruent or different student teaching evaluation of teaching effectiveness ratings based on final cooperating teacher judgments compared to final university supervisor judgments for (a) knowledge base, (b) instructional skills, (c) assessment and evaluation skills, (d) classroom management skills, (e) communication and interpersonal skills, and (f) disposition/professionalism?

Sub-Question 10a. Is there a significant difference between cooperating teacher judgments compared to university supervisor judgments for ASTP candidates' final student teaching evaluations of teaching effectiveness ratings for (a) knowledge base?

Sub-Question 10b. Is there a significant difference between cooperating teacher judgments compared to university supervisor judgments for ASTP candidates' final student teaching evaluations of teaching effectiveness ratings for (b) instructional skills?

Sub-Question 10c. Is there a significant difference between cooperating teacher judgments compared to university supervisor judgments for ASTP candidates' final student teaching evaluations of teaching effectiveness ratings for (c) assessment and evaluation skills?

Sub-Question 10d. Is there a significant difference between cooperating teacher judgments compared to university supervisor judgments for ASTP candidates' final student teaching evaluations of teaching effectiveness ratings for (d) classroom management skills?

Sub-Question 10e. Is there a significant difference between cooperating teacher judgments compared to university supervisor judgments for ASTP candidates' final student teaching evaluations of teaching effectiveness ratings for (e) communication and interpersonal skills?

Sub-Question 10f. Is there a significant difference between cooperating teacher judgments compared to university supervisor judgments for ASTP candidates'

final student teaching evaluations of teaching effectiveness ratings for (f) disposition/professionalism?

The following research questions were used to analyze teacher candidate employment in education six-months after completion of TSTP and ASTP certification programs.

Overarching Posttest-Posttest Teacher Candidate Employment Research

Question #11. Is there a significant difference between TSTP candidates' employment and ASTP candidates' employment in education six months after completion of their certification programs?

Sub-Question 11a. Is there a significant difference between TSTP candidates' employment and ASTP candidates' employment in education six months after completion of their certification programs for (a) public, parochial, or private school full-time contracted teaching, (b) public, parochial, or private school part-time contracted teaching, (c) other employment?

Importance of the Study

This study contributes to research, practice, and policy. The study is of significant interest to institutions of higher education that are responsible for teacher preparation program options, to individuals hiring teacher candidates, and to state certification officials who set standards for licensure.

Assumptions of the Study

The study has several strong features. Importantly, the College of Education at the University of Nebraska at Omaha, the research institution, has long offered both traditional and alternative teacher preparation program options for secondary candidates.

The traditional teacher preparation program was first established in 1950. It first earned accreditation through the Nebraska Department of Education and subsequently was accredited by the National Council for Accreditation of Teacher Education (NCATE) in 1954. The Teacher Academy Project (TAP), the alternative teacher preparation program option, was established in 2000 in collaboration with school districts that are members of the Metropolitan Omaha Education Consortium (MOEC). TAP was developed as an alternative teacher certification path for post-baccalaureate candidates with majors in secondary teaching content areas to assist MOEC schools in filling vacancies in high demand secondary content areas with qualified candidates. Since 2000, TAP has prepared 174 candidates who have been recommended to the Nebraska Department of Education for certification to teach in secondary schools. The university teaching faculty in both the traditional and alternative teacher preparation programs meets or exceeds the national and state accreditation standards for preparing teacher candidates (UNO NCATE Report, 2008; UNO NDE Report, 2008). The required course work for both the traditional and alternative teacher preparation options is aligned with certification standards established in Rule 20 and Rule 24 of the Nebraska Department of Education regulations for teacher preparation programs (NDE Rule 20, 2008; & NDE Rule 24, 2006). All study participants were admitted to their respective programs based on choice and successful completion of all entrance requirements. All candidates who have met the stated requirements for admission to teacher preparation studies as established by the College of Education in response to state and national teacher preparation standards (UNO COE Formal Acceptance, 2009). The cooperating teachers and university supervisors have met the criteria established by state and national accreditation policy to

serve in their specified roles (NCATE, 2009; UNO COE Report, 2008). In addition, the research college recently received full unconditional accreditation of the teacher preparation programs (NCATE, 2009).

Delimitations of the Study

The study was delimited to the traditionally prepared secondary teacher candidates who enrolled in student teaching in the spring 2007 and the alternatively prepared secondary teacher candidates who enrolled in TAP in the summer 2006, fall 2006, and spring 2007. All participants were enrolled as students at the university. Study findings were delimited to the teacher candidates and certification programs studied.

Limitations of the Study

This study was confined to one randomly selected group of traditionally prepared pre-baccalaureate secondary teacher candidates ($n = 13$) and one naturally formed group of alternatively prepared post-baccalaureate secondary teacher candidates ($n = 15$). Both groups completed their capstone experience of student teaching in the spring semester of 2007. The small number of research subjects may limit interpretation of the study results and further limit generalizability of the findings.

Definition of Terms

Alternative teacher certification programs. Alternative teacher certification programs are post-baccalaureate programs designed for individuals not prepared as educators during their undergraduate studies. These programs, which lead to recommendation for teacher certification/license, recognize earlier academic preparation (NCATE, 2009) but require further specific professional teacher preparation studies for licensure. These alternative pathways to teacher certification are designed for individuals

who wish to teach subjects in areas where there is demand. All states and the District of Columbia have established such alternative routes to teacher certification (Feistritzer & Haar, 2008).

Alternative secondary teacher preparation (ASTP) candidates. Alternative secondary teacher preparation candidates in this study earned teacher certification by successfully completing the Teacher Academy Project (TAP), an alternative teacher preparation option offered by the University of Nebraska at Omaha, College of Education (UNO COE Teacher Academy Project, 2009).

Best practices. Best practices are those techniques and methodologies that have been proven through research and experience to lead to desired results, form the core studies for both alternative and traditional teacher certification programs (NCATE, 2009).

Candidate. The term candidate is used to identify individuals admitted to and enrolled in either the traditional or alternative teacher preparation program at the initial certification level (NCATE, 2009).

Candidate performance data. Candidate performance data is information derived from assessments of candidate proficiencies, in areas of teaching, candidate knowledge, and professional dispositions (NCATE, 2009). Specifically, assessments for this study include the Pre-Professional Skills Test, cumulative grade point average in the content area, student teaching evaluations, and the employment survey.

Certificate. Certificate is a term used to identify the authorization of an individual who meets the qualifications to engage in teaching (NDE Rule 21, 2008). The term certificate is often used interchangeably with the term license. Each state has one entity authorized to issue a teaching certificate or license to an individual following

completion of specific qualifications approved by the Department of Education. Public school teachers in the United States are required to hold a certificate to teach in the state where they are contracted (Feistritzer & Harr, 2008). Regulations for the certificate vary from state to state (Boydston, 2008) and issuance of a certificate for teaching indicates the individual is prepared to practice responsibly as the primary teacher of record for a group of students (INTASC, 1992).

Certification. Certification is the process by which the state grants recognition to an individual who has met the predetermined qualifications specified for teaching. These predetermined qualifications are set forth in state statute and regulation and are guided by the expert consensus of highly qualified and proven effective educators in specific areas of expertise empanelled to develop, determine, and document these requirements (NCTE, 2008; NDE Rule 20, 2008).

Content. Content is the subject matter or discipline candidates are being prepared to teach at the secondary school level such as mathematics, science, social science, English, and humanities (NCATE, 2009).

Content knowledge. Content knowledge is the understanding of the theories, principles, and concepts of a particular discipline. For the purposes of this study, content knowledge was measured by cumulative grade point average.

Cooperating teachers. Cooperating teachers are classroom teachers employed by K-12 schools. Cooperating teachers serve as the mentor teacher for candidates during the student teaching semester. Cooperating teachers must have a minimum of three (3) years experience in the areas they are supervising and hold either a teaching or

administrative certificate for the areas/levels they are teaching or supervising (NDE Rule 20, 2008).

Cumulative grade point average (CGPA). Cumulative grade point average (CGPA) is defined as the grade point average based on academic course work completed in the content endorsement area of ASTP and TSTP.

Curriculum. Curriculum includes courses, experiences, and assessments necessary to prepare candidates to teach students at a specific age level and/or teach a specific subject area (NCATE, 2009).

Cut score. Cut score is the minimum score required by the state on a basic skills test for admission to a university teacher preparation program. For purposes of this study the cut score for the Pre-Professional Skills Test was based on a score report from Educational Testing Service (NDE, Rule 23, 2008).

Diversity. Diversity is the difference among groups of people and individuals based on ethnicity, race, socioeconomic status, gender, exceptionalities, language, religion, sexual orientation, and geographic area (NCATE, 2009).

Effective teacher. An effective teacher is one who embodies the knowledge, skills, and dispositions that teachers need to practice responsibly as the teacher of record for students. The effective teacher understands student learning and development, curriculum, and teaching strategies and engages in learner-centered practices (INTASC, 1992).

Endorsement. An endorsement is an area of specialization placed on a teaching certificate to signify that the individual has met the specific content preparation required for teaching in the identified subject area or discipline (NDE Rule 24, 2006).

Field experiences. Field experiences are a variety of early and on-going school-based experiences in which candidates observe, assist, tutor, and instruct (NCATE, 2009).

Follow-up Employment Survey. The Follow-up Employment Survey of Teachers who completed ASTP and TSTP in this research study were used to determine employment status as contracted teachers in schools after completion of the program.

High and low poverty districts/schools. High-poverty districts/schools are determined using the quartile of the highest percentage of children living in poverty based on estimates generated by the Small Area Income and Poverty Estimates (SAIPE) program. Low poverty schools are defined as all other districts (USDOE Title II, 1998).

Initial teacher preparation program. An initial teacher preparation program at the baccalaureate or post-baccalaureate levels prepares candidates' for their first certificate/license to teach (NCATE, 2009).

Interstate New Teacher Assessment and Support Consortium (INTASC)

Principles. Interstate New Teacher Assessment and Support Consortium (INTASC) Principles are model standards that articulate what beginning teachers should know, be like, and be able to do to teach effectively, regardless of subject matter or grade level (INTASC, 1992).

Metropolitan Omaha Education Consortium. Metropolitan Omaha Education Consortium (MOEC) is an organization dedicated to model collaboration between the University of Nebraska at Omaha, College of Education, the twelve metropolitan area school districts, and two educational service units. The consortium is a catalyst for identifying high priority issues common to member organizations and addressing these

issues through joint task forces and projects. MOEC, established in 1989 and housed on the UNO campus, provides a forum for professionals from across the educational spectrum and community to share information and work together in the areas of teaching, research, and service. MOEC aims to enhance the quality of education in the metropolitan Omaha community (UNO MOEC, 2009).

Pedagogical content knowledge. Pedagogical content knowledge is the interaction of the subject matter and effective teaching strategies utilized to help students learn the subject matter. Pedagogical content knowledge requires a thorough understanding of the content to teach in multiple ways, drawing on cultural backgrounds and prior experience and knowledge of students (NCATE, 2009).

Pedagogical knowledge. Pedagogical knowledge is the general concepts, theories, and research about effective teaching, regardless of subject matter content (NCATE, 2009).

Pedagogical skills. Pedagogical skills are those abilities related to instruction, assessment, and classroom management that create opportunities for students to learn.

Performance assessment. Performance assessment is a comprehensive assessment through which candidates demonstrate their proficiencies in subject, professional and pedagogical knowledge and skills, and professional dispositions, including their abilities to have a positive effect on student learning (NCATE, 2009). For this study, these performance assessments include PPST, CGPA, and student teaching evaluations.

Pre-Professional Skills Test. The Pre-Professional Skills Test (PPST) is defined by the Nebraska Department of Education as the required basic skills competency

examination for all individuals wishing to apply to be admitted to a teacher preparation program. Each candidate must provide passing scores on the reading, writing, and mathematics portions of the national examination. The PPST is published by the Educational Testing Service (ETS) of Princeton, New Jersey. The statutory authority for the establishment of the basic skills competency examination resides in Nebraska Revised Statutes (as cited in NDE Rule 20, 2008). Minimum scores have been established by the Nebraska Department of Education for each area of the examination. The passing scores must appear on an original score report from ETS and must show a scaled score of 170 or above on the reading portion; 171 or above on the mathematics portion; and 172 or above on the writing portion (NDE Rule 23, 2008).

Professional dispositions. Professional dispositions are professional attitudes, values, and beliefs demonstrated through both verbal and non-verbal behaviors as educators interact with students, families, colleagues, and communities. These positive behaviors support student learning and development (NCATE, 2009).

Program completers. Program completers are candidates who have met all the requirements of a state-approved alternative or traditional teacher preparation program and are eligible to be recommended for a teaching certificate. (NCATE, 2009).

Shortage areas. Shortage areas are defined as those content areas in which K-12 schools are unable to fill teaching positions with classroom teachers prepared and qualified to teach in the given area (USDOE Title II, 1998).

Structured field experiences. Structured field experiences are activities designed to introduce candidates to increasingly greater levels of responsibility in the

classroom. These activities are specifically designed to help candidates attain identified knowledge, skills, and dispositions (NCATE, 2009).

Students. Students are children and youth attending P-12 schools (NCATE, 2009).

Student teaching. Student teaching, a pre-service clinical practice in P-12 schools for candidates preparing to teach, immerses the candidate in a classroom setting and provides opportunities to develop and demonstrate competence in the professional teaching role. At the research college, student teaching is a supervised 14-week, full day, field-based experience. Successful completion is required as the culminating activity of a teacher preparation program. It is required for initial state certification (NCATE, 2009; UNO Student Teaching Handbook, 2006).

Student Teaching Evaluation. The Student Teaching Evaluation is the instrument used to assess student teachers' competencies in the following areas, knowledge base, instructional skills, assessment and evaluation skills, classroom management skills, communication and interpersonal skills, and disposition/professionalism. The competencies measured within these areas align with the Interstate New Teacher Assessment and Support Consortium (INTASC) principles, Nebraska Department of Education (NDE) standards, Specialty Professional Association (SPA) standards, and National Board of Professional Teaching Standards (NBPTS) core propositions. The instrument is completed by the university supervisor and the cooperating teacher as the midterm and final evaluation. The same items are found on both versions (cooperating teacher and university supervisor) of the evaluation tool at each administration. The evaluation is accessed through a special on-line portal.

Evaluations are submitted electronically to a database that allows for storage, retrieval, and analysis of the data. The student teacher is evaluated using the following descriptors, (1) Proficient--the student teacher has demonstrated competence in the professional skill or disposition, providing evidence of the sustained adeptness in integrating it routinely and intentionally as expected of a qualified teacher; (2) Developing--the student teacher has demonstrated growth in the professional skill or disposition, providing evidence that the student teacher is approaching the level of competence expected of a qualified teacher; and (3) Beginning--the student teacher has provided evidence of an awareness of the professional skill or disposition and /or has demonstrated initial attempts to become skilled in this area; however, the student teacher has not yet demonstrated a level of competence expected of a qualified teacher (UNO NCATE Institutional Report, 2008).

Teacher Academy Project. The Teacher Academy Project (TAP) is designed to prepare individuals for certification as teachers in the secondary school. Candidates must have an undergraduate degree in a major related to a secondary school endorsement area. Participants in TAP complete coursework for certification while serving an internship in a MOEC school district. TAP, established in 2000, is a collaborative effort of the College of Education and the Metropolitan Omaha Education Consortium. TAP is designed to assist individuals who currently hold a non-education disciplinary undergraduate degree and are interested in entering the education profession as a certified secondary school teacher. To be eligible to apply for TAP, individuals must hold a baccalaureate degree in a major that meets the content requirements for a subject area endorsement for certification as a teacher in secondary schools such as mathematics, science, or foreign language. TAP candidates are enrolled as full-time graduate

candidates and complete certification requirements in one calendar year. TAP candidates are selected to participate by one of the MOEC school districts through the district interview process. Districts select candidates based on projected areas of needs in the secondary schools.

TAP candidates enroll in 3 hours of undergraduate and 9 graduate hours in summer school. During the fall semester, TAP candidates intern with a master teacher in the classroom setting each morning and attend the university in the afternoon and evening to complete an additional 3 hours of undergraduate and 9 hours graduate course work. In the spring semester, TAP candidates complete a 14-week, full-day student teaching experience. Upon successful completion of student teaching, TAP candidates are eligible to make application for an initial Nebraska teaching certificate and an endorsement to teach in the identified content area in grades 7-12 (UNO COE Teacher Academy Project, 2009). For a complete listing of TAP course requirements see TAP independent variable description in Chapter 3.

Traditional teacher certification programs. Traditional teacher certification programs are baccalaureate level program to prepare teachers. Candidates must have finished student teaching under the direction of a cooperating teacher and university supervisor. Candidates earn a bachelor's degree in education, at the same time completing requirements for state certification/licensure.

Traditional secondary teacher preparation (TSTP) candidates. Traditional secondary teacher preparation candidates earn initial teacher certification by successfully completing the bachelor requirements for teacher certification in one or more content areas. Candidates in this program complete a 45-hour general education requirement, a

15-hour professional core requirement, a 9-hour secondary education component, and a 30-hour major that meets the content requirements for a subject area endorsement for certification as a teacher in secondary school, such as mathematics, science, or foreign language. All course work in the required areas must be completed prior to enrolling in student teaching. Upon successful completion of student teaching, the candidates are eligible to apply for an initial Nebraska teaching certificate with an endorsement to teach in the identified content area in grades 7-12 (UNO Secondary Teacher Preparation, 2009). For a complete listing of TSTP course requirements see TSTP independent variable description in Chapter 3.

University supervisor. The university supervisor is assigned by the teacher preparation program to provide supervision and evaluation of student teaching. The university supervisor must have a minimum of a master's degree and two years of teaching experience in a state approved or accredited K-12 school. The university supervisor makes a minimum of five classroom visits (NDE Rule 20, 2008; UNO Student Teaching Handbook, 2006).

Significance of the Study

This study has the potential to contribute to research, practice, and policy. It is of significant interest because of the need for qualified, effective teachers in secondary classrooms. By understanding the results of this study, teacher training institutions, policymakers, and school partners are able to determine the appropriateness of continuing, adjusting, and/or expanding existing traditional and alternative teacher preparation programs.

Contribution to research. After reviewing the professional literature, it was evident that there was a need for additional research regarding traditionally and alternatively prepared secondary teacher candidates in the areas of content knowledge, skills, dispositions, and employment status. While all states nationwide now have alternative teacher training program options, research in the areas identified in this study is not available in a comparative model. The results of the study will add to the body of theoretical literature on the impact of traditional and alternative university teacher preparation program options on secondary teacher candidates measured content knowledge, skills, dispositions, and employment.

Contribution to practice. The results of the study establish information on the impact of traditional and alternative teacher preparation program options on content knowledge, skills, disposition, and employment of secondary teacher candidates. The study offers insight into the success of program objectives and provides college administrators and faculty with data that could lead to program continuance, program adjustments, and/or program improvements.

Contribution to policy. Local level policy is impacted by this study. The study allows college administrators, teaching faculty, and school partners to better understand the impact of traditional and alternative university teacher preparation program options on secondary teacher candidates measured content knowledge, pedagogical skills, teacher dispositions, and employment.

Organization of the Study

The literature relevant to this exploratory research study is presented in Chapter 2. The chapter reviews literature regarding the demand for qualified, effective secondary

teacher candidates, traditional teacher preparation, alternative teacher preparation, content knowledge, pedagogical skills, teacher dispositions, and employment. Chapter 3 describes the research design, methodology, independent and dependent variables, and procedures used in this study to gather and analyze the data, including the number of participants, gender, age range, racial and ethnic origins, inclusion criteria, dependent variables, dependent measures, and the data analysis to be used for each research question. The research findings are reported in Chapter 4, including data analysis, tables, descriptive statistics, and inferential statistics. The conclusions and discussion of the research findings are presented in Chapter 5.

CHAPTER TWO

Review of Literature

A Review of Selected Literature and Research

The formal preparation of teachers for America's schools began in 1839 with the opening of the first public normal school in Massachusetts. The curriculum in early teacher preparation programs included teaching methods, subject area content knowledge, and educational foundations. Although the ratio of each of these elements has fluctuated over time, the elements remain common to traditional teacher preparation today (Helton, 2008).

Teacher shortages and alternative teacher preparation. The teacher shortages being experienced today are not unique to the 21st century. Shortages of teachers have been reported since the beginning of common schools. A historical analysis of teacher preparation shows that as early as 1839, schools were experiencing teacher shortages and looking for alternative ways to meet the demand for classroom teachers. Again, in the last twenty-five years, teacher shortages have led to the development of alternative teacher preparation programs (Helton, 2008). Virginia established the first statewide alternative certification program in 1982, followed by California in 1983, and Texas and in 1984 (Zeichner & Schulte, 2001). New Jersey leads the country with 25% of its new teachers entering the classroom through alternative methods (Feistritzer, 2005). Since the mid-1980's, more than 250,000 individuals have entered teaching through alternative certification programs (Feistritzer, 2005).

Walsh and Jacobs (2007) suggest the need for ATP options is based on questions that have been raised regarding the quality of traditionally prepared teachers and the

chronic shortage of teachers graduating from traditional teacher preparation programs in colleges and universities. Increasing student enrollments in K-12 schools and expanding opportunities for women and minorities in the marketplace decreased the number of individuals entering teacher preparation programs ultimately contributing to the teacher shortage (Ingersoll, 2003).

Alternative Teacher Preparation

In the past 20 years, alternative teacher preparation (ATP) has been one of the most controversial and debated topics in teacher certification in the United States (Zeichner & Schulte, 2001). ATP options were established as programs to supplement the supply of teachers prepared through traditional 4-year teacher preparation programs in colleges of education (Feistritzer & Harr, 2008; Torres, 2006). Proponents of ATP, using the broadest interpretation for entry into the teaching profession, describe alternative teacher certification as the “responsible way to get smart, talented individuals into the classroom without requiring them to earn a second bachelor’s degree or its equivalent” (p. 13). ATP advocates propose that these programs reduce teacher shortages and raise teacher quality while minimizing cost to the taxpayer (Walsh & Jacobs, 2007).

Defining alternative teacher preparation programs. The variety of alternative certification options offered by states, higher education institutions, and school districts makes defining ATP difficult. A very broad definition of ATP is everything but four-year undergraduate teacher preparation programs housed in a school of education (Walsh & Jacobs, 2007). ATP is a broad term used to describe programs designed for individuals who already hold a non-teaching disciplinary bachelor’s degree and wish to teach subjects where there is a critical shortage of teachers such as in mathematics,

science, foreign language, and special education (Feistritzer & Haar, 2008). ATP post-baccalaureate programs are designed for individuals not prepared as educators during their undergraduate studies by acknowledging the earlier academic preparation, life experiences, and potential of these adult learners to become teachers (NCATE, 2009).

Participants in alternative teacher preparation programs. In a study of seven alternative teacher programs, which prepared over 8,000 teachers, Humphrey and Wechsler (2007) found individuals entering alternative teacher preparation were, (a) are slightly older than individuals in traditional teacher preparation, (b) tend to have the same gender ratios as the general teaching populations, (c) are more likely to be from a minority group, (d) are less likely to leave a career in mathematics or science to enter teaching, and (e) have a wide variety of motivations for considering a career in teaching (2005).

Structure of alternative teacher preparation programs. The structure of alternative certification programs varies across the country. Of the types of ATP programs that have evolved, one is the state-mandated program that allows local school districts to initiate and monitor the preparation and certification of their own teachers. These teachers work in the classroom as provisional teachers or interns. A second category encompasses programs that are housed in institutions of higher education (IHE). These ATP programs shorten or modify the amount of course work to provide an accelerated track for teachers in high demand areas (Harrell & Harris, 2006). The majority of ATP programs are offered within colleges of education, although many ATP programs are managed by school districts. A third additional category of alternative options supports programs that primarily focus on recruitment of teachers rather than

teacher preparation. This category includes programs like Teach for America (TFA), The American Board for Certification of Teacher Excellence's, Passport to Teaching (ABCTE), and Troops to Teachers. These programs have one or more of the following goals: (a) to assist districts in meeting their need for teachers, (b) to expand the pool of candidates' who teach while working toward certification, (c) to provide experience based teacher training, and (d) to develop expedited teacher preparation. The goal of these recruitment programs is to recruit well-educated college graduates or mid-career professionals to serve in the nation's highest need public schools (Walsh & Jacobs, 2007).

Elements of alternative teacher preparation programs. ATP programs leading to teacher certification vary widely in requirements, agency responsibility, length, and intensity (Jorissen, 2003). Effective ATP programs have been described as having elements, such as a strong academic course work component, field-based learning in the classroom, and support from qualified mentors (Jorissen, 2003; Suell & Piotrowski, 2007). Summarizing ATP, The Education Commission of the States found key factors that support this alternative approach to teacher certification include strong partnership between preparation programs and schools, good screening, strong mentoring, solid curriculum, and as much training in course work as possible prior to teaching (Allen, 2003). Furthermore, time to prepare before being assigned as the teacher of record is an issue for some. Characteristics and variables often found in ATP programs include: (a) organized structure, (b) grade-point-average requirement, (c) an academic major, (d) added educational course work, (e) student teaching, and (f) mentoring. Four identifiers in the purest definition of alternative certification are academic selectivity, strong subject-

matter knowledge, a streamlined, practical course of study, and intensive mentoring support (Haberman, 2001; Walsh & Jacobs, 2007). The program requirements for alternative certification are as varied as the entities that provide them. The wide variety of programs that are identified as alternative pathways to teaching makes it even more important to determine elements that constitute a high-quality alternative path to teacher certification.

Research Findings

Evaluations of TTP and ATP programs have measured teacher satisfaction, teacher effectiveness as measured by student performance, success as measured by employers, and a variety of other topics with mixed results. There is a great variation in program requirements and total instruction for ATP and TTP teachers (Constantine et al., 2009). ATP options, developed to assist districts in meeting their need for teachers, expand the pool of qualified teachers, provide on-the-job teacher preparation, and expedite entry into the teaching profession are often criticized by proponents of traditional teacher preparation programs (McKibbin, 2008).

Public school principals, in a study comparing the perceived effectiveness of alternatively and traditionally certified teachers on pedagogical content knowledge, classroom management and instruction, behavior management, attitude, life experience, professionalism, professional development, and evaluation, rated traditionally prepared teachers as more effective in all of the domain areas (Nusbaum, 2002). Principals also reported the most positive aspect of ATP programs as the assistance the programs provided in alleviating the teacher shortage. In that same study teachers reported the

most positive aspect of ATP programs as encouraging individuals to enter teaching with the hope that they could improve teacher quality (Marshall, 2006).

Darling-Hammond, Holtzman, Gatlin, & Heilig (2005) found that candidates in strong traditional teacher preparation programs manage the challenges of first year teaching more successfully than those who do not have adequate training. Frome, Lasater, and Cooney (2005), found that students who completed classes with teachers who had pedagogical training in mathematics and a major in mathematics education, scored significantly higher on norm referenced mathematics examinations.

In a study measuring achievement of children taught by under-qualified teachers with emergency, temporary, or provisional certificates compared to children taught by qualified teachers with full certification through accredited university teacher training programs, results showed children taught by certified teachers out-performed children taught by teachers with emergency, temporary, or provisional certificates (Laczko-Kerr & Berliner, 2002). Brewer (2003) also found that student achievement was higher among Texas students who were taught by fully prepared and licensed teachers.

In a comparison of traditionally prepared teacher candidates and teacher candidates prepared through an on-line alternative certification program, based in institution of higher education, Foster, Bishop, and Hernandez (2008) found that alternatively prepared teachers reported higher levels of preparedness than graduates prepared in traditional programs. In another comparison of three types of secondary-level teacher preparation options, a traditional undergraduate program, a professional development school option (PDS), and an alternative graduate-level 10-month program, researchers investigated new teachers' employment and program preparation satisfaction

in the areas of classroom management, diversity, lesson planning, technology, and teaching strategies (Mantle-Bromley, Gould, McWhorter, & Whaley, 2000). The researchers found the alternative graduate-level completers had a statistically higher rate of employment in schools compared to traditional program completers. The PDS completers did not differ significantly from the other two groups in employment. Across the three programs, the alternative graduate-level completers consistently rated their preparation in all areas more positively than the other two groups. In the same study, for those who were employed as full-time teachers, there was no statistically significant difference for job satisfaction even though ATP completers rated their preparation more positively than the TTP completers.

In collaboration, the Newport News Public Schools and Old Dominion University developed an ATP program to prepare competent highly qualified teachers and found the urban school-university partnership to be one of the strengths of the preparation program (Gimbert, Wallace, Cristol, & Sene, 2005). In Salyer's study (2003) ATP candidates expressed concern about the lack of formal orientation and training prior to being assigned to a classroom and the lack of mentoring during the first year teaching experience. In a study of Florida's first year teachers Suell and Piotrowski (2006) found that teachers trained in alternative programs expressed similar levels of competencies on the Florida Accomplished Practices Survey as first-year teachers trained in traditional degree programs. A meta-analysis of 24 studies found that teachers from alternative training programs were trained in less time than traditionally prepared teachers with equivalent classroom performance (Qu & Becker, 2003).

Teacher attrition. Another factor associated with the shortage of effective qualified teachers that has resulted in the burgeoning of ATP programs is the unfortunate early leaving of experienced mid-level career teachers. Based on a study of first-year teachers in an urban school district in Georgia, Gerson (2002) found no difference in retention and attrition rates between traditionally and alternatively prepared teachers. However, in an examination of peer-reviewed literature on alternative teacher certification, Zeichner and Schulte (2001) found that subject areas and level of teaching were critical factors in the attrition rates of beginning teachers both traditionally and alternatively prepared. In all cases elementary teachers were more likely to stay on the job than middle school or high school teachers, regardless of where or how they were trained. The study also revealed that high school mathematics and science teachers were less likely to stay on the job than teachers in other subject areas, also regardless of where or how they were trained.

A comparative study of alternatively and traditionally prepared teachers with three years of experience concluded that there were no differences in teaching behavior, student achievement, or perception of teaching competence between the two groups (Miller, McKenna & McKenna, 1998).

Final Thought

The issue of how to improve teacher preparation programs has led to strenuous debate about how the classroom effectiveness of traditionally prepared teachers compares with alternatively prepared teachers. The variety of pathways now available for individuals to enter teaching and the variety of measures used to quantify success in traditional and alternative programs emphasize the need for continued evaluation of both

types of programs to determine if the programs are meeting the goal of having a qualified, effective teacher for every classroom.

CHAPTER THREE

Methodology

The purpose of the study was to determine the impact of traditional and alternative university teacher preparation program options on secondary teacher candidates' measured content knowledge, pedagogical skills, disposition, and employment. The study will analyze achievement for each group, the traditional secondary teacher preparation (TSTP) candidates and the alternative secondary teacher preparation (ASTP) candidates in the areas of content knowledge, pedagogical skills, dispositions, and employment.

Participants

Individuals participating in this study completed teacher certification requirements for secondary content endorsements either through a traditional teacher preparation program or an alternative teacher preparation program at an urban higher education institution.

Number of participants. Study participants ($N = 28$) consist of one randomly assigned arm and one naturally formed arm. The first study arm was a randomly selected group of traditionally prepared pre-baccalaureate secondary teacher candidates ($n = 13$) who enrolled in student teaching in the spring semester of 2007. The second study arm was a naturally formed group of alternative post-baccalaureate secondary teacher candidates ($n = 15$) who have been selected to participate in the Teacher Academy Project beginning in the summer of 2006 and culminating the program with student teaching in the spring semester of 2007. All participants were enrolled as candidates at the university.

Gender of participants. The gender of the randomly selected group of pre-baccalaureate traditional secondary teacher preparation prepared (TSTP) candidates is $n = 5$ (47.1%) male and $n = 8$ (52.9%) female. The gender of the naturally formed post-baccalaureate alternative secondary teacher preparation (ASTP) candidates is $n = 2$ (13%) male and $n = 13$ (87%) female.

Age range of participants. The age range for the TSTP candidates is 23 years to 48 years. All TSTP are completing a bachelor's degree as part of the teacher preparation program. The age range for the ASTP candidates is 22 years to 49 years. All ASTP have completed a minimum of a previously completed bachelor's degree in a secondary content area.

Racial and ethnic origin of participants. The racial and ethnic origin ratio of the TSTP candidates $N = 13$ were White not Hispanic $n = 12$ and Asian Pacific Islander $n = 1$. The racial and ethnic origin ratio of the ASTP candidates $N = 15$ were White not Hispanic $n = 12$, Black not Hispanic $n = 2$, and Hispanic $n = 1$. The racial and ethnic origin of the study participants is congruent with the overall racial and ethnic origin of the research college education majors.

Inclusion criteria of participants. The teacher preparation candidates selected as a part of the TSTP group were admitted as teacher preparation candidates in the traditional teacher preparation program. Applicants for admission to the traditional teacher preparation program had a cumulative grade point average of 2.50 or higher on a 4.0 scale; had a minimum score on the Pre Professional Skills Test in the areas of reading (170), writing (172) and mathematics (171); and provided two letters of recommendation and a essay conveying personal interest in teaching and describing personal attributes that

are viewed as necessary for successful, effective teachers. Applicants were admitted based on faculty committee review.

Teacher preparation candidates selected by the metropolitan area schools to participate in the Teacher Academy Project comprise the ASTP group. To be eligible for selection by a school district, applicants hold a four-year degree from an accredited institution of higher education with a major in a secondary teaching content area. The major had a minimum of 30 credit hours. The cumulative grade point average for the degree met a minimum requirement of 2.50 on a 4.00 scale. The applicants had a minimum score on the Pre Professional Skills Test in the areas of reading (170), writing (172) and mathematics (171). Applicants also meeting the minimum requirements in all areas were screened by the participating school districts for interviews and potential selection.

Method of participant identification. The TSTP group was randomly selected from the group of candidates meeting all criteria for student teaching with content area endorsements in an arts and sciences discipline. The naturally formed group of ASTC participants was identified through a school district selection processes after meeting all criteria for student teaching with content area endorsements in an arts and sciences discipline.

Description of Procedures

Research design. The pretest-posttest two-group exploratory comparative efficacy study design is displayed in the following notation:

Group 1 $X_1 O_1 Y_1 O_2$

Group 2 $X_1 O_1 Y_2 O_2$

Group 1 = study participants #1. Randomly selected traditionally prepared pre-baccalaureate secondary teacher candidate group ($n = 13$).

Group 2 = study participants #2. Naturally formed alternative post-baccalaureate secondary teacher candidate group ($n = 15$).

$X_1 =$ study constant. All study participants successfully met all program entrance requirements including above cut score Pre-Professional Skills Test (2008) scores and above cut score cumulative grade point average scores.

$Y_1 =$ study independent variable, teacher preparation program, condition #1. Completion of a traditional secondary teacher preparation program.

$Y_2 =$ study independent variable, teacher preparation program, condition #2. Completion of an alternative secondary teacher preparation program.

$O_1 =$ study pretest dependent measures. (1) Content knowledge as measured by (a) teacher candidates' required Pre-Professional Skills Test (PPST) Mathematics, Writing, and Reading Scaled Scores at the time of admission to the program and (b) content knowledge as measured by candidates' cumulative grade point average in content area course work prior to student teaching. (2) Pedagogical skills as measured by candidates' initial mid-term student teaching evaluations completed by their (a) cooperating teacher and their (b) university supervisor.

$O_2 =$ study posttest dependent measures. (1) Pedagogical skills as measured by candidates' final student teaching evaluations completed by their (a) cooperating teacher and their (b) university supervisor. (2) Employment at (a) public, parochial, or private school full-time contracted teaching or (b) public, parochial, or private school part-time contracted teaching or (c) other employment.

Independent Variable Descriptions

The independent variables for this study were teacher preparation candidates in traditional and alternative university teacher preparation program options. Both of these programs are fully supported and staffed by the research university. Both the TSTP and the ASTP programs are fully recognized by the Nebraska Department of Education and have recently received program approval from the National Council for the Accreditation of Teacher Education. Furthermore, all required courses meet Nebraska Department of Education Rule 24 standards for teaching endorsements.

Traditional Secondary Teacher Preparation Program Requirements

The traditional secondary teacher preparation candidates earn initial teacher certification by successfully completing the bachelor requirements for teacher certification in one or more content areas. Candidates in this program complete a 45-hour general education requirement, a 15-hour professional core requirement, a 9-hour secondary education component, and a 30-hour major that meets the content requirements for a subject area endorsement for certification as a teacher in secondary school, such as mathematics, science, foreign language, and English. All course work in the required areas must be completed prior to enrolling in student teaching. Upon successful completion of student teaching, the candidates are eligible to apply for an initial Nebraska teaching certificate with an endorsement to teach in the identified content area in grades 7-12. The four-year plan of study includes completion of: (a) 45 semester hours of general education liberal arts requirements including coursework in (i) cultural diversity, (ii) humanities and fine arts, (iii) mathematics, (iv) natural sciences, and (v) social science, (b) 15 semester hours of professional education requirements, (c) 9 semester

hours of secondary education requirements, (d) 30 semester hours of content major--math, science, and foreign language, English--requirements, and (e) 12 semester hours of supervised student teaching.

Four-year plan of study. Traditional secondary teacher preparation candidates typically complete required courses over four-year academic years. Following are the specific courses by each academic year of study.

Year 1. Completion of 30 semester hours of university general education requirements and content area course work including:

Year 2. Completion of 24 hours of university general education requirements and content area course work. Completion of EDUC 2020 – Foundations of Education and EDUC 2030 – Human Relations for a Bias Free Education, complete PPST and be formally accepted into the traditional secondary teacher preparation program (UNO Secondary Teacher Preparation, 2009).

Year 3. Completion of 21 hours of content area course work. Completion of EDUC 2010 – Human Growth and Learning (including a 10-hour structured field experience) EDUC 2510 – Applied Special Education, EDUC 2520 – Instructional Systems (including a 40-hour structured field experience).

Year 4. Completion of remaining electives or content area course work. Completion of TED 3690 – Applying Reading and Writing in the Content Areas (including a structured field experience, TED 3550 – Art and Science of Teaching, and TED 4000 – Special Methods of Teaching in the Content Area during the first semester. The final semester is the capstone experience, which includes a 1-week student teaching orientation with the assigned cooperating teacher and a 14-week, full day student

teaching experience. The assigned university supervisor conducts five on-site visits and completes an initial mid-term and final performance evaluation. Upon successful completion of student teaching, TSTP candidates are eligible to make application for an initial teaching certificate and an endorsement to teach in the identified content area in grades 7-12.

Alternative Secondary Teacher Preparation Program Requirements

Candidates selected to participate have an undergraduate degree in a major related to one or more secondary school endorsement areas. The ASTP candidates begin course work in the summer as a cohort group. ASTP candidates enroll in 3 hours of undergraduate and 9 graduate hours in summer school. The initial course work addresses education content which prepares the candidates to begin interning in classroom settings during the fall semester. The summer course work includes completion of EDUC 2010 – Human Growth and Learning (including a 10-hours structured field experience), TED 8300 – Effective Teaching Practices, TED 8020 – History and Philosophy of Education, and SPED 8030 – Special Education Alternatives. During the fall semester, ASTP candidates are assigned to work with a master teacher in the classroom for four hours each morning. During this time candidates’ participate in observations, one-on-one tutoring, small group instruction, collaborative lesson planning, and other classroom activities assigned by the master teacher. ASTP candidates attend required university courses after completing their morning school internship activities. This university work includes 3 semester hours of undergraduate and 9 semester hours of graduate course work. The fall course work includes TED 4000 – Special Methods in the Content Area, TED 8540 – Introduction to Technology Tools for Learning, TED 8695 – Applying

Reading and Writing in Content Areas, and TED 8210 – Human Relations for Bias Free Education. In the spring semester, ASTP candidates complete their capstone experience, which includes a 1-week student teaching orientation with the assigned cooperating teacher and a 14-week, full day student teaching experience. The assigned university supervisor conducts five on-site visits and completes an initial mid-term and final performance evaluation. Upon successful completion of student teaching, ASTP candidates are eligible to make application for an initial teaching certificate and an endorsement to teach in the identified content area in grades 7-12 (UNO COE Teacher Academy Project, 2009).

Dependent Variable Descriptions

The following research questions will focus on the dependent variables, specifically program entrance requirements, content knowledge, pedagogical skills, teacher dispositions, and employment status. The following program data were collected at only one point in the study (a) program entrance data were collected only once at the time of admission, (b) content knowledge data were collected prior to the beginning of the student teaching semester, and (c) employment data were gathered after student teaching. The pedagogical skills and teacher dispositions both serve as pretest and posttest measures.

Research Questions and Data Analysis

Research questions were used to determine the impact of traditional and alternative university teacher preparation program options on secondary teacher candidates' measured content knowledge, pedagogical skills, dispositions, and employment.

The following research questions were used to analyze candidate participation in TSTP and ASTP measuring content knowledge PPST Scaled Scores.

Overarching Pretest-Pretest Content Knowledge Research Question #1. Do teacher candidates who participate in the TSTP program and the ASTP program have congruent or different content knowledge as measured by their Pre-Professional Skills Test (PPST) Scaled Scores in Mathematics, Writing, and Reading?

Sub-Question 1a. Is there a significant difference between TSTP candidates' PPST Scaled Scores in Mathematics compared to ASTP candidates' PPST Scaled Scores in Mathematics?

Sub-Question 1b. Is there a significant difference between TSTP candidates' PPST Scaled Scores in Writing compared to ASTP candidates' PPST Scaled Scores in Writing?

Sub-Question 1c. Is there a significant difference between TSTP candidates' PPST Scaled Scores in Reading compared to ASTP candidates' PPST Scaled Scores in Reading?

Analysis. Research Sub-Questions #1a, 1b, and 1c were analyzed using independent t tests to examine the significance of the difference between TSTP candidates' beginning teacher preparation program PPST Scaled Scores compared to ASTP candidates' beginning teacher preparation program PPST Scaled Scores. Because multiple statistical tests were conducted, a one-tailed .01 alpha level was employed to help control for Type 1 errors. Means and standard deviations are displayed on tables.

The following research questions will measure TSTP and ASTP candidates' content knowledge using the cumulative grade point average (CGPA) in the content endorsement area.

Overarching Pretest-Pretest Content Knowledge Research Question #2. Do teacher candidates who participate in the TSTP program and the ASTP program have congruent or different content knowledge as measured by their CGPA in their content endorsement area?

Sub-Question 2a. Is there a significant difference between TSTP candidates' content knowledge CGPA compared to ASTP' candidates' content CGPA?

Analysis. Research Sub-Question #2a were analyzed using independent *t* tests to examine the significance of the difference between TSTP candidates' CGPA compared to ASTP candidates' CGPA. Because multiple statistical tests were conducted, a one-tailed .01 alpha level was employed to help control for Type 1 errors. Means and standard deviations are displayed on tables.

The following research questions were used to analyze candidate participation in TSTP program measuring pedagogical skills based on cooperating teacher judgments.

Overarching Pretest-Posttest Pedagogical Skills Research Question #3. Do teacher candidates who participate in TSTP program lose, maintain, or improve their initial mid-term student teaching evaluation ratings of teaching effectiveness compared to their final student teaching evaluation ratings of teaching effectiveness based on cooperating teacher judgments for (a) knowledge base, (b) instructional skills, (c) assessment and evaluation skills, (d) classroom management skills, (e) communication and interpersonal skills, and (f) disposition/professionalism?

Sub-Question 3a. Is there a significant difference between TSTP candidates' initial mid-term student teaching evaluation of teaching effectiveness ratings compared to TSTP candidates' final student teaching evaluation of teaching effectiveness ratings based on cooperating teacher judgments for (a) knowledge base?

Sub-Question 3b. Is there a significant difference between TSTP candidates' initial mid-term student teaching evaluation of teaching effectiveness ratings compared to TSTP candidates' final student teaching evaluation of teaching effectiveness ratings based on cooperating teacher judgments for (b) instructional skills?

Sub-Question 3c. Is there a significant difference between TSTP candidates' initial mid-term student teaching evaluation of teaching effectiveness ratings compared to TSTP candidates' final student teaching evaluation of teaching effectiveness ratings based on cooperating teacher judgments for (c) assessment and evaluation skills?

Sub-Question 3d. Is there a significant difference between TSTP candidates' initial mid-term student teaching evaluation of teaching effectiveness ratings compared to TSTP candidates' final student teaching evaluation of teaching effectiveness ratings based on cooperating teacher judgments for (d) classroom management skills?

Sub-Question 3e. Is there a significant difference between TSTP candidates' initial mid-term student teaching evaluation of teaching effectiveness ratings compared to TSTP candidates' final student teaching evaluation of teaching effectiveness ratings based on cooperating teacher judgments for (e) communication and interpersonal skills?

Sub-Question 3f. Is there a significant difference between TSTP candidates' initial mid-term student teaching evaluation of teaching effectiveness ratings

compared to TSTP candidates' final student teaching evaluation of teaching effectiveness ratings based on cooperating teacher judgments for (f) disposition/professionalism?

Analysis. Research Sub-Questions #3a, 3b, 3c, 3d, 3e, and 3f were analyzed using dependent *t* tests to examine the significance of the difference between the TSTP candidates' initial mid-term compared to final student teaching evaluation of teaching effectiveness ratings based on cooperating teacher judgments. Because multiple statistical tests were conducted, a one-tailed .01 alpha level was employed to help control for Type 1 errors. Means and standard deviations are displayed on tables.

The following research questions were used to analyze candidates participation in the ASTP program measuring pedagogical skills based on cooperating teacher judgments.

Overarching Pretest-Posttest Pedagogical Skills Research Question #4. Do teacher candidates who participate in ASTP program lose, maintain or improve their initial mid-term student teaching evaluations ratings of teaching effectiveness to their final student teaching evaluation of teaching effectiveness ratings based on cooperating teacher judgments for (a) knowledge base, (b) instructional skills, (c) assessment and evaluation skills, (d) classroom management skills, (e) communication and interpersonal skills, and (f) disposition/professionalism?

Sub-Question 4a. Is there a significant difference between ASTP candidates' initial mid-term student teaching evaluation of teaching effectiveness ratings compared to ASTP candidates' final student teaching evaluation of teaching effectiveness ratings based on cooperating teacher judgments for (a) knowledge base?

Sub-Question 4b. Is there a significant difference between ASTP candidates' initial mid-term student teaching evaluation of teaching effectiveness ratings

compared to ASTP candidates' final student teaching evaluation of teaching effectiveness ratings based on cooperating teacher judgments for (b) instructional skills?

Sub-Question 4c. Is there a significant difference between ASTP candidates' initial mid-term student teaching evaluation of teaching effectiveness ratings compared to ASTP candidates' final student teaching evaluation of teaching effectiveness ratings based on cooperating teacher judgments for (c) assessment and evaluation skills?

Sub-Question 4d. Is there a significant difference between ASTP candidates' initial mid-term student teaching evaluation of teaching effectiveness ratings compared to ASTP candidates' final student teaching evaluation of teaching effectiveness ratings based on cooperating teacher judgments for (d) classroom management skills?

Sub-Question 4e. Is there a significant difference between ASTP candidates' initial mid-term student teaching evaluation of teaching effectiveness ratings compared to ASTP candidates' final student teaching evaluation of teaching effectiveness ratings based on cooperating teacher judgments for (e) communication and interpersonal skills?

Sub-Question 4f. Is there a significant difference between ASTP candidates' initial mid-term student teaching evaluation of teaching effectiveness ratings compared to ASTP candidates' final student teaching evaluation of teaching effectiveness ratings based on cooperating teacher judgments for (f) disposition/professionalism?

Analysis. Research Sub-Questions #4a, 4b, 4c, 4d, 4e, and 4f were analyzed using dependent *t* tests to examine the significance of the difference between the ASTP candidates' initial mid-term compared to final student teaching evaluation of teaching effectiveness ratings based on cooperating teacher judgments. Because multiple

statistical tests were conducted, a one-tailed .01 alpha level was employed to help control for Type 1 errors. Means and standard deviations were displayed on tables.

The following research questions were used to analyze candidate participation in the TSTP program measuring pedagogical skills based on university supervisor judgments.

Overarching Pretest-Posttest Pedagogical Skills Research Question #5. Do teacher candidates who participate in TSTP program lose, maintain, or improve their initial mid-term student teaching evaluation of teaching effectiveness ratings compared to their final student teaching evaluation of teaching effectiveness ratings based on university supervisor judgments for (a) knowledge base, (b) instructional skills, (c) assessment and evaluation skills, (d) classroom management skills, (e) communication and interpersonal skills, and (f) disposition/professionalism?

Sub-Question 5a. Is there a significant difference between TSTP candidates' initial mid-term student teaching evaluation of teaching effectiveness ratings compared to TSTP candidates' final student teaching evaluation of teaching effectiveness ratings based on university supervisor judgments for (a) knowledge base?

Sub-Question 5b. Is there a significant difference between TSTP candidates' initial mid-term student teaching evaluations of teaching effectiveness ratings compared to TSTP candidates' final student teaching evaluation of teaching effectiveness ratings based on university supervisor judgments for (b) instructional skills?

Sub-Question 5c. Is there a significant difference between TSTP candidates' initial mid-term student teaching evaluation of teaching effectiveness ratings

compared to TSTP candidates' final student teaching evaluation of teaching effectiveness ratings based on university supervisor judgments for (c) assessment and evaluation skills?

Sub-Question 5d. Is there a significant difference between TSTP candidates' initial mid-term student teaching evaluation of teaching effectiveness ratings compared to TSTP candidates' final student teaching evaluation of teaching effectiveness ratings based on university supervisor judgments for (d) classroom management skills?

Sub-Question 5e. Is there a significant difference between TSTP candidates' initial mid-term student teaching evaluation of teaching effectiveness ratings compared to TSTP candidates' final student teaching evaluation of teaching effectiveness ratings based on university supervisor judgments for (e) communication and interpersonal skills?

Sub-Question 5f. Is there a significant difference between TSTP candidates' initial mid-term student teaching evaluation of teaching effectiveness ratings compared to TSTP candidates' final student teaching evaluation of teaching effectiveness ratings based on university supervisor judgments for (f) disposition/professionalism?

Analysis. Research Sub-Questions #5a, 5b, 5c, 5d, 5e, and 5f were analyzed using dependent *t* tests to examine the significance of the difference between the TSTP candidates' initial mid-term compared to final student teaching evaluation of teaching effectiveness ratings based on university supervisor judgments. Because multiple statistical tests were conducted, a one-tailed .01 alpha level were employed to help control for Type 1 errors. Means and standard deviations are displayed on tables.

The following research questions were used to analyze candidate participation in the ASTP program measuring pedagogical skills based on university supervisor judgments.

Overarching Pretest-Posttest Pedagogical Skills Research Question #6. Do teacher candidates who participate in ASTP program lose, maintain, or improve their initial mid-term student teaching evaluations ratings of teaching effectiveness to their final student teaching evaluation of teaching effectiveness ratings based on university supervisor judgments for (a) knowledge base, (b) instructional skills, (c) assessment and evaluation skills, (d) classroom management skills, (e) communication and interpersonal skills, and (f) disposition/professionalism?

Sub-Question 6a. Is there a significant difference between ASTP candidates' initial mid-term student teaching evaluation of teaching effectiveness ratings compared to TSTP candidates' final student teaching evaluation of teaching effectiveness ratings based on university supervisor judgments for (a) knowledge base?

Sub-Question 6b. Is there a significant difference between ASTP candidates' initial mid-term student teaching evaluations of teaching effectiveness ratings compared to TSTP candidates' final student teaching evaluation of teaching effectiveness ratings based on university supervisor judgments for (b) instructional skills?

Sub-Question 6c. Is there a significant difference between ASTP candidates' initial mid-term student teaching evaluation of teaching effectiveness ratings compared to TSTP candidates' final student teaching evaluation of teaching effectiveness ratings based on university supervisor judgments for (c) assessment and evaluation skills?

Sub-Question 6d. Is there a significant difference between ASTP candidates' initial mid-term student teaching evaluation of teaching effectiveness ratings compared to TSTP candidates' final student teaching evaluation of teaching effectiveness ratings based on university supervisor judgments for (d) classroom management skills?

Sub-Question 6e. Is there a significant difference between ASTP candidates' initial mid-term student teaching evaluation of teaching effectiveness ratings compared to ASTP candidates' final student teaching evaluation of teaching effectiveness ratings based on university supervisor judgments for (e) communication and interpersonal skills?

Sub-Question 6f. Is there a significant difference between ASTP candidates' initial mid-term student teaching evaluation of teaching effectiveness ratings compared to TSTP candidates' final student teaching evaluation of teaching effectiveness ratings based on university supervisor judgments for (f) disposition/professionalism?

Analysis. Research Sub-Questions #6a, 6b, 6c, 6d, 6e, and 6f were analyzed using dependent *t* tests to examine the significance of the difference between the ASTP candidates' initial mid-term compared to final student teaching evaluation of teaching effectiveness ratings based on university supervisor judgments. Because multiple statistical tests were conducted, a one-tailed .01 alpha level was employed to help control for Type 1 errors. Means and standard deviations are displayed on tables.

The following research questions were used to analyze teacher candidates' pedagogical skills based on final cooperating teacher judgments following participation in student teaching.

Overarching Posttest-Posttest Pedagogical Skills Research Question #7. Do teacher candidates' who participate in the TSTP program and the ASTP program have congruent or different student teaching evaluation of teaching effectiveness ratings based on final cooperating teacher judgments for (a) knowledge base, (b) instructional skills, (c) assessment and evaluation skills, (d) classroom management skills, (e) communication and interpersonal skills, and (f) disposition/professionalism?

Sub-Question 7a. Is there a significant difference between TSTP candidates' compared to ASTP candidates' final student teaching evaluation of teaching effectiveness ratings based on cooperating teacher judgments for (a) knowledge base?

Sub-Question 7b. Is there a significant difference between TSTP candidates' compared to ASTP candidates' final student teaching evaluation of teaching effectiveness ratings based on cooperating teacher judgments for (b) instructional skills?

Sub-Question 7c. Is there a significant difference between TSTP candidates' compared to ASTP candidates' final student teaching evaluation of teaching effectiveness ratings based on cooperating teacher judgments for (c) assessment and evaluation skills?

Sub-Question 7d. Is there a significant difference between TSTP candidates' compared to ASTP candidates' final student teaching evaluation of teaching effectiveness ratings based on cooperating teacher judgments for (d) classroom management skills?

Sub-Question 7e. Is there a significant difference between TSTP candidates' compared to ASTP candidates' final student teaching evaluation of teaching

effectiveness ratings based on cooperating teacher judgments for (e) communication and interpersonal skills?

Sub-Question 7f. Is there a significant difference between TSTP candidates' compared to ASTP candidates' final student teaching evaluation of teaching effectiveness ratings based on cooperating teacher judgments for (f) disposition/professionalism?

Analysis. Research Sub-Questions #7a, 7b, 7c, 7d, 7e, and 7f were analyzed using independent *t* tests to examine the significance of the difference between TSTP candidates' final student teaching evaluation of teaching effectiveness ratings compared to ASTP candidates' final student teaching evaluation of teaching effectiveness ratings based on cooperating teacher judgments. Because multiple statistical tests were conducted, a one-tailed .01 alpha level was employed to help control for Type 1 errors. Means and standard deviations are displayed on tables.

The following research questions were used to analyze teacher candidates' pedagogical skills based on final university supervisor judgments following participation in student teaching.

Overarching Posttest-Posttest Pedagogical Skills Research Question #8. Do teacher candidates who participate in the TSTP program and the ASTP program have congruent or different student teaching evaluation of teaching effectiveness ratings based on final university supervisor judgments for (a) knowledge base, (b) instructional skills, (c) assessment and evaluation skills, (d) classroom management skills, (e) communication and interpersonal skills, and (f) disposition/professionalism?

Sub-Question 8a. Is there a significant difference between TSTP candidates' compared to ASTP candidates' final student teaching evaluation of teaching effectiveness ratings based on university supervisor judgments for (a) knowledge base?

Sub-Question 8b. Is there a significant difference between TSTP candidates' compared to ASTP candidates' final student teaching evaluation of teaching effectiveness ratings based on university supervisor judgments for (b) instructional skills?

Sub-Question 8c. Is there a significant difference between TSTP candidates' compared to ASTP candidates' final student teaching evaluation of teaching effectiveness ratings based on university supervisor judgments for (c) assessment and evaluation skills?

Sub-Question 8d. Is there a significant difference between TSTP candidates' compared to ASTP candidates' final student teaching evaluation of teaching effectiveness ratings based on university supervisor judgments for (d) classroom management skills?

Sub-Question 8e. Is there a significant difference between TSTP candidates' compared to ASTP candidates' final student teaching evaluation of teaching effectiveness ratings based on university supervisor judgments for (e) communication and interpersonal skills?

Sub-Question 8f. Is there a significant difference between TSTP candidates' compared to ASTP candidates' final student teaching evaluation of teaching effectiveness ratings based on university supervisor judgments for (f) disposition/professionalism?

Analysis. Research Sub-Questions #8a, 8b, 8c, 8d, 8e, and 8f were analyzed using independent t tests to examine the significance of the difference between TSTP candidates' final student teaching evaluation of teaching effectiveness ratings compared to ASTP candidates' final student teaching evaluation of teaching effectiveness ratings based on university supervisor judgments. Because multiple statistical tests were conducted, a one-tailed .01 alpha level was employed to help control for Type 1 errors. Means and standard deviations are displayed on tables.

The following research questions were used to analyze TSTP candidates' pedagogical skills based on final cooperating teacher judgments compared to final university supervisor judgments following participation in student teaching.

Overarching Posttest-Posttest Pedagogical Skills Research Question #9. Do teacher candidates who participate in the TSTP program have congruent or different student teaching evaluations of teaching effectiveness ratings based on final cooperating teacher judgments compared to final university supervisor judgments for (a) knowledge base, (b) instructional skills, (c) assessment and evaluation skills, (d) classroom management skills, (e) communication and interpersonal skills, and (f) disposition/professionalism?

Sub-Question 9a. Is there a significant difference between cooperating teacher judgments compared to university supervisor judgments for TSTP candidates' final student teaching evaluations of teaching effectiveness ratings for (a) knowledge base?

Sub-Question 9b. Is there a significant difference between cooperating teacher judgments compared to university supervisor judgments for TSTP candidates'

final student teaching evaluations of teaching effectiveness ratings for (b) instructional skills?

Sub-Question 9c. Is there a significant difference between cooperating teacher judgments compared to university supervisor judgments for TSTP candidates' final student teaching evaluations of teaching effectiveness ratings for (c) assessment and evaluation skills?

Sub-Question 9d. Is there a significant difference between cooperating teacher judgments compared to university supervisor judgments for TSTP candidates' final student teaching evaluations of teaching effectiveness ratings for (d) classroom management skills?

Sub-Question 9e. Is there a significant difference between cooperating teacher judgments compared to university supervisor judgments for TSTP candidates' final student teaching evaluations of teaching effectiveness ratings for (e) communication and interpersonal skills?

Sub-Question 9f. Is there a significant difference between cooperating teacher judgments compared to university supervisor judgments for TSTP candidates' final student teaching evaluations of teaching effectiveness ratings for (f) disposition/professionalism?

Analysis. Research Sub-Questions #9a, 9b, 9c, 9d, 9e, and 9f were analyzed using independent *t* tests to examine the significance of the difference between cooperating teacher judgments compared to university supervisor judgments for TSTP candidates' final student teaching evaluations of teaching effectiveness ratings. Because

multiple statistical tests were conducted, a one-tailed .01 alpha level was employed to help control for Type 1 errors. Means and standard deviations are displayed on tables.

The following research questions were used to analyze ASTP candidates' pedagogical skills based on final cooperating teacher judgments compared to final university supervisor judgments following participation in student teaching.

Overarching Posttest-Posttest Pedagogical Skills Research Question #10. Do teacher candidates who participate in the ASTP program have congruent or different student teaching evaluation of teaching effectiveness ratings based on final cooperating teacher judgments compared to final university supervisor judgments for (a) knowledge base, (b) instructional skills, (c) assessment and evaluation skills, (d) classroom management skills, (e) communication and interpersonal skills, and (f) disposition/professionalism?

Sub-Question 10a. Is there a significant difference between cooperating teacher judgments compared to university supervisor judgments for ASTP candidates' final student teaching evaluations of teaching effectiveness ratings for (a) knowledge base?

Sub-Question 10b. Is there a significant difference between cooperating teacher judgments compared to university supervisor judgments for ASTP candidates' final student teaching evaluations of teaching effectiveness ratings for (b) instructional skills?

Sub-Question 10c. Is there a significant difference between cooperating teacher judgments compared to university supervisor judgments for ASTP candidates'

final student teaching evaluations of teaching effectiveness ratings for (c) assessment and evaluation skills?

Sub-Question 10d. Is there a significant difference between cooperating teacher judgments compared to university supervisor judgments for ASTP candidates' final student teaching evaluations of teaching effectiveness ratings for (d) classroom management skills?

Sub-Question 10e. Is there a significant difference between cooperating teacher judgments compared to university supervisor judgments for ASTP candidates' final student teaching evaluations of teaching effectiveness ratings for (e) communication and interpersonal skills?

Sub-Question 10f. Is there a significant difference between cooperating teacher judgments compared to university supervisor judgments for ASTP candidates' final student teaching evaluations of teaching effectiveness ratings for (f) disposition/professionalism?

Analysis. Research Sub-Questions #10a, 10b, 10c, 10d, 10e, and 10f were analyzed using independent *t* tests to examine the significance of the difference between cooperating teacher judgments compared to university supervisor judgments for ASTP candidates' final student teaching evaluations of teaching effectiveness ratings. Because multiple statistical tests were conducted, a one-tailed .01 alpha level was employed to help control for Type 1 errors. Means and standard deviations are displayed on tables.

The following research questions were used to analyze teacher candidate employment in education six-months after completion of TSTP and ASTP certification programs.

Overarching Posttest-Posttest Teacher Candidate Employment Research

Question #11. Is there a significant difference between TSTP candidates' employment and ASTP candidates' employment in education six months after completion of their certification programs?

Sub-Question 11a. Is there a significant difference between TSTP candidates' employment and ASTP candidates' employment in education six months after completion of their certification programs for (a) public, parochial, or private school full-time contracted teaching, (b) public, parochial, or private school part-time contracted teaching, (c) other employment?

Analysis. Research Sub-Question #11a utilized a chi-square test of significance to compare observed versus expected recorded frequencies for employment. Because multiple statistical tests were conducted, .01 alpha level was employed to help control for Type I errors. Frequencies and percents are displayed on tables.

Data Collection Procedures

All data used in this study were routinely collected. Permission from the appropriate university personnel was obtained before data collection and analysis were conducted. Non-coded numbers were used to display individual de-identify data.

Performance sites. The research was conducted at the university and in the public schools under normal educational practices. The study procedure did not interfere in any way with the normal educational practices at the university or in the public school setting and did not involve coercion or discomfort of any kind. Data were stored on spreadsheets and computer drives for statistical analysis. Data and computer drives were secured. No individual identifiers were attached to the data.

Confidentiality. Non-coded numbers were used to display individual achievement. Individual data was de-identified by the appropriate university personnel after all information was linked and the data sets were complete.

Human Subjects Approval Category

The exemption categories for this study were provided under 45FR46.101(b) categories 1 and 4. The research was conducted using routinely collected archival data. A letter of support from the university for this study was obtained and sent to the University of Nebraska Medical Center/University of Nebraska at Omaha Joint Institutional Review Board for the Protection of Human Subjects for review.

CHAPTER FOUR

Results

Purpose of the Study

The purpose of the study was to determine the impact of traditional and alternative university teacher preparation program options on secondary teacher candidates measured content knowledge, pedagogical skills, dispositions, and employment. The study analyzed achievement for each group, the traditional secondary teacher preparation candidates (TSTP) and the alternative secondary teacher preparation candidates (ASTP) in the areas of content knowledge, pedagogical skills, dispositions, and employment status. Study dependent measures were content knowledge as measured by (a) teacher candidates' required Pre-Professional Skills Test (PPST) Mathematics, Writing, and Reading Scaled Scores at the time of admission to the program and (b) content knowledge as measured by candidates' cumulative grade point average in content area course work prior to student teaching, pedagogical skills as measured by candidates' (a) initial mid-term and (b) final student teaching evaluations completed by their (a) cooperating teacher and their (b) university supervisor, and employment at (a) public, parochial, or private school full-time contracted teaching, or (b) public, parochial, or private school part-time contracted teaching, or (c) other employment.

The independent variable for this study was teacher preparation program with two teacher preparation options, a traditional secondary teacher preparation (TSTP) condition and an alternative secondary teacher preparation (ASTP) condition. Both of these conditions were fully supported and staffed by the research university. Both the TSTP and the ASTP programs are fully recognized by the Nebraska Department of Education

and have recently received program approval from the National Council for the Accreditation of Teacher Education. Furthermore, all required courses meet Nebraska Department of Education Rule 24 standards for teaching endorsements. All study data related to each of the dependent variables were retrospective, archival, and routinely collected college information. Permission from the appropriate college dean was obtained before the data was collected and analyzed.

Table 1 displays demographic information of TSTP candidates and ASTP candidates. Table 2 displays Educational Testing Service Pre-Professional Skills Test means and standard deviations of TSTP candidates and ASTP candidates.

Research Question #1

The first pretest-pretest hypothesis was tested using the independent t test. The first hypothesis, an independent t test analysis of Educational Testing Service Pre-Professional Skills Test means and standard deviations of TSTP candidates and ASTP candidates program entrance score results, are displayed in Table 3. As seen in Table 3, null hypotheses were not rejected for any of the three measured Pre-Professional Skills Test mean reading, writing, and mathematics domain comparisons. The null hypothesis was not rejected for reading where the TSTP program entrance reading score ($M = 182.31$, $SD = 2.72$) compared to the ASTP program entrance reading score ($M = 182.47$, $SD = 3.87$) was not statistically significantly different, $t(26) = -0.12$, $p = .45$ (one-tailed), $d = .04$. The null hypothesis was not rejected for writing where the TSTP program entrance writing score ($M = 177.15$, $SD = 3.67$) compared to the ASTP program entrance writing score ($M = 178.73$, $SD = 5.05$) was not statistically significantly different, $t(26) = -0.93$, $p = .18$ (one-tailed), $d = .36$. The null hypothesis was also not rejected for

mathematics where the TSTP program entrance mathematics score ($M = 181.31$, $SD = 4.84$) compared to the ASTP program entrance reading score ($M = 182.80$, $SD = 6.60$) was not statistically significantly different, $t(26) = -0.67$, $p = .25$ (one-tailed), $d = .26$.

Overall, pretest-pretest Educational Testing Service Pre-Professional Skills test results indicated program entrance reading, writing, and mathematics score equipoise between traditional and ASTP candidates. These results indicate that candidates who enter a traditional path to secondary teacher preparation enter their studies with measurable content knowledge in reading, writing, and mathematics that is congruent with the content knowledge of post-baccalaureate candidates who enter an ASTP program.

Comparing TSTP program test results with Nebraska Department of Education required entrance cut scores helps put their performance in perspective. TSTP candidates' entrance mean reading score of 182.31 is 12.31 mean scaled score points above the reading cut score of 170. ASTP candidates' entrance mean reading score of 182.47 is 12.47 mean scaled score points above the reading cut score of 170. For this comparison the entrance, reading mean cut score difference between the two secondary teacher preparation groups is greater by .16 mean scaled score points for the ASTP candidates. TSTP candidates' entrance mean writing score of 177.15 is 5.15 mean scaled score points above the writing cut score of 172. ASTP candidates' entrance mean writing score of 178.73 is 6.73 mean scaled score points above the writing cut score of 172. For this comparison the entrance, writing mean cut score difference between the two secondary teacher preparation groups is greater by 1.58 mean scaled score points for the ASTP candidates. TSTP candidates' entrance mean mathematics score of 181.31 is

10.31 mean scaled score points above the writing cut score of 171. ASTP candidates' entrance mean mathematics score of 182.80 is 11.80 mean scaled score points above the writing cut score of 171. For this comparison the entrance, mathematics mean cut score difference between the two secondary teacher preparation groups is greater by 1.49 mean scaled score points for the ASTP candidates.

Finally, the higher reading (+ .16), the higher writing (+ 1.58), and the higher mathematics (+ 1.49) pretest compared to pretest mean scaled score points for the ASTP candidates may reflect college degree completion for the ASTP candidates rather than greater content knowledge for these not statistically significantly different program entrance score comparisons.

Table 4 displays the content coursework cumulative Grade Point Average of TSTP candidates and ASTP candidates.

Research Question #2

The second pretest-pretest hypothesis was tested using the independent t test. The second hypothesis comparing independent t test analysis of content coursework cumulative grade point average of TSTP candidates and ASTP candidates results are displayed in Table 5. As seen in Table 5 the null hypothesis was not rejected for the Cumulative Grade Point Average comparison. The null hypothesis was not rejected for the cumulative Grade Point Average where the TSTP program candidates score ($M = 3.39$, $SD = 0.45$) compared to the ASTP program entrance candidates score ($M = 3.42$, $SD = 0.45$) was not statistically significantly different, $t(26) = -0.19$, $p = .43$ (one-tailed), $d = .06$.

Overall, cumulative Grade Point Average results calculated for both groups at the completion of all content area course work in an arts and sciences discipline, and just prior to their student teaching experiences indicated program cumulative Grade Point Average score equipoise between TSTP and ASTP candidates. These results indicated candidates who seek a traditional path to secondary teacher preparation enter their student teaching experience with a measurable mean cumulative Grade Point Average that is congruent with post-baccalaureate ASTP candidates.

TSTP candidates cumulative Grade Point Average score of 3.39 is .39 mean points above the cut score of 3.0 required for admission to graduate school. ASTP candidates cumulative Grade Point Average score of 3.42 is .42 mean points above the cut score of 3.0 required for admission to graduate school.

Finally, the not significantly different but higher cumulative Grade Point Average (+ .03), for the ASTP candidates indicates congruent mastery of required content knowledge in the subject matter and successful course completion for both the TSTP and ASTP program candidates as they begin their student teaching capstone experiences.

Research Question #3

The third pretest-posttest hypothesis was tested using the dependent *t* test. Dependent *t* test analysis of TSTP candidates' initial mid-term student teaching evaluation ratings compared to final student teaching evaluation ratings of teaching effectiveness based on cooperating teacher judgments are displayed in Table 6. As seen in Table 6 the null hypothesis was rejected for the six measured, pretest-posttest TSTP candidates' initial mid-term student teaching evaluation ratings compared to final student teaching evaluation ratings of teaching effectiveness based on cooperating teacher

judgments. The initial mid-term student teaching evaluation rating for knowledge base ($M = 2.15$, $SD = 0.73$) compared to the posttest final student teaching evaluation rating for knowledge base ($M = 2.60$, $SD = 0.49$) was statistically significantly different, $t(12) = 4.79$, $p = < .0001$ (one-tailed), $d = .73$. The initial mid-term student teaching evaluation rating for instructional skills ($M = 2.27$, $SD = 0.66$) compared to the posttest final student teaching evaluation rating for instructional skills ($M = 2.69$, $SD = 0.46$) was statistically significantly different, $t(12) = 5.54$, $p = < .0001$ (one-tailed), $d = .75$. The initial mid-term student teaching evaluation rating for assessment and evaluation skills ($M = 2.03$, $SD = 0.87$) compared to the posttest final student teaching evaluation rating for assessment and evaluation skills ($M = 2.63$, $SD = 0.49$) was statistically significantly different, $t(12) = 5.29$, $p = < .0001$ (one-tailed), $d = .88$. The initial mid-term student teaching evaluation rating for classroom management skills ($M = 2.18$, $SD = 0.73$) compared to the posttest final student teaching evaluation rating for classroom management skills ($M = 2.55$, $SD = 0.53$) was statistically significantly different, $t(12) = 4.41$, $p = < .0001$ (one-tailed), $d = .58$. The initial mid-term student teaching evaluation rating for communication and interpersonal skills ($M = 2.33$, $SD = 0.86$) compared to the posttest final student teaching evaluation rating for communication and interpersonal skills ($M = 2.77$, $SD = 0.58$) was statistically significantly different, $t(12) = 3.56$, $p = < .0004$ (one-tailed), $d = .61$. The initial mid-term student teaching evaluation rating for disposition/professionalism ($M = 2.49$, $SD = 0.64$) compared to the posttest final student teaching evaluation rating for disposition/professionalism ($M = 2.77$, $SD = 0.45$) was statistically significantly different, $t(12) = 4.66$, $p = < .0001$ (one-tailed), $d = .51$.

Overall, pretest-posttest results indicated statistically improved initial mid-term student teaching evaluation ratings compared to final student teaching evaluation ratings of teaching effectiveness of TSTP candidates based on cooperating teacher judgments in all six evaluation domains. Positive statistical growth of this magnitude suggests real world mastery of day-to-day teaching effectiveness observed by the contracted cooperating classroom teachers who have observed TSTP candidates for the 14-week, full day clinical experience. Furthermore, all observed initial mid-term mean student teaching evaluation ratings for TSTP candidates were measured below 2.50 on a three point Likert scale where KB = 2.15, IS = 2.27, AES = 2.03, CMS = 2.18, CIS = 2.33, and DP = 2.49 while all final mean student teaching evaluation ratings for TSTP candidates were measured above 2.51 on a three point Likert scale where KB = 2.60, IS = 2.69, AES = 2.63, CMS = 2.55, CIS = 2.77, and DP = 2.77. The single greatest growth domain was AES (+ .60) and the single least growth domain was DP (+ .28).

Research Question #4

The fourth pretest-posttest hypothesis was tested using the dependent *t* test. Dependent *t* test analysis of ASTP candidates' initial mid-term student teaching evaluation ratings compared to final student teaching evaluation ratings of teaching effectiveness based on cooperating teacher judgments are displayed in Table 7. As seen in Table 7 the null hypothesis was rejected for the six measured, pretest-posttest ASTP candidates' initial mid-term student teaching evaluation ratings compared to final student teaching evaluation ratings of teaching effectiveness based on cooperating teacher judgments. The initial mid-term student teaching evaluation rating for knowledge base ($M = 2.33$, $SD = 0.63$) compared to the posttest final student teaching evaluation rating

for knowledge base ($M = 2.77$, $SD = 0.42$) was statistically significantly different, $t(14) = 4.79$, $p < .0001$ (one-tailed), $d = .84$. The initial mid-term student teaching evaluation rating for instructional skills ($M = 2.30$, $SD = 0.69$) compared to the posttest final student teaching evaluation rating for instructional skills ($M = 2.70$, $SD = 0.46$) was statistically significantly different, $t(14) = 4.43$, $p < .0001$ (one-tailed), $d = .70$. The initial mid-term student teaching evaluation rating for assessment and evaluation skills ($M = 2.16$, $SD = 0.71$) compared to the posttest final student teaching evaluation rating for assessment and evaluation skills ($M = 2.70$, $SD = 0.46$) was statistically significantly different, $t(14) = 5.16$, $p < .0001$ (one-tailed), $d = .93$. The initial mid-term student teaching evaluation rating for classroom management skills ($M = 2.10$, $SD = 0.71$) compared to the posttest final student teaching evaluation rating for classroom management skills ($M = 2.56$, $SD = 0.50$) was statistically significantly different, $t(14) = 4.19$, $p < .0001$ (one-tailed), $d = .76$. The initial mid-term student teaching evaluation rating for communication and interpersonal skills ($M = 2.25$, $SD = 0.86$) compared to the posttest final student teaching evaluation rating for communication and interpersonal skills ($M = 2.80$, $SD = 0.44$) was statistically significantly different, $t(14) = 4.64$, $p < .0001$ (one-tailed), $d = .84$. The initial mid-term student teaching evaluation rating for disposition/professionalism ($M = 2.40$, $SD = 0.69$) compared to the posttest final student teaching evaluation rating for disposition/professionalism ($M = 2.80$, $SD = 0.42$) was statistically significantly different, $t(14) = 6.48$, $p < .0001$ (one-tailed), $d = .72$.

Overall, pretest-posttest results indicated statistically improved initial mid-term student teaching evaluation ratings compared to final student teaching evaluation ratings of teaching effectiveness of ASTP candidates based on cooperating teacher judgments in

all six evaluation domains. Positive statistical growth of this magnitude suggests real world mastery of day-to-day teaching effectiveness observed by the cooperating classroom teachers who have observed ASTP candidates for the 14-week, full day clinical experience. Furthermore, all observed initial mid-term mean student teaching evaluation ratings for ASTP candidates were measured below 2.50 on a three point Likert scale where KB = 2.33, IS = 2.30, AES = 2.16, CMS = 2.10, CIS = 2.25, and DP = 2.40 while all final mean student teaching evaluation ratings for ASTP candidates were measured above 2.51 on a three point Likert scale where KB = 2.77, IS = 2.70, AES = 2.70, CMS = 2.56, CIS = 2.80, and DP = 2.80. The single greatest growth domain was CIS (+ .65) and the least growth domains were IS (+ .40) and DP (+ .40).

Research Question #5

The fifth pretest-posttest hypothesis was tested using the dependent *t* test. Dependent *t* test analysis of TSTP candidates' initial mid-term student teaching evaluation ratings compared to final student teaching evaluation ratings of teaching effectiveness based on university supervisor judgments are displayed in Table 8. As seen in Table 8 the null hypothesis was rejected for five of the six measured, pretest-posttest TSTP candidates' initial mid-term student teaching evaluation ratings compared to final student teaching evaluation ratings of teaching effectiveness based on university supervisor judgments. The initial mid-term student teaching evaluation rating for knowledge base ($M = 2.09$, $SD = 0.57$) compared to the posttest final student teaching evaluation rating for knowledge base ($M = 2.63$, $SD = 0.49$) was statistically significantly different, $t(12) = 4.57$, $p < .0001$ (one-tailed), $d = 1.03$. The initial mid-term student teaching evaluation rating for instructional skills ($M = 2.04$, $SD = 0.44$) compared to the

posttest final student teaching evaluation rating for instructional skills ($M = 2.45$, $SD = 0.50$) was statistically significantly different, $t(12) = 4.37$, $p = < .0001$ (one-tailed), $d = .89$. The initial mid-term student teaching evaluation rating for assessment and evaluation skills ($M = 1.87$, $SD = 0.33$) compared to the posttest final student teaching evaluation rating for assessment and evaluation skills ($M = 2.41$, $SD = 0.50$) was statistically significantly different, $t(12) = 4.93$, $p = < .0001$ (one-tailed), $d = 1.31$. The initial mid-term student teaching evaluation rating for classroom management skills ($M = 2.11$, $SD = 0.53$) compared to the posttest final student teaching evaluation rating for classroom management skills ($M = 2.47$, $SD = 0.50$) was statistically significantly different, $t(12) = 3.69$, $p = .0003$ (one-tailed), $d = .68$. The initial mid-term student teaching evaluation rating for communication and interpersonal skills ($M = 2.69$, $SD = 0.47$) compared to the posttest final student teaching evaluation rating for communication and interpersonal skills ($M = 2.72$, $SD = 0.45$) was not statistically significantly different, $t(12) = 0.33$, $p = .37$ (one-tailed), $d = .06$. The initial mid-term student teaching evaluation rating for disposition/professionalism ($M = 2.40$, $SD = 0.51$) compared to the posttest final student teaching evaluation rating for disposition/professionalism ($M = 2.70$, $SD = 0.48$) was statistically significantly different, $t(12) = 4.49$, $p = < .0001$ (one-tailed), $d = .62$.

Overall, pretest-posttest results indicated statistically improved initial mid-term student teaching evaluation ratings compared to final student teaching evaluation ratings of teaching effectiveness of TSTP candidates based on university supervisor judgments in five of the six evaluation domains. Positive statistical growth of this magnitude suggests real world mastery of teaching effectiveness based on five observations by the university

supervisors over the 14-week, full day clinical experience. Five of the observed initial mid-term mean student teaching evaluation ratings for TSTP candidates were measured below 2.50 on a three point Likert scale where KB = 2.09, IS = 2.04, AES = 1.87, CMS = 2.11, DP = 2.40, and CIS = 2.69 was measured above 2.50. Only three of the final mean student teaching evaluation ratings for TSTP candidates were measured above 2.51 on a three point Likert scale where KB = 2.63, CIS = 2.72, and DP = 2.70 and IS = 2.45, AES = 2.41, and CMS = 2.46 were measured below 2.51. The single greatest growth domain was AES (+ .54) and the single least growth domain was CIS (+ .03).

Research Question #6

The sixth pretest-posttest hypothesis was tested using the dependent *t* test. Dependent *t* test analysis of ASTP candidates' initial mid-term student teaching evaluation ratings compared to final student teaching evaluation ratings of teaching effectiveness based on university supervisor judgments are displayed in Table 9. As seen in Table 9 the null hypothesis was rejected for five of the six measured, pretest-posttest ASTP candidates' initial mid-term student teaching evaluation ratings compared to final student teaching evaluation ratings of teaching effectiveness based on university supervisor judgments. The initial mid-term student teaching evaluation rating for knowledge base ($M = 2.49$, $SD = 0.59$) compared to the posttest final student teaching evaluation rating for knowledge base ($M = 2.87$, $SD = 0.34$) was statistically significantly different, $t(14) = 3.39$, $p < .0001$ (one-tailed), $d = .82$. The initial mid-term student teaching evaluation rating for instructional skills ($M = 2.30$, $SD = 0.50$) compared to the posttest final student teaching evaluation rating for instructional skills ($M = 2.78$, $SD = 0.42$) was statistically significantly different, $t(14) = 5.56$, $p < .0001$ (one-tailed), $d =$

1.04. The initial mid-term student teaching evaluation rating for assessment and evaluation skills ($M = 2.22$, $SD = 0.47$) compared to the posttest final student teaching evaluation rating for assessment and evaluation skills ($M = 2.64$, $SD = 0.48$) was statistically significantly different, $t(14) = 4.31$, $p < .0001$ (one-tailed), $d = .89$. The initial mid-term student teaching evaluation rating for classroom management skills ($M = 2.36$, $SD = 0.57$) compared to the posttest final student teaching evaluation rating for classroom management skills ($M = 2.69$, $SD = 0.47$) was statistically significantly different, $t(14) = 3.16$, $p = .001$ (one-tailed), $d = .63$. The initial mid-term student teaching evaluation rating for communication and interpersonal skills ($M = 2.77$, $SD = 0.43$) compared to the posttest final student teaching evaluation rating for communication and interpersonal skills ($M = 2.81$, $SD = 0.40$) was not statistically significantly different, $t(14) = 0.30$, $p = .38$ (one-tailed), $d = .09$. The initial mid-term student teaching evaluation rating for disposition/professionalism ($M = 2.53$, $SD = 0.52$) compared to the posttest final student teaching evaluation rating for disposition/professionalism ($M = 2.88$, $SD = 0.33$) was statistically significantly different, $t(14) = 6.37$, $p < .0001$ (one-tailed), $d = .83$.

Overall, pretest-posttest results indicated statistically improved initial mid-term student teaching evaluation ratings compared to final student teaching evaluation ratings of teaching effectiveness of ASTP candidates based on university supervisor judgments in five of the six evaluation domains. Positive statistical growth of this magnitude suggests real world mastery of teaching effectiveness based on five observations by the university supervisors over the 14-week, full day clinical experience. Four of the observed initial mid-term mean student teaching evaluation ratings for ASTP candidates

were measured below 2.50 on a three point Likert scale where KB = 2.49, IS = 2.30, AES = 2.22, CMS = 2.36, and CIS = 2.77 and DP = 2.53 were measured above 2.50. All six of the final mean student teaching evaluation ratings for TSTP candidates were measured above 2.51 on a three point Likert scale where KB = 2.87, IS = 2.78, AES = 2.64, CMS = 2.69, CIS = 2.81, and DP = 2.88. The single greatest growth domain was IS (+ .48) and the single least growth domain was CIS (+ .04).

Research Question #7

The seventh posttest-posttest hypothesis was tested using the independent *t* test. Independent *t* test analysis of TSTP candidates' and ASTP candidates' final student teaching evaluation ratings of teaching effectiveness based on cooperating teacher judgments are displayed in Table 10. As seen in Table 10 the null hypothesis was rejected for one of the six measured, posttest-posttest TSTP candidates' and ASTP candidates' final student teaching evaluation ratings of teaching effectiveness based on cooperating teacher judgments. The TSTP candidates' final student teaching evaluation rating for knowledge base ($M = 2.60$, $SD = 0.49$) compared to the ASTP candidates final student teaching evaluation rating for knowledge base ($M = 2.77$, $SD = 0.42$) was statistically significantly different, $t(26) = -2.17$, $p = .02$ (one-tailed), $d = .37$. The TSTP candidates' final student teaching evaluation rating for instructional skills ($M = 2.69$, $SD = 0.46$) compared to the ASTP candidates' final student teaching evaluation rating for instructional skills ($M = 2.70$, $SD = 0.46$) was not statistically significantly different, $t(26) = -0.14$, $p = .44$ (one-tailed), $d = .02$. The TSTP candidates' final student teaching evaluation rating for assessment and evaluation skills ($M = 2.63$, $SD = 0.49$) compared to the ASTP candidates' final student teaching evaluation rating for assessment and

evaluation skills ($M = 2.70$, $SD = 0.46$) was not statistically significantly different, $t(26) = -0.85$, $p = .20$ (one-tailed), $d = .14$. The TSTP candidates' final student teaching evaluation rating for classroom management skills ($M = 2.55$, $SD = 0.53$) compared to the ASTP candidates' final student teaching evaluation rating for classroom management skills ($M = 2.56$, $SD = 0.50$) was not statistically significantly different, $t(26) = -0.04$, $p = .49$ (one-tailed), $d = .01$. The TSTP candidates' final student teaching evaluation rating for communication and interpersonal skills ($M = 2.77$, $SD = 0.58$) compared to the ASTP candidates' final student teaching evaluation rating for communication and interpersonal skills ($M = 2.80$, $SD = 0.44$) was not statistically significantly different, $t(26) = -0.35$, $p = .36$ (one-tailed), $d = .06$. The TSTP candidates' final student teaching evaluation rating for disposition/professionalism ($M = 2.77$, $SD = 0.45$) compared to the ASTP candidates' final student teaching evaluation rating for disposition/professionalism ($M = 2.80$, $SD = 0.42$) was not statistically significantly different, $t(26) = -0.65$, $p = .26$ (one-tailed), $d = .06$.

Overall, posttest-posttest results indicated statistically different TSTP candidates' final student teaching evaluation rating for knowledge base compared to the ASTP candidates' final student teaching evaluation rating for knowledge base with cooperating teacher mean judgments higher for ASTP candidates ratings. The null hypothesis was not rejected for the other five cooperating teacher mean final student teaching evaluation ratings of the two groups of secondary teacher candidates at the conclusion of student teaching. Statistical equipoise suggests equivalent secondary teacher preparation program effectiveness for traditional and alternatively prepared candidates.

Research Question #8

The eighth posttest-posttest hypothesis was tested using the independent t test. Independent t test analysis of TSTP candidates' and ASTP candidates' final student teaching evaluation ratings of teaching effectiveness based on university supervisor judgments are displayed in Table 11. As seen in Table 11 the null hypothesis was rejected for five of the six measured, posttest-posttest TSTP candidates and ASTP candidates' final student teaching evaluation ratings of teaching effectiveness based on university supervisor judgments. The TSTP candidates' final student teaching evaluation rating for knowledge base ($M = 2.63$, $SD = 0.49$) compared to the ASTP candidates' final student teaching evaluation rating for knowledge base ($M = 2.87$, $SD = 0.34$) was statistically significantly different, $t(26) = -2.58$, $p = .006$ (one-tailed), $d = .56$. The TSTP candidates' final student teaching evaluation rating for instructional skills ($M = 2.45$, $SD = 0.50$) compared to the ASTP candidates' final student teaching evaluation rating for instructional skills ($M = 2.78$, $SD = 0.42$) was statistically significantly different, $t(26) = -3.63$, $p = .0002$ (one-tailed), $d = .61$. The TSTP candidates' final student teaching evaluation rating for assessment and evaluation skills ($M = 2.41$, $SD = 0.50$) compared to the ASTP candidates' final student teaching evaluation rating for assessment and evaluation skills ($M = 2.64$, $SD = 0.48$) was statistically significantly different, $t(26) = -2.32$, $p = .01$ (one-tailed), $d = .52$. The TSTP candidates' final student teaching evaluation rating for classroom management skills ($M = 2.47$, $SD = 0.50$) compared to the ASTP candidates' final student teaching evaluation rating for classroom management skills ($M = 2.69$, $SD = 0.47$) was statistically significantly different, $t(26) = -2.17$, $p = .02$ (one-tailed), $d = .45$. The TSTP candidates' final student teaching evaluation rating for

communication and interpersonal skills ($M = 2.72$, $SD = 0.45$) compared to the ASTP candidates' final student teaching evaluation rating for communication and interpersonal skills ($M = 2.81$, $SD = 0.40$) was not statistically significantly different, $t(26) = -0.80$, $p = .21$ (one-tailed), $d = .21$. The TSTP candidates' final student teaching evaluation rating for disposition/professionalism ($M = 2.70$, $SD = 0.48$) compared to the ASTP candidates' final student teaching evaluation rating for disposition/professionalism ($M = 2.88$, $SD = 0.33$) was statistically significantly different, $t(26) = -3.12$, $p = .001$ (one-tailed), $d = .45$.

Overall, posttest-posttest results indicated statistically different TSTP candidates' final student teaching evaluation rating for knowledge base, instructional skills, assessment and evaluation skills, classroom management skills, and disposition/professionalism compared to the ASTP candidates' final student teaching evaluation rating for knowledge base, instructional skills, assessment and evaluation skills, classroom management skills, and disposition/professionalism with university supervisor mean judgments higher for ASTP candidates ratings. The null hypothesis was not rejected for communication and interpersonal skills recorded by university supervisor mean final student teaching evaluation ratings of the two groups of secondary teacher candidates at the conclusion of student teaching. Because null hypotheses were rejected for five of the university supervisor mean judgments and all six of the university supervisor mean judgments were higher for the alternatively prepared secondary teacher candidates it may be concluded that university supervisors' ratings of alternatively prepared secondary teacher candidates may reflect the additional time that candidates in this alternative program spent in their respective classrooms in the structured field experience in the semester prior to their 14-week, full day, clinical experience.

Research Question #9

The ninth posttest-posttest hypothesis was tested using the independent t test. Independent t test analysis of cooperating teachers' and university supervisors' final student teaching ratings of TSTP candidates are displayed in Table 12. As seen in Table 12 the null hypothesis was rejected for two of the six measured, posttest-posttest cooperating teachers' and university supervisors' final student teaching ratings of TSTP candidates. The cooperating teacher judgment of TSTP candidates' final student teaching rating for knowledge base ($M = 2.60$, $SD = 0.49$) compared to the university supervisor judgment of TSTP candidates' final student teaching rating for knowledge base ($M = 2.63$, $SD = 0.49$) was not statistically significantly different, $t(26) = 0.38$, $p = .35$ (one-tailed), $d = .06$. The cooperating teacher judgment of TSTP candidates' final student teaching rating for instructional skills ($M = 2.69$, $SD = 0.46$) compared to the university supervisor judgment of TSTP candidates' final student teaching rating for instructional skills ($M = 2.45$, $SD = 0.50$) was statistically significantly different, $t(26) = 2.80$, $p = .003$ (one-tailed), $d = .50$. The cooperating teacher judgment of TSTP candidates' final student teaching rating for assessment and evaluation skills ($M = 2.63$, $SD = 0.49$) compared to the university supervisor judgment of TSTP candidates' final student teaching rating for assessment and evaluation skills ($M = 2.41$, $SD = 0.50$) was statistically significantly different, $t(26) = 2.36$, $p = .01$ (one-tailed), $d = .44$. The cooperating teacher judgment of TSTP candidates' final student teaching rating for classroom management skills ($M = 2.55$, $SD = 0.53$) compared to the university supervisor judgment of TSTP candidates' final student teaching rating for classroom management skills ($M = 2.47$, $SD = 0.50$) was not statistically significantly different, $t(26) = 0.86$, $p = .19$ (one-tailed), $d = .15$. The

cooperating teacher judgment of TSTP candidates' final student teaching rating for communication and interpersonal skills ($M = 2.77$, $SD = 0.58$) compared to the university supervisor judgment of TSTP candidates' final student teaching rating for communication and interpersonal skills ($M = 2.72$, $SD = 0.45$) was not statistically significantly different, $t(26) = 0.41$, $p = .34$ (one-tailed), $d = .09$. The cooperating teacher judgment of TSTP candidates' final student teaching rating for disposition/professionalism ($M = 2.77$, $SD = 0.45$) compared to the university supervisor judgment of TSTP candidates' final student teaching rating for disposition/professionalism ($M = 2.70$, $SD = 0.48$) was not statistically significantly different, $t(26) = 1.20$, $p = .11$ (one-tailed), $d = .15$.

Overall, posttest-posttest results indicated statistically different cooperating teacher judgment of TSTP candidates' final student teaching rating for instructional skills and assessment and evaluation skills compared to the university supervisor judgment of TSTP candidates' final student teaching rating for instructional skills and assessment and evaluation skills, so we reject the null hypotheses for these two comparisons. The null hypothesis was not rejected for knowledge base, classroom management skills, communication and interpersonal skills, and disposition/professionalism comparisons. Because null hypotheses were rejected for only two of the cooperating teacher, university supervisor mean judgments for TSTP candidates and null hypotheses were not rejected for four of the cooperating teacher, university supervisor mean judgments for TSTP candidates it may be concluded that overall assessment of the TSTP candidates were congruent.

Research Question #10

The tenth posttest-posttest hypothesis was tested using the independent t test. Independent t test analysis of cooperating teachers' and university supervisors' final student teaching ratings of ASTP candidates are displayed in Table 13. As seen in Table 13 the null hypothesis was rejected for one of the six measured, posttest-posttest cooperating teachers' and university supervisors' final student teaching ratings of ASTP candidates. The cooperating teacher judgment of ASTP candidates' final student teaching rating for knowledge base ($M = 2.77$, $SD = 0.42$) compared to the university supervisor judgment of ASTP candidates' final student teaching rating for knowledge base ($M = 2.87$, $SD = 0.34$) was not statistically significantly different, $t(26) = -1.27$, $p = .10$ (one-tailed), $d = .26$. The cooperating teacher judgment of ASTP candidates' final student teaching rating for instructional skills ($M = 2.70$, $SD = 0.46$) compared to the university supervisor judgment of ASTP candidates' final student teaching rating for instructional skills ($M = 2.78$, $SD = 0.42$) was not statistically significantly different, $t(26) = -0.97$, $p = .17$ (one-tailed), $d = .18$. The cooperating teacher judgment of ASTP candidates' final student teaching rating for assessment and evaluation skills ($M = 2.70$, $SD = 0.46$) compared to the university supervisor judgment of ASTP candidates' final student teaching rating for assessment and evaluation skills ($M = 2.64$, $SD = 0.48$) was not statistically significantly different, $t(26) = 0.62$, $p = .27$ (one-tailed), $d = .29$. The cooperating teacher judgment of ASTP candidates' final student teaching rating for classroom management skills ($M = 2.56$, $SD = 0.50$) compared to the university supervisor judgment of ASTP candidates' final student teaching rating for classroom management skills ($M = 2.69$, $SD = 0.47$) was not statistically significantly different,

$t(26) = -1.41, p = .08$ (one-tailed), $d = .26$. The cooperating teacher judgment of ASTP candidates' final student teaching rating for communication and interpersonal skills ($M = 2.80, SD = 0.44$) compared to the university supervisor judgment of ASTP candidates' final student teaching rating for communication and interpersonal skills ($M = 2.81, SD = 0.40$) was not statistically significantly different, $t(26) = -0.03, p = .49$ (one-tailed), $d = .02$. The cooperating teacher judgment of ASTP candidates' final student teaching rating for disposition/professionalism ($M = 2.80, SD = 0.42$) compared to the university supervisor judgment of ASTP candidates' final student teaching rating for disposition/professionalism ($M = 2.88, SD = 0.33$) was statistically significantly different, $t(26) = -1.62, p = .05$ (one-tailed), $d = .21$.

Overall, posttest-posttest results indicated statistically different cooperating teacher judgment of ASTP candidates' final student teaching rating for disposition/professionalism compared to the university supervisor judgment of ASTP candidates' final student teaching rating for disposition/professionalism, so we reject the null hypothesis for this comparison. The null hypothesis was not rejected for knowledge base, instructional skills, assessment and evaluation skills, classroom management skills, and communication and interpersonal skills comparisons. Because the null hypothesis was rejected for only one of the cooperating teacher, university supervisor mean judgments for ASTP candidates and null hypotheses were not rejected for five of the cooperating teacher, university supervisor mean judgments for ASTP candidates it may be concluded that overall assessment of the ASTP candidates were congruent.

Research Question #11

The eleventh posttest-posttest hypothesis was tested using the chi-square. Chi-square analysis of TSTP candidates' and ASTP candidates' employment in education six-months after program completion is found in Table 14. The eleventh hypothesis was tested using chi-square (X^2). The result of X^2 displayed in Table 14 was statistically significantly different ($X^2(1, N = 28) = 4.32, p = < .12$) so the null hypothesis of no difference or congruence for TSTP candidates' employment in education percentages compared to ASTP candidates' employment in education percentages is rejected. Inspecting the findings in Table 14 shows that the observed fulltime teaching frequency category for both TSTP candidates (11, 85%) and ASTP candidates (11, 73%) were greater than the findings for the observed substitute/other frequency category for both TSTP candidates (2, 15%) and ASTP candidates (4, 27%). The fulltime teaching percentages provided variance with the substitute/other category resulting in a statistically significant X^2 result and rejection of the null hypothesis.

Overall, the observed levels of fulltime teaching positions accepted by candidates regardless of their preparation program status, TSTP (85%) and ASTP (73%) represents a commendable level of employment that is consistent with this study's classroom teacher and university supervisor evaluations and the hiring actions of school districts all confirming that candidates certified from both the traditional and ASTP programs of the research college of education are fully qualified and prepared to join a metropolitan high school teaching faculty.

Table 1

Demographic Information of TSTP Candidates and ASTP Candidates

| Sources of Data | Traditional Secondary Teacher Preparation Candidates | Alternative Secondary Teacher Preparation Candidates |
|------------------------|--|--|
| Gender | | |
| Female | 8 | 13 |
| Male | 5 | 2 |
| Total | 13 | 15 |
| Age range | 23-48 | 22-49 |
| Ethnicity | | |
| Black not Hispanic | | 2 |
| Hispanic | | 1 |
| Asian Pacific Islander | 1 | |
| White not Hispanic | 12 | 12 |
| Content Subject Areas | | |
| English | 2 | 1 |
| Foreign Language | | 5 |
| Journalism | | 1 |
| Language Arts | 4 | |
| Mathematics | 4 | 4 |
| Science | 3 | 4 |

Table 2

Educational Testing Service Pre-Professional Skills Test Means and Standard Deviations of TSTP Candidates and ASTP Candidates

| Candidate | Traditional Secondary Teacher Preparation Candidates | | | Alternative Secondary Teacher Preparation Candidates | | |
|-----------|--|---------|-------------|--|---------|-------------|
| | Reading | Writing | Mathematics | Reading | Writing | Mathematics |
| 1. | 180 | 172 | 176 | 176 | 173 | 172 |
| 2. | 185 | 176 | 187 | 185 | 184 | 190 |
| 3. | 181 | 177 | 184 | 181 | 171 | 185 |
| 4. | 188 | 179 | 183 | 183 | 175 | 181 |
| 5. | 182 | 175 | 179 | 179 | 171 | 179 |
| 6. | 178 | 173 | 182 | 185 | 177 | 187 |
| 7. | 181 | 179 | 179 | 174 | 178 | 175 |
| 8. | 185 | 184 | 180 | 189 | 189 | 189 |
| 9. | 180 | 179 | 171 | 186 | 183 | 190 |
| 10. | 181 | 174 | 184 | 185 | 183 | 188 |
| 11. | 184 | 178 | 190 | 182 | 182 | 172 |
| 12. | 181 | 174 | 183 | 181 | 180 | 175 |
| 13. | 184 | 183 | 179 | 183 | 180 | 184 |
| 14. | | | | 184 | 177 | 188 |
| 15. | | | | 184 | 178 | 187 |

Note. An Educational Testing Service Pre-Professional Skills Test minimum passing score in Reading = 170; Writing = 172; and Mathematics = 171 is required by the Nebraska Department of Education for entrance into all public and private university and college teacher preparation programs.

Table 3

Independent t test Analysis of Educational Testing Service Pre-Professional Skills Test Means and Standard Deviations of TSTP Candidates' and ASTP Candidates' Program Entrance Scores

| Measure | Traditional Secondary Teacher Preparation Candidates' Program Entrance Scores | | Alternative Secondary Teacher Preparation Candidates' Program Entrance Scores | | <i>t</i> (26) | <i>p</i> [†] |
|-------------|--|-----------|--|-----------|---------------|-----------------------|
| | <i>M</i> | <i>SD</i> | <i>M</i> | <i>SD</i> | | |
| Reading | 182.31 | 2.72 | 182.47 | 3.87 | -0.12 | .45 <i>ns</i> |
| Writing | 177.15 | 3.67 | 178.73 | 5.05 | -0.93 | .18 <i>ns</i> |
| Mathematics | 181.31 | 4.84 | 182.80 | 6.60 | -0.67 | .25 <i>ns</i> |

[†]*p* one-tailed.

Table 4

Content Coursework Cumulative Grade Point Average of TSTP Candidates and ASTP Candidates

| Candidate | Traditional Secondary Teacher Preparation Candidates | Alternative Secondary Teacher Preparation Candidates |
|-----------|---|---|
| | Cumulative Grade Point Average | Cumulative Grade Point Average |
| 1. | 3.706 | 2.931 |
| 2. | 3.998 | 3.327 |
| 3. | 2.406 | 2.831 |
| 4. | 3.421 | 3.858 |
| 5. | 3.062 | 2.682 |
| 6. | 3.195 | 3.465 |
| 7. | 3.515 | 3.294 |
| 8. | 3.310 | 3.210 |
| 9. | 4.000 | 3.789 |
| 10. | 3.316 | 4.000 |
| 11. | 3.428 | 3.633 |
| 12. | 2.878 | 3.692 |
| 13. | 3.826 | 4.000 |
| 14. | | 3.797 |
| 15. | | 2.811 |

Note. Cumulative Grade Point Average calculated on all non-professional education coursework in content areas.

Table 5

Independent t test Analysis of Content Coursework Cumulative Grade Point Average of TSTP Candidates and ASTP Candidates

| Measure | Traditional Secondary Teacher Preparation Candidates | | Alternative Secondary Teacher Preparation Candidates | | <i>t</i> (26) | <i>p</i> [†] |
|---------|--|-----------|--|-----------|---------------|-----------------------|
| | <i>M</i> | <i>SD</i> | <i>M</i> | <i>SD</i> | | |
| CGPA | 3.39 | 0.45 | 3.42 | 0.45 | -0.19 | .43 <i>ns</i> |

Note. Cumulative Grade Point Average = CGPA.

[†]*p* one-tailed.

Table 6

Dependent t test Analysis of TSTP Candidates' Initial Mid-Term Student Teaching Evaluation Ratings Compared to Final Student Teaching Evaluation Ratings of Teaching Effectiveness Based on Cooperating Teacher Judgments

| Measure | Cooperating Teacher Judgments of Traditional Secondary Teacher Preparation Candidates | | | | <i>t</i> (12) | <i>p</i> [†] |
|---------|--|-----------|----------|-----------|---------------|-----------------------|
| | Mid-Term | | Final | | | |
| | <i>M</i> | <i>SD</i> | <i>M</i> | <i>SD</i> | | |
| KB | 2.15 | 0.73 | 2.60 | 0.49 | 4.79 | < .0001 |
| IS | 2.27 | 0.66 | 2.69 | 0.46 | 5.54 | < .0001 |
| AES | 2.03 | 0.87 | 2.63 | 0.49 | 5.29 | < .0001 |
| CMS | 2.18 | 0.73 | 2.55 | 0.53 | 4.41 | < .0001 |
| CIS | 2.33 | 0.86 | 2.77 | 0.58 | 3.56 | .0004 |
| DP | 2.49 | 0.64 | 2.77 | 0.45 | 4.66 | < .0001 |

Note. KB = Knowledge Base; IS = Instructional Skills; AES = Assessment and Evaluation Skills; CMS = Classroom Management Skills; CIS = Communication and Interpersonal Skills; and DP = Disposition/Professionalism.

[†]*p* one-tailed.

Table 7

Dependent t test Analysis of ASTP Candidates' Initial Mid-Term Student Teaching Evaluation Ratings Compared to Final Student Teaching Evaluation Ratings of Teaching Effectiveness Based on Cooperating Teacher Judgments

| Measure | Cooperating Teacher Judgments of Alternative Secondary Teacher Preparation Candidates | | | | <i>t</i> (14) | <i>p</i> [†] |
|---------|--|-----------|----------|-----------|---------------|-----------------------|
| | Mid-Term | | Final | | | |
| | <i>M</i> | <i>SD</i> | <i>M</i> | <i>SD</i> | | |
| KB | 2.33 | 0.63 | 2.77 | 0.42 | 4.79 | < .0001 |
| IS | 2.30 | 0.69 | 2.70 | 0.46 | 4.43 | < .0001 |
| AES | 2.16 | 0.71 | 2.70 | 0.46 | 5.16 | < .0001 |
| CMS | 2.10 | 0.71 | 2.56 | 0.50 | 4.19 | < .0001 |
| CIS | 2.25 | 0.86 | 2.80 | 0.44 | 4.64 | < .0001 |
| DP | 2.40 | 0.69 | 2.80 | 0.42 | 6.48 | < .0001 |

Note. KB = Knowledge Base; IS = Instructional Skills; AES = Assessment and Evaluation Skills; CMS = Classroom Management Skills; CIS = Communication and Interpersonal Skills; and DP = Disposition/Professionalism.

[†]*p* one-tailed.

Table 8

Dependent t test Analysis of TSTP Candidates, Initial Mid-Term Student Teaching Evaluation Ratings Compared to Final Student Teaching Evaluation Ratings of Teaching Effectiveness Based on University Supervisor Judgments

| Measure | University Supervisor Judgments of Traditional Secondary Teacher Preparation Candidates | | | | <i>t</i> (12) | <i>p</i> [†] |
|---------|--|-----------|----------|-----------|---------------|-----------------------|
| | Mid-Term | | Final | | | |
| | <i>M</i> | <i>SD</i> | <i>M</i> | <i>SD</i> | | |
| KB | 2.09 | 0.57 | 2.63 | 0.49 | 4.57 | < .0001 |
| IS | 2.04 | 0.44 | 2.45 | 0.50 | 4.37 | < .0001 |
| AES | 1.87 | 0.34 | 2.41 | 0.50 | 4.93 | < .0001 |
| CMS | 2.11 | 0.53 | 2.47 | 0.50 | 3.69 | .0003 |
| CIS | 2.69 | 0.47 | 2.72 | 0.45 | 0.33 | .37 <i>ns</i> |
| DP | 2.40 | 0.51 | 2.70 | 0.48 | 4.49 | < .0001 |

Note. KB = Knowledge Base; IS = Instructional Skills; AES = Assessment and Evaluation Skills; CMS = Classroom Management Skills; CIS = Communication and Interpersonal Skills; and DP = Disposition/Professionalism.

[†]*p* one-tailed.

Table 9

Dependent t test Analysis of ASTP Candidates' Initial Mid-Term Student Teaching Evaluation Ratings Compared to Final Student Teaching Evaluation Ratings of Teaching Effectiveness Based on University Supervisor Judgments

| University Supervisor Judgments of Alternative Secondary Teacher Preparation Candidates | | | | | | |
|--|----------|-----------|----------|-----------|---------------|-----------------------|
| Measure | Mid-Term | | Final | | <i>t</i> (14) | <i>p</i> [†] |
| | <i>M</i> | <i>SD</i> | <i>M</i> | <i>SD</i> | | |
| KB | 2.49 | 0.59 | 2.87 | 0.34 | 3.39 | .001 |
| IS | 2.30 | 0.50 | 2.78 | 0.42 | 5.56 | < .0001 |
| AES | 2.22 | 0.47 | 2.64 | 0.48 | 4.31 | < .0001 |
| CMS | 2.36 | 0.57 | 2.69 | 0.47 | 3.16 | .001 |
| CIS | 2.77 | 0.43 | 2.81 | 0.40 | 0.30 | .38 <i>ns</i> |
| DP | 2.53 | 0.52 | 2.88 | 0.33 | 6.37 | < .0001 |

Note. KB = Knowledge Base; IS = Instructional Skills; AES = Assessment and Evaluation Skills; CMS = Classroom Management Skills; CIS = Communication and Interpersonal Skills; and DP = Disposition/Professionalism.

[†]*p* one-tailed.

Table 10

Independent t test Analysis of TSTP Candidates' and ASTP Candidate's Final Student Teaching Evaluation Ratings of Teaching Effectiveness Based on Cooperating Teacher Judgments

| Cooperating Teacher Judgments | | | | | | |
|-------------------------------|---|-----------|---|-----------|---------------|-----------------------|
| Measure | Traditional Secondary Teacher Preparation Candidates' Final Student Teaching Evaluation Ratings | | Alternative Secondary Teacher Preparation Candidates' Final Student Teaching Evaluation Ratings | | <i>t</i> (26) | <i>p</i> [†] |
| | <i>M</i> | <i>SD</i> | <i>M</i> | <i>SD</i> | | |
| KB | 2.60 | 0.49 | 2.77 | 0.42 | -2.17 | .02 |
| IS | 2.69 | 0.46 | 2.70 | 0.46 | -0.14 | .44 <i>ns</i> |
| AES | 2.63 | 0.49 | 2.70 | 0.46 | -0.85 | .20 <i>ns</i> |
| CMS | 2.55 | 0.53 | 2.56 | 0.50 | -0.04 | .49 <i>ns</i> |
| CIS | 2.77 | 0.58 | 2.80 | 0.44 | -0.35 | .36 <i>ns</i> |
| DP | 2.77 | 0.45 | 2.80 | 0.42 | -0.65 | .26 <i>ns</i> |

Note. KB = Knowledge Base; IS = Instructional Skills; AES = Assessment and Evaluation Skills; CMS = Classroom Management Skills; CIS = Communication and Interpersonal Skills; and DP = Disposition/Professionalism.

[†]*p* one-tailed.

Table 11

Independent t test Analysis of TSTP Candidates' and ASTP Candidates' Final Student Teaching Evaluation Ratings of Teaching Effectiveness Based on University Supervisor Judgments

| Measure | University Supervisor Judgments | | | | | |
|---------|---|-----------|---|-----------|---------------|-----------------------|
| | Traditional Secondary Teacher Preparation Candidates' Final Student Teaching Evaluation Ratings | | Alternative Secondary Teacher Preparation Candidates' Final Student Teaching Evaluation Ratings | | <i>t</i> (26) | <i>p</i> [†] |
| | <i>M</i> | <i>SD</i> | <i>M</i> | <i>SD</i> | | |
| KB | 2.63 | 0.49 | 2.87 | 0.34 | -2.58 | .006 |
| IS | 2.45 | 0.50 | 2.78 | 0.42 | -3.63 | .0002 |
| AES | 2.41 | 0.50 | 2.64 | 0.48 | -2.32 | .01 |
| CMS | 2.47 | 0.50 | 2.69 | 0.47 | -2.17 | .02 |
| CIS | 2.72 | 0.45 | 2.81 | 0.40 | -0.80 | .21 <i>ns</i> |
| DP | 2.70 | 0.48 | 2.88 | 0.33 | -3.12 | .001 |

Note. KB = Knowledge Base; IS = Instructional Skills; AES = Assessment and Evaluation Skills; CMS = Classroom Management Skills; CIS = Communication and Interpersonal Skills; and DP = Disposition/Professionalism.

[†]*p* one-tailed.

Table 12

Independent t test Analysis of Cooperating Teachers' and University Supervisors' Final Student Teaching Evaluation Ratings of TSTP Candidates

| Measure | Cooperating Teacher Judgments of Traditional Secondary Teacher Preparation Candidates' Final Student Teaching Evaluation Ratings | | University Supervisor Judgments of Traditional Secondary Teacher Preparation Candidates' Final Student Teaching Evaluation Ratings | | <i>t</i> (26) | <i>p</i> [†] |
|---------|--|-----------|--|-----------|---------------|-----------------------|
| | <i>M</i> | <i>SD</i> | <i>M</i> | <i>SD</i> | | |
| KB | 2.60 | 0.49 | 2.63 | 0.49 | .38 | .35 <i>ns</i> |
| IS | 2.69 | 0.46 | 2.45 | 0.50 | 2.80 | .003 |
| AES | 2.63 | 0.49 | 2.41 | 0.50 | 2.36 | .01 |
| CMS | 2.55 | 0.53 | 2.47 | 0.50 | 0.86 | .19 <i>ns</i> |
| CIS | 2.77 | 0.58 | 2.72 | 0.45 | 0.41 | .34 <i>ns</i> |
| DP | 2.77 | 0.45 | 2.70 | 0.48 | 1.20 | .11 <i>ns</i> |

Note. KB = Knowledge Base; IS = Instructional Skills; AES = Assessment and Evaluation Skills; CMS = Classroom Management Skills; CIS = Communication and Interpersonal Skills; and DP = Disposition/Professionalism.

[†]*p* one-tailed.

Table 13

Independent t test Analysis of Cooperating Teachers' and University Supervisors' Final Student Teaching Evaluation Ratings of ASTP Candidates

| Measure | Cooperating Teacher Judgments of Alternative Secondary Teacher Preparation Candidates' Final Student Teaching Evaluation Ratings | | University Supervisor Judgments of Alternative Secondary Teacher Preparation Candidates' Final Student Teaching Evaluation Ratings | | <i>t</i> (26) | <i>p</i> [†] |
|---------|--|-----------|--|-----------|---------------|-----------------------|
| | <i>M</i> | <i>SD</i> | <i>M</i> | <i>SD</i> | | |
| KB | 2.77 | 0.42 | 2.87 | 0.34 | -1.27 | .10 <i>ns</i> |
| IS | 2.70 | 0.46 | 2.78 | 0.42 | -0.97 | .17 <i>ns</i> |
| AES | 2.70 | 0.46 | 2.64 | 0.48 | 0.62 | .27 <i>ns</i> |
| CMS | 2.56 | 0.50 | 2.69 | 0.47 | -1.41 | .08 <i>ns</i> |
| CIS | 2.80 | 0.44 | 2.81 | 0.40 | -0.03 | .49 <i>ns</i> |
| DP | 2.80 | 0.42 | 2.88 | 0.33 | -1.62 | .05 |

Note. KB = Knowledge Base; IS = Instructional Skills; AES = Assessment and Evaluation Skills; CMS = Classroom Management Skills; CIS = Communication and Interpersonal Skills; and DP = Disposition/Professionalism.

[†]*p* one-tailed.

Table 14

Chi-Square Analysis of TSTP Candidates' and ASTP Candidate's Employment in Education Six-Months After Program Completion

| Employment Status | Traditional Secondary Teacher Preparation | | Alternative Secondary Teacher Preparation | | χ^2 |
|-------------------|---|-------|---|-------|----------|
| | <i>N</i> | % | <i>N</i> | % | |
| Fulltime Teaching | 11 | (85) | 11 | (73) | |
| Substitute/Other | 2 | (15) | 4 | (27) | |
| Totals | 13 | (100) | 15 | (100) | 4.32* |

Note. Percents used for calculation.

* $p < .05$.

CHAPTER FIVE

Conclusions and Discussion

The purpose of the study was to determine the impact of traditional and alternative university teacher preparation program options on secondary teacher candidates measured content knowledge, pedagogical skills, dispositions, and employment. The study analyzed achievement for each group, the traditional secondary teacher preparation (TSTP) candidates and the alternative secondary teacher preparation (ASTP) candidates in the areas of content knowledge, pedagogical skills, dispositions, and employment status. Study dependent measures were content knowledge as measured by (a) teacher candidates' required Pre-Professional Skills Test (PPST) Mathematics, Writing, and Reading Scaled Scores at the time of admission to the program and (b) content knowledge as measured by candidates' cumulative grade point average in content area course work prior to student teaching, pedagogical skills as measured by candidates' (a) initial mid-term and (b) final student teaching evaluations completed by their (a) cooperating teacher and their (b) university supervisor, and employment at (a) public, parochial, or private school full-time contracted teaching or (b) public, parochial, or private school part-time contracted teaching or (c) other employment.

The independent variable for this study was teacher preparation program with two teacher preparation options, a traditional secondary teacher preparation (TSTP) condition and an alternative secondary teacher preparation (ASTP) condition.

Conclusions

The following conclusions may be drawn from the study for each of the eleven research questions.

Research Question #1

Overall, pretest-pretest Educational Testing Service Pre-Professional Skills test results indicated program entrance reading, writing, and mathematics score equipoise between traditional and ASTP candidates. These results indicated that candidates who entered a traditional path to secondary teacher preparation entered their studies with measurable content knowledge in reading, writing, and mathematics that was congruent with the content knowledge of post-baccalaureate candidates who entered an ASTP program. Comparing TSTP program test results with Nebraska Department of Education required entrance cut scores helps put their performance in perspective. TSTP candidates' entrance mean reading score of 182.31 is 12.31 mean scaled score points above the reading cut score of 170. ASTP candidates' entrance mean reading score of 182.47 is 12.47 mean scaled score points above the reading cut score of 170. For this comparison the entrance, reading mean cut score difference between the two secondary teacher preparation groups is greater by .16 mean scaled score points for the ASTP candidates. TSTP candidates' entrance mean writing score of 177.15 is 5.15 mean scaled score points above the writing cut score of 172. ASTP candidates' entrance mean writing score of 178.73 is 6.73 mean scaled score points above the writing cut score of 172. For this comparison the entrance, writing mean cut score difference between the two secondary teacher preparation groups is greater by 1.58 mean scaled score points for the ASTP candidates. TSTP candidates' entrance mean mathematics score of 181.31 is 10.31 mean scaled score points above the writing cut score of 171. ASTP candidates' entrance mean mathematics score of 182.80 is 11.80 mean scaled score points above the writing cut score of 171. For this comparison the entrance, mathematics mean cut score

difference between the two secondary teacher preparation groups is greater by 1.49 mean scaled score points for the ASTP.

Research Question #2

Overall, cumulative Grade Point Average results calculated for both groups at the completion of all content area course work in an arts and sciences discipline and just prior to their student teaching experiences indicated program cumulative Grade Point Average score equipoise between TSTP and ASTP candidates. These results indicated that college of education candidates who sought a traditional path to secondary teacher preparation entered their student teaching experience with a measurable mean cumulative Grade Point Average that was congruent with post-baccalaureate ASTP candidates. TSTP candidates' cumulative Grade Point Average score of 3.39 is .39 mean points above the cut score of 3.0 required for admission to graduate school. ASTP candidates' cumulative Grade Point Average score of 3.42 is .42 mean points above the cut score of 3.0 required for admission to graduate school. Finally, the not significantly different but higher cumulative Grade Point Average (+ .03), for the ASTP candidates indicates congruent mastery of required content matter as well as equally successful course completion for both the TSTP and ASTP program candidates as they begin their student teaching capstone experiences.

Research Question #3

Overall, pretest-posttest results indicated statistically improved initial mid-term student teaching evaluation ratings compared to final student teaching evaluation ratings of teaching effectiveness of TSTP candidates based on cooperating teacher judgments in all six evaluation domains. Positive statistical growth of this magnitude suggests real

world mastery of day-to-day teaching effectiveness observed by the contracted cooperating classroom teachers who have observed TSTP candidates for 14-week, full day, clinical experience. Furthermore, all observed initial mid-term mean student teaching evaluation ratings for TSTP candidates were measured below 2.50 on a three point Likert scale where KB = 2.15, IS = 2.27, AES = 2.03, CMS = 2.18, CIS = 2.33, and DP = 2.49 while all final mean student teaching evaluation ratings for TSTP candidates were measured above 2.51 on a three point Likert scale where KB = 2.60, IS = 2.69, AES = 2.63, CMS = 2.55, CIS = 2.77, and DP = 2.77. The single greatest growth domain was AES (+ .60) and the single least growth domain was DP (+ .28).

Research Question #4

Overall, pretest-posttest results indicated statistically improved initial mid-term student teaching evaluation ratings compared to final student teaching evaluation ratings of teaching effectiveness of ASTP candidates based on cooperating teacher judgments in all six evaluation domains. Positive statistical growth of this magnitude suggests real world mastery of day-to-day teaching effectiveness observed by the contracted cooperating classroom teachers who have observed ASTP candidates for 14-week, full day, clinical experience. Furthermore, all observed initial mid-term mean student teaching evaluation ratings for ASTP candidates were measured below 2.50 on a three point Likert scale where KB = 2.33, IS = 2.30, AES = 2.16, CMS = 2.10, CIS = 2.25, and DP = 2.40 while all final mean student teaching evaluation ratings for ASTP candidates were measured above 2.51 on a three point Likert scale where KB = 2.77, IS = 2.70, AES = 2.70, CMS = 2.56, CIS = 2.80, and DP = 2.80. The single greatest growth domain was CIS (+ .65) and the least growth domains were IS (+ .40) and DP (+ .40).

Research Question #5

Overall, pretest-posttest results indicated statistically improved initial mid-term student teaching evaluation ratings compared to final student teaching evaluation ratings of teaching effectiveness of TSTP candidates based on university supervisor judgments in five of the six evaluation domains. Positive statistical growth of this magnitude suggests real world mastery of teaching effectiveness based on limited observations by the university supervisors who have observed TSTP candidates for a minimum of five observations over a 14-week, full day, clinical experience. Five of the observed initial mid-term mean student teaching evaluation ratings for TSTP candidates were measured below 2.50 on a three point Likert scale where KB = 2.09, IS = 2.04, AES = 1.87, CMS = 2.11, DP = 2.40, and CIS = 2.69 was measured above 2.50. Only three of the final mean student teaching evaluation ratings for TSTP candidates were measured above 2.51 on a three point Likert scale where KB = 2.63, CIS = 2.72, and DP = 2.70 and IS = 2.45, AES = 2.41, and CMS = 2.46 were measured below 2.51. The single greatest growth domain was AES (+ .54) and the single least growth domain was CIS (+ .03).

Research Question #6

Overall, pretest-posttest results indicated statistically improved initial mid-term student teaching evaluation ratings compared to final student teaching evaluation ratings of teaching effectiveness of ASTP candidates based on university supervisor judgments in five of the six evaluation domains. Positive statistical growth of this magnitude suggests real world mastery of teaching effectiveness based on limited observations by the university supervisors who have observed ASTP candidates for a minimum of five observations over a 14-week, full day, clinical experience. Four of the observed initial

mid-term mean student teaching evaluation ratings for ASTP candidates were measured below 2.50 on a three point Likert scale where KB = 2.49, IS = 2.30, AES = 2.22, CMS = 2.36, and CIS = 2.77 and DP = 2.53 were measured above 2.50. All six of the final mean student teaching evaluation ratings for TSTP candidates were measured above 2.51 on a three point Likert scale where KB = 2.87, IS = 2.78, AES = 2.64, CMS = 2.69, CIS = 2.81, and DP = 2.88. The single greatest growth domain was IS (+ .48) and the single least growth domain was CIS (+ .04).

Research Question #7

Overall, posttest-posttest results indicated statistically different final TSTP candidates' student teaching evaluation rating for knowledge base compared to the final ASTP candidates' student teaching evaluation rating for knowledge base with cooperating teacher mean judgments higher for ASTP candidates' ratings. The null hypothesis was not rejected for the other five cooperating teacher mean final student teaching evaluation ratings of the two groups of secondary teacher candidates at the conclusion of student teaching. Statistical equipoise suggests equivalent secondary teacher preparation program effectiveness for traditional and alternatively prepared candidates.

Research Question #8

Overall, posttest-posttest results indicated statistically different TSTP candidates' final student teaching evaluation rating for knowledge base, instructional skills, assessment and evaluation skills, classroom management skills, and disposition/professionalism compared to the ASTP candidates' final student teaching evaluation rating for knowledge base, instructional skills, assessment and evaluation

skills, classroom management skills, and disposition/professionalism with university supervisor mean judgments higher for ASTP candidates ratings. The null hypothesis was not rejected for communication and interpersonal skills recorded by university supervisor mean final student teaching evaluation ratings of the two groups of secondary teacher candidates at the conclusion of student teaching. Because null hypotheses were rejected for five of the university supervisor mean judgments and all six of the university supervisor mean judgments were higher for the alternatively prepared secondary teacher candidates it may be concluded that university supervisors' ratings of alternatively prepared secondary teacher candidates may reflect the additional time that candidates in this alternative program spent in their respective classrooms in the structured field experience in the semester prior to their 14-week, full day, clinical experience.

Research Question #9

Overall, posttest-posttest results indicated statistically different cooperating teacher judgment of TSTP candidates' final student teaching rating for instructional skills and assessment and evaluation skills compared to the university supervisor judgment of TSTP candidates' final student teaching rating for instructional skills and assessment and evaluation skills, so we reject the null hypotheses for these two comparisons. The null hypothesis was not rejected for knowledge base, classroom management skills, communication and interpersonal skills, and disposition/professionalism comparisons. Because null hypotheses were rejected for only two of the cooperating teacher, university supervisor mean judgments for TSTP candidates and null hypotheses were not rejected for four of the cooperating teacher, university supervisor mean judgments for TSTP

candidates it may be concluded that overall assessment of the TSTP candidates were congruent.

Research Question #10

Overall, posttest-posttest results indicated statistically different cooperating teacher judgment of ASTP candidates' final student teaching rating for disposition/professionalism compared to the university supervisor judgment of ASTP candidates' final student teaching rating for disposition/professionalism, so we reject the null hypothesis for this comparison. The null hypothesis was not rejected for knowledge base, instructional skills, assessment and evaluation skills, classroom management skills, and communication and interpersonal skills comparisons. Because the null hypothesis was rejected for only one of the cooperating teacher, university supervisor mean judgments for ASTP candidates and null hypotheses were not rejected for five of the cooperating teacher, university supervisor mean judgments for ASTP candidates it may be concluded that overall assessment of the ASTP candidates were congruent.

Research Question #11

Overall, the observed levels of fulltime teaching positions accepted by candidates regardless of their preparation program status, TSTP (85%) and ASTP (73%) represents a commendable level of employment that is consistent with this study's classroom teacher and university supervisor evaluations and the hiring actions of school districts all confirming that candidates certified from both the TSTP and ASTP programs of the research college of education are fully qualified and prepared to join a metropolitan high school teaching faculty.

Discussion

While others (Gatlin, 2009) have called for a pluralistic approach to revitalized teacher education through traditionally trained and alternatively trained pathways based on a thorough examination of existing literature this study shares the view that there is no “one best way to prepare teachers” (p. 475) based on tested hypotheses that examined candidates’ entrance exam scores, cumulative grade point averages based on non-education required college of arts and sciences coursework in the endorsement areas, cooperating teacher and university supervisor student teaching evaluations, and employment status following certification. The results clearly support continuance of multiple program options for certifying secondary teachers in the research college of education. Furthermore, the study findings support continuation of a common standards infused framework for both traditionally trained and alternatively trained candidates’ coursework and practicum experiences even while compressing the training timeline for the alternatively trained candidates.

Also of importance the data of this exploratory comparative efficacy study dispels for these research subjects the notion that alternatively trained secondary teacher candidates have greater tested knowledge and more successful course completion in content coursework than traditionally trained secondary teacher candidates. If this is not the case than what matters is pedagogical training that results in an effective and qualified teacher in a every classroom.

Teacher shortages. Pluralist teacher preparation alternatives may help address the looming teacher shortage. Teacher shortages are related to geographic regions, high demand subject areas, school demographics, and ethnic/racial diversity (Gitomer, 2007;

Ingersoll & Perda, 2006; Kober, 2006 US Bureau of Labor Statistics, 2009). Expanding diversity in the teaching ranks in the areas of gender, age, and ethnicity, and increasing the number of teachers in high need areas are often identified as positive outcomes of alternative teacher preparation options (Humphrey & Wechsler, 2007; Walsh & Jacobs, 2007). In this study, ethnic/racial representation was 8% in the TSTP group and 25% in the ASTP group. Candidates in the TSTP program completed content area endorsements for certification in English, language arts, mathematics and science, all identified as high demand teaching areas by the Nebraska Department of Education (NDE, Shortage Report Summary, 2008). Candidates in the ASTP program completed content area endorsements for certification in English, foreign language, journalism, mathematics, and science, all identified as high demand teaching areas by the participating MOEC school districts (UNO TAP, 2009). Expanding ethnic diversity and increasing the number of teachers in identified high demand areas are goals of the research college. The program completers did expand the ethnic diversity and increased the number of teachers in identified high demand areas.

Mid-term to final evaluations. The data of this study also shows that candidates in both program options demonstrated growth in the standards based domains rated by the cooperating teachers' and university supervisors' initial mid-term to final evaluation ratings of teacher effectiveness. The measured growth may be attributed to the foundation of course work completed prior to student teaching in human growth and learning, educational technology, assessment and evaluation, reading and writing skills in the content area, and structured field experience. The required course work for both the traditional and alternative teacher preparation options based on aligned standards

established by Nebraska Department of Education, INTASC, and NCATE. Jorissen, (2003), and Suell & Piotrowski (2007), described effective ATP programs as having elements, such as a strong academic course work component, field-based learning in the classroom, and support from qualified mentors. The Education Commission of the States found key factors that support this alternative approach to teacher certification include strong partnership between preparation programs and schools, good screening, strong mentoring, solid curriculum, and as much training in course work as possible prior to teaching (Allen, 2003).

Employment. Mantle-Bromley, Gould, McWhorter, & Whaley (2000) found the alternative graduate-level completers had a statistically higher rate of employment in schools compared to traditional program completers. The findings of this study suggest that hiring school districts view these candidates as teachers ready to assume the leadership of a content driven high school learning environment. In addition to preparing qualified, effective teachers, retaining those qualified, effective teachers must be a priority. Research on teacher supply, demand, quality, and shortages demonstrates that simply recruiting more teachers will not fill the need for effective qualified classroom teachers (Ingersoll, 1999). Fewer than 50% of traditionally prepared teachers enter the profession after graduation and of the newly trained teachers many leave the profession before reaching the five-year milestone in their career (Ingersoll, 2003; Henke, Chen, & Geis, 2000). The USDOE reports 33% of new teachers leave teaching during the first three years and 46% leave in the first five years (Kober, 2006). This study shows exceptional initial employment rates for both the TSTP and ASTP program completers. However, given the data on the number of teachers leaving the profession, it is important

to determine the rate of retention of these new teachers at three and five year increments and to determine if the retention rate is statistically different depending on the preparation option.

Implications for future research. Alternative secondary teacher preparation options may not be the answer but may provide part of the solution particularly when program requirements are aligned with standards, with rigorous entrance requirements, and school districts and universities partnerships. Studies have shown a positive relationship between teacher qualifications and student outcomes. This relationship supports the view that teacher preparation and certification are legitimate criteria for entry into the profession (Fetler, 1999; Goldhaber & Brewer, 2000; Wilson et al., 2001). No Child Left Behind legislation (2002) has two objectives as it applies to classroom teaching, (1) to ensure that all teachers are highly qualified in the subjects they teach, and (2) to reduce the barriers to becoming a teacher by reframing traditional teacher education programs and opening up alternative routes to the profession (Office of Postsecondary Education, 2005). The increased emphasis on improving teacher quality seemingly conflicts with the chronic teacher shortages. The shortages have encouraged some policymakers and educational leaders to create faster, cheaper routes that offer fewer barriers to teacher certification (Rosenberg and Sindelar, 2001). Because of these real world exigencies future research should focus on student outcomes in classrooms taught by alternatively and traditionally trained secondary teachers particularly as we come to believe that our training programs even with their differences, are equivalent and based on excellence.

This exploratory efficacy study provides important information about teacher effectiveness as it relates to content knowledge, pedagogical skills, and teacher dispositions of the participants and establishes a framework for additional longitudinal research in this area. Establishing a baseline, for annual data collection and analysis will make it possible to determine if the one-time results of this study are indicative of candidate outcomes over time. This determination would be invaluable to the research college and to teacher educators nationwide.

References

- Allen, M. (2003). *Eight questions on teacher preparation: What does the research say? A summary of the findings*. Education Commission of the States.
- Bergert, S., & Burnette, J. (2001). *Educating exceptional children: A statistical profile*. Arlington, VA: ERIC Clearinghouse on Disabilities and Gifted Education, Council for Exceptional Children. (ERIC Document Information Reproduction Service No. Report: ED452649).
- Billingsley, B. S., & McLeskey, J. (2004). Critical issues in special education teacher supply and demand: Overview. *Journal of Special Education, 38*(1), 2-4.
Retrieved from <http://www.ingentaconnect.com/content/proedcw/jse>
- Blank, R. K., Langesen, D., Laird, E., & Toye, C. (2004). Meeting NCLB goals for highly qualified teachers: Estimates by state from survey data. *Education Policy Analysis Archives, 12*(70), 2-25.
- Boe, E. E. (2006). Long-term trends in the national demand, supply, and shortage of special education teachers. *Journal of Special Education, 40*(3), 138-150.
- Boe, E. E., & Bobbitt, S. A. (1997). Whither didst thou go? retention, reassignment, migration, and attrition of special and general education teachers in national perspective. *Journal of Special Education, 30*(4), 371-388.
- Boyd, D., Grossman, P., Lankford, H., Loeb, S., & Wyckoff, J. (2006). How changes in entry requirements alter the teacher workforce and affect student achievement. *Education and Finance Policy, 1*(2), 176-226.

- Boyd, D., Lankford, H., Loeb, S., & Wyckoff, J. (2005). The draw of home: How teachers' preferences for proximity disadvantage urban schools. *Journal of Policy Analysis and Management*, 24(1), 113-132. Retrieved from <http://dx.doi.org/10.1002/pam.20072>
- Boydston, J. E. (2008). *Teacher certification requirements in all fifty states: How and where to get a teaching certificate in all fifty states and D.C.* (26th ed.). Sebring, FL: Teacher Certification Publications.
- Brewer, T. M. (2003). The "grand paradox" in teacher preparation and certification policy. *Arts Education Policy Review*, 104(6), 3-10.
- Constantine, J., Player, D., Silva, T., Hallgren, K., Grider, M., Deke, J. (2009). *An evaluation of teachers trained through different routes to certification.* (NCEE 2009-4043). National Center for Education Evaluation and Regional Assistance.
- Darling-Hammond, L. (1997). *Doing what matters most: Investing in quality teaching.* Kutztown, PA: National Commission on Teaching & America's Future. (ERIC Document Reproduction Service No. ED415183).
- Darling-Hammond, L. (2000a). *Solving the dilemmas of teacher supply, demand and standards: How we can ensure a competent, caring and qualified teacher for every child.* Kutztown, PA: National Commission on Teaching & America's Future. (ERIC Document Reproduction Service No. ED463337).
- Darling-Hammond, L. (2000b). Teacher quality and student achievement: A review of state policy evidence. *Education Policy Analysis Archives*, 8(1).

- Darling-Hammond, L., Holtzman, D. J., Gatlin, S. J., & Heilig, J. V. (2005). Does teacher preparation matter? Evidence about teacher certification, teach for America, and teacher effectiveness. *Education Policy Analysis Archives*, 13(42), 1-51.
- Darling-Hammond, L., & Youngs, P. (2002). Defining "highly qualified teachers": What does "scientifically-based research" actually tell us? *Educational Researcher*, 31(9), 13-25.
- Ding, C., & Sherman, H. (2006). Teaching effectiveness and student achievement: Examining the relationship. *Educational Research Quarterly*, 29(4), 40-51.
Retrieved from <http://www.gram.edu/education/erq/>
- Esch, C. E., Chang-Ross, C. M., Guha, R., Humphrey, D. C., Shields, P. M., Tiffany-Morales, J. D., et al. (2005). *The status of the teaching profession, 2005*. Santa Cruz, CA: The Center for the Future of Teaching and Learning.
- Feistritzer, C. E. (2005). *Alternative teacher certification: An overview*. Retrieved May 30, 2005, from <http://www.ncei.com/Alt-Teacher-Cert.htm>
- Feistritzer, C. E., & Haar, C. K. (2008). *Alternate route to teaching*. Upper Saddle River, NJ: Pearson Education.
- Fetler, M. (1999). High school staff characteristics and mathematics test results. *Education Policy Analysis Archives*, 7(9).
- Foster, C., Bishop, C. A., & Hernandez, D. A. (2003). Alternative certification: Effectively preparing teachers. *Journal for the National Association for Alternation Certification*, 3(2), 8-27.

- Frome, P., Lasater, B., & Cooney, S. (2005). *Well-qualified teachers and high quality teaching: Are they the same? Research brief*. Atlanta, GA: Southern Regional Education Retrieved from <http://www.sreb.org>
- Futernick, K. (2007). *A possible dream: Retaining California teachers so all students can learn*. Sacramento: California State University.
- Gatlin, D. (2009). *A pluralistic approach to the revitalization of teacher education*. *Journal of Teacher Education*, 60(5) 469-477.
- Gerson, K. (2002). *Alternative certification in Georgia: Does it work? Research*. Retrieved from http://www.eric.gov/ERICDocs/data/ericdocs2sq1/content_storage_01/00000196/80/1a/60/22.pdf.
- Gimbert, B., Wallace, D., Cristol, D., & Sene, A. M. (2005). A case study of a competency-driven alternative route to teacher licensure in an urban "hard to staff" school system. *Action in Teacher Education*, 27(1), 53-71. Retrieved from <http://www.rowmaneducation.com>
- Gitomer, D. H. (2007). *Teacher quality in a changing policy landscape: Improvements in the teacher pool*. Princeton, NJ: Educational Testing Service.
- Goldhaber, D. D., & Brewer, D. J. (2000). Does teacher certification matter? High school teacher certification status and student achievement. *Educational Evaluation and Policy Analysis*, 22(2), 129-145.
- Greenberg, E., Rhodes, E., Ye, X., & Stancavage, F. (2004). *Prepared to teach: Teach preparation and student achievement in eight-grade mathematics*. American Institutes for Research.

- Gritz, R. M., & Theobald, N. D. (1996). The effects of school district spending priorities on length of stay in teaching. *Journal of Human Resources, 31*(3), 477-512.
- Haberman, M. (2001). The creation of an urban normal school: What constitutes quality in alternative certification? *Education Studies, 32*(3), 278-288.
- Hanushek, E. A., Kain, J. F., & Rivkin, S. G. (1999). *Do higher salaries buy better teachers?*
- Harrell, P. E., & Harris, M. (2006). Teacher preparation without boundaries: A two-year study of an online teacher certification program. *Journal of Technology and Teacher Education, 14*(4), 755-774. Retrieved from <http://www.aace.org/pubs/jtate/>
- Heck, R. H. (2007). Examining the relationship between teacher quality as an organizational property of schools and students' achievement and growth rates. *Educational Administration Quarterly, 43*(4), 399-432. Retrieved from <http://dx.doi.org/10.1177/0013161X07306452>
- Helton, J. (2008). A historical analysis of teacher preparation program content beginning with teacher normal colleges in 1839 through school district alternative certification programs in 2007. (Doctor of Education, University of Central Florida, 2001). ii-170.
- Henke, R. R., Chen, X., & Geis, S. (2000). *Progress through the teacher pipeline: 1992-93 college graduates and elementary/secondary school teaching as of 1997*. (Report No. NCES-2000-152). Jessup, MO: U.S. Department of Education.
- Huling, L., Resta, V., & Rainwater, N. (2001). The case for a third alternative: One university's trip. *Journal of Teacher Education, 52*(4), 326-338.

- Humphrey, D. C., & Wechsler, M. E. (2007). Insights into alternative certification: Initial findings from a national study. *Teachers College Record*, 109(3), 483-530. Retrieved from <http://www.tcrecord.org/Content.asp?ContentId=12145>
- Hussar, W., & Bailey, T. (2008). *Projections of education statistics to 2017*. (Report No. NCES 2008078). Washington D.C.: U.S. Department of Education, National Center for Education Statistics.
- Ingersoll, R. M. (1999). The problem of under qualified teachers in American secondary schools. *Educational Researcher*, 28(2), 26-37.
- Ingersoll, R. M. (2002). The teacher shortage: A case of wrong diagnosis and wrong prescription. *NASSP Bulletin*, 86(631), 16-31.
- Ingersoll, R. M. (2003). *Is there really a teacher shortage?* Seattle, WA: Center for the Study of Teaching and Policy (CTP), University of Washington. Retrieved from <http://www.ctpweb.org>
- Ingersoll, R. M., & Perda, D. (2006). *What the data tell us about shortages of mathematics and science teachers*. University of Pennsylvania.
- Interstate New Teacher Assessment and Support Consortium (1992). *Model standards for beginning teacher licensing, assessment and development: A resource for state dialogue* (No. 202/336-7048). Washington D.C.: Council of Chief State School Officers.
- Jorissen, K. T. (2003). Successful career transitions: Lessons from urban alternate route teachers who stayed. *High School Journal*, 86(3), 41-51. Retrieved from http://muse.jhu.edu/journals/high_school_journal/toc/hsj86.3.html

- Kirby, S. N., Berends, M., & Naftel, S. (1999). Supply and demand of minority teachers in Texas: Problems and prospects. *Educational Evaluation and Policy Analysis*, 21(1), 47-66.
- Kober, N. (2006). *A public education primer: Basic (and sometimes surprising) facts about the U.S. education system*. Washington D.C.: Center on Education Policy.
- Kober, N. (2007). *Why we still need public schools: Public education for the common good*. Washington D.C.: Center on Education Policy.
- Kozol, J. (1991). *Savage inequalities: Children in America's schools*. New York: Crown Pub.
- Laczko-Kerr, I., & Berliner, D. C. (2002). The effectiveness of "teach for America" and other under-certified teachers on student academic achievement: A case of harmful public policy. *Education Policy Analysis Archives*, 10(37).
- Lankford, H., Loeb, S., & Wyckoff, J. (2002). Teacher sorting and the plight of urban schools: A descriptive analysis. *Educational Evaluation and Policy Analysis*, 24(1), 37-62.
- Loeb, S., & Page, M. E. (2000). Examining the link between teacher wages and student outcomes: The importance of alternative labor market opportunities and non-pecuniary variation. *The Review of Economics and Statistics*, 82(3), 393-408.
- Mantle-Bromley, C., Gould, L. M., McWhorter, B. A., & Whaley, D. C. (2000). The effect of program structure on new teachers' employment and program satisfaction patterns. *Action in Teacher Education*, 22(1), 1-14.
- Marshall, N. A. (2006). A case study: Alternative certification. (Doctor of Education, University of Central Florida, 2006). i-198.

- McKibbon, M. (2008). *Management of alternative route teacher certification programs*. In C. E. Feistritzer (Ed.), *Building a quality teaching force: Lessons learned from alternative routes* (pp110-3). Upper Saddle Rive, NJ: Prentice Hall.
- McLeskey, J., Tyler, N. C., & Flippin, S. S. (2004). The supply of and demand for special education teachers: A review of research regarding the chronic shortage of special education teachers. *The Journal of Special Education, 38*(1), 5-21.
- Miller, J. W., McKenna, B. A., & McKenna, M. C. (1998). A comparison of alternatively and traditionally prepared teachers. *Journal of Teacher Education, 49*(3), 165-176.
- Murphy, P., DeArmond, M., & Guin, K. (2003). A national crisis or localized problems? Getting perspective on the scope and scale of the teacher shortage. *Education Policy Analysis Archives, 11*(23).
- National Board for Professional Teaching Standards, Arlington, VA. (2002). *What teachers should know and be able to do*. Arlingngton, VA: National Board for Professional Teaching Standards.
- National Council for Accreditation of Teacher Education. (2009). *Glossary*. Retrieved July 10, 2008, from <http://www.ncate.org/public/glossary.asp?ch=155>
- Nebraska Council on Teacher Education (NCTE). (2008). *Organizational policies of the Nebraska council on teacher education, 2009*. Retrieved from www.nde.state.ne.us/documents/teachered/1008/organizationalpolicies_proposed_withchangetracker.doc

- Nebraska Department of Education. (2006). *Rule 24: Regulations for certificate endorsements*. Retrieved January 19, 2009, from <http://www.nlc.state.ne.us/epubs/E2000/R092.0024-2006r.pdf>
- Nebraska Department of Education. (2008). *Rule 20: Regulations for the approval of teacher education programs*. Retrieved January 19, 2009, from <http://www.nde.state.ne.us/LEGAL/RULE20.html>
- Nebraska Department of Education. (2008). *Rule 21: Regulations for the issuance of certificates and permits to teach, provide special services, and administer in Nebraska schools*. Retrieved January 19, 2009, from <http://www.nde.state.ne.us/LEGAL/RULE21.HTML>
- Nebraska Department of Education. (2008). *Rule 23: Regulations for the basic skills competency testing of teachers and administrators*. Retrieved January 19, 2009, from <http://www.nde.state.ne.us/LEGAL/RULE23.html>
- No Child Left Behind Act of 2001, Pub. L. No. 107-110, 115 Stat. 1425 (2002).
- Nusbaum, C. M. (2002). Principals' perceptions of the effectiveness of alternatively certified and traditionally certified teachers in Hampton Roads Virginia. (Doctor of Education, Virginia Polytechnic Institute and State University, 2002).
- Office of Postsecondary Education. (2005). *The secretary's fourth annual report on teacher quality: A highly qualified teacher in every classroom*. Washington D.C.: U.S. Department of Education.
- Office of Postsecondary Education. (2006). *The secretary's fifth annual report on teacher quality: A highly qualified teacher in every classroom*. Washington D.C.: U.S. Department of Education.

- Olson, L. (2003). The great divide. *Education Week*, 22(17), 9. Retrieved from <http://search.ebscohost.com/login.aspx?direct=true&db=aph&AN=9041722&site=ehost-live>
- Qu, Y., & Becker, B. J. (2003, April). *Does traditional teacher certification imply quality? A meta-analysis*. Paper presented at the annual meeting of the American Research Association, Chicago, IL.
- Rosenberg, M. S., & Sindelar, P. T. (2001). *The proliferation of alternative routes to certification in special education: A critical review of the literature. developing the special education workforce series*. Arlington, VA: National Clearinghouse for Professions in Special Education, Council for Exceptional Children.
- Salyer, B. A. (2003). Alternatively and traditionally certified teachers: The same but different. *NASSP Bulletin*, 87(636), 16-27.
- Sanders, W. L., & Horn, S. P. (1998). Research findings from the Tennessee value-added assessment system (TVAAS) database: Implications for educational evaluation and research. *Journal of Personnel Evaluation in Education*, 12(3), 247-256.
- Shen, J. (1998). Alternative certification minority teachers and urban education. *Education and Urban Society*, 31(1), 30-41.
- Shulman, L. S. (1986). Those who understand: Knowledge growth in teaching. *Educational Researcher*, 15(2), 4-14.
- Shulman, L. S. (1987). Knowledge and teaching: Foundations of the new reform. *Harvard Educational Review*, 57(1), 1-22.

Sparks, G. M. (1983). Synthesis of research on staff development for effective teaching. *Educational Leadership*, 41(3), 65-72.

Suell, J. L., & Piotrowski, C. (2006). Efficacy of alternative teacher certification programs: A study of the Florida model. *Education*, 127(2), 310-315.

Retrieved from <http://www.projectinnovation.biz/education.html>

Suell, J. L., & Piotrowski, C. (2007). Alternative teacher education programs: A review of the literature and outcome studies. *Journal of Instructional Psychology*, 34(1), 54-58. Retrieved from <http://www.projectinnovation.biz/jip.html>

Torres, N. (2006). Alternative teacher certification: An investigation to determine the effectiveness of alternative teacher certification in the state of Florida according to principals' perspective. (Doctor of Education, University of Central Florida, 2006). ii-180.

University of Nebraska-Omaha College of Education. (2008). *NCATE institutional report*. Retrieved October 26, 2008, from <http://coe.unomaha.edu/ncate/>

University of Nebraska-Omaha College of Education. (2008).

NDE report. Retrieved October 26, 2008, from <http://coe.unomaha.edu/nde/>

University of Nebraska-Omaha College of Education. (2009). Academic program secondary education. Retrieved May 15, 2009, from

<http://coe.unomaha.edu/oss/SecHome.php>

University of Nebraska-Omaha College of Education. (2009). Metropolitan Omaha educational consortium. Retrieved January 19, 2009, from

<http://coe.unomaha.edu/moec/index.php>

- University of Nebraska-Omaha College of Education. (2009). *Procedures for formal acceptance to teacher preparation program*. Retrieved May 31, 2009, from <http://coe.unomaha.edu/oss/PreEdadmissions.php>
- University of Nebraska-Omaha College of Education. (2006). *Student teaching handbook for the teacher candidate*. Retrieved June 31, 2009, from <http://coe.unomaha.edu/oss/studentteaching.php>
- University of Nebraska-Omaha College of Education. (2009). Teacher academy project. Retrieved June 10, 2009, from <http://coe.unomaha.edu/outreach/tap.php>
- U.S. Bureau of Labor Statistics, U.S. Department of Labor. (2009). *Occupational outlook handbook, 2008-09 edition: Teachers--preschool, kindergarten, elementary, middle, and secondary*. Retrieved March 22, 2009, from <http://data.bls.gov/cgi-bin/print.pl/oco/ocos069.htm>
- U.S. Department of Education. (1998). *Title II higher education act: Glossary*. Retrieved November 17, 2008, from <https://title2.ed.gov/Title2DR/Glossary.asp>
- U.S. Department of Education. (2002). *Title II higher education act: Meeting the highly qualified teachers challenge*. Retrieved June 25, 2009, from <https://title2.ed.gov/ADATitleIIReport2002.pdf>
- U.S. Department of Education. (2006). Highly qualified teachers for every child, 1-2. Retrieved from <http://www.ed.gov/nclb/methods/teachers/stateplanfacts.html>
- U.S. Department of Education, National Center for Education Statistics. (2001). *The condition of education 2001* (No. NCES 2001-072). Washington, D.C.: U.S. Government Printing Office, 2001.

- U.S. Department of Education, National Center for Education Statistics. (2008). *Fast facts*. Retrieved June 2, 2009, from <http://nces.ed.gov/fastfacts/display.asp?id=28>
- Walsh, K. (2001). *Teacher certification reconsidered: Stumbling for quality*. Baltimore, MD: Abell Foundation.
- Walsh, K., & Jacobs, S. (2007). *Alternative certification isn't alternative*. Washington D.C.: Thomas B. Fordham Foundation & Institute.
- Washburn-Moses, L. (2005). Preparing special educators for secondary positions. *Action in Teacher Education*, 27(3), 26-39. Retrieved from <http://www.rowmaneducation.com/Journals/ATE/Fall05.shtml>
- Wayne, A. J. (2000). Teacher supply and demand: Surprises from primary research. *Education Policy Analysis Archives*, 8(47).
- Wenglinsky, H. (2000). *How teaching matters: Bringing the classroom back into discussions of teacher quality*. Princeton, NJ: Policy Information Center.
- Wilson, S. M., Floden, R. E., & Ferrini-Mundy, J. (2001). *Teacher preparation research: Current knowledge, gaps and recommendations* (Document No. S-01-1). Michigan State University. Retrieved from <http://depts.washington.edu/ctpmail/PDFs/TeacherPrep-WFFM-02-2001.pdf>
- Zeichner, K. M., & Schulte, A. K. (2001). What we know and don't know from peer-reviewed research about alternative teacher certification programs. *Journal of Teacher Education*, 52(4), 266-282.