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Principals' Perceptions of Teacher Academy for Preparation and Pedagogy Teachers (Tapp) And Traditionally Certified Teachers

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PRINCIPALS' PERCEPTIONS OF TEACHER ACADEMY FOR PREPARATION
AND PEDAGOGY TEACHERS (TAPP) AND TRADITIONALLY CERTIFIED
TEACHERS

by

KEVIN BRIAN CAMPBELL

(Under the Direction of Linda M. Arthur)

ABSTRACT

Georgia's alternative certification program, Teacher Academy for Preparation and Pedagogy (TAPP), is producing approximately 20% of the teacher pool in Georgia although minimal research exists about the performance of TAPP teachers in Georgia classrooms compared to traditionally certified teachers. Principals that employ TAPP teachers and traditionally certified teachers are responsible for performance evaluations and; therefore, they are a valid source for providing comparisons between the two types of teacher preparation. In an effort to gain a better understanding of principals' perceptions of TAPP teachers and traditionally certified teachers, the researcher used a previously validated formal survey constructed by Dr. Michael Nusbaum in 2002. The survey was sent electronically to 40 principals in an east Georgia RESA district that currently employ a first year TAPP teacher. The survey focused on three constructs of teaching: content knowledge, classroom management and instructional planning. A random group of principals from the RESA district were also interviewed to obtain further understanding of the survey results. The researcher's findings confirmed that principals' perceive TAPP teachers' content knowledge to be equal to traditionally certified teachers. However, principals' reported that traditionally certified teachers are

more adept at classroom management than TAPP teachers. Principals also perceived that TAPP teachers initially struggle with instructional planning, but eventually learn the skill by collaborating with experienced teachers.

INDEX WORDS: Georgia, TAPP, Traditional Teacher Certification, Alternative Teacher Certification, Principals, Dissertation

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Partial Fulfillment of the Requirements for the Degree

DOCTOR OF EDUCATION

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Electronic Version Approved:

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DEDICATION

This dissertation is dedicated to my parents, Connie and Larry Campbell. My parents have been a constant source of support and encouragement through all of my endeavors. Quite simply, they are my rock, and I dedicate this dissertation in their honor.

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CHAPTER 1

INTRODUCTION

The federal *No Child Left Behind Act* mandated that all teachers in core subjects be “highly qualified” by the end of the 2005-2006 school year (NCLB, 2005). While the federal government mandated highly qualified teachers, a projected shortage of 2.2 million teachers over the next decade was predicted, so this shortage had every state rushing to encourage people to become teachers (Healy, 2002). To compound the problem, the National Council for Accreditation of Teacher Education states that almost a third of all new teachers leave the classroom after three years and close to fifty percent leave after five years (2005). However, since this federal mandate, the Bureau of Labor Statistics (2009) notes that the supply of teachers is expected to increase in response to additional teachers drawn from a reserve pool of career changers and teachers completing alternative certification programs. Most recently, employment of school teachers is expected to grow by 12 percent between 2006 and 2016 in the states where the largest enrollment increases are expected such as Nevada, Arizona, Texas, and Georgia. Due to the expected increase in enrollment in Georgia and the impact of alternative certification on teacher availability, it is important to evaluate the effectiveness of Georgia’s alternative certification program, Teacher Academy for Preparation and Pedagogy (TAPP).

Due to the demand for more teachers, the interest in alternative teacher certification programs has grown rapidly. This growth can be attributed to the passage of the *No Child Left Behind Act* which required a highly certified teacher in every classroom by 2005-2006 (Feistritzer & Chester, 2000). In 2003, according to the National Center for

Education Information (NCEI), 46 states, plus the District of Columbia, reported implementing an alternative teacher certification program as compared to only eight states with an alternative route to teaching in 1983. National Center for Education Information researchers note that since 1985, an estimated 200,000 candidates have taken alternative routes to become teachers, with more than 130,000 receiving alternative certification in the last five years. In addition, 35,000 individuals entered teaching through approximately 115 alternative programs in over 40 states (NCEI, 2005). In particular, the Georgia Professional Standards Commission notes that 18.3 percent of the new teacher supply in 2004 was from an alternate certification program.

Georgia's Alternative Certification Program

Georgia's Teacher Alternative Preparation Program (TAPP) was created in 2000 to provide a non-traditional option for prospective post-baccalaureate teacher candidates to acquire the critical and essential knowledge and skills necessary for successful entry into the classroom. On May 15, 2009, the TAPP program was renamed Teacher Academy for Preparation and Pedagogy and redesigned to address the need for middle and high school core teachers (PSC, 2009). Phyllis Payne, the Director of Non-Traditional Teacher Preparation for the Georgia Professional Standards Commission, recognizes that the changes were necessary due to being "the nation's third-fastest-growing state and one that is projected to add 4 million residents in the next 20 years. Georgia must streamline the way we move qualified people into teaching positions. Our universities are doing many things to increase the teacher candidate pool, but we will still need more teachers than these institutions can produce" (PSC, 2009). Georgia's TAPP program has made a significant impact on the pool of teachers in Georgia. Of all newly

certified Georgia teachers in 2008-2009, 3,407 (22. 2%) became certified through alternative routes.

Teachers' Certification Affect on Student Achievement

The effect of various teacher certification routes upon student achievement becomes more important as the interest in alternative certification continues to grow. Although research on the effectiveness of alternatively certified teachers is not conclusive, several studies have examined the effects on student achievement of specific alternative certification programs including Teach for America (TFA) and the New York City Teaching Fellows (NYCTF) programs. Such studies have reached conflicting conclusions (Decker et al. 2004; Kane et al. 2006; Laczko-Kerr and Berliner 2002; Raymond et al. 2001). The more rigorous studies generally showed that students of alternatively certified teachers scored the same or higher than students of traditionally certified teachers, or that they scored slightly lower during their teacher's first year of teaching. However, these students' scores were equivalent by the teacher's second year (Decker et al. 2004; Boyd et al. 2007; Kane et al. 2006). A recent study conducted by the United States Department of Education (2009) compared 87 alternatively certified teachers and 87 traditionally certified teachers from 63 schools in 20 districts and 7 states. The pairing of an alternatively certified teacher to a traditionally certified teacher in each school and grade level constituted a separate mini experiment. Students were tested at the beginning of the school year as a baseline measure and at the end of the year as an outcome using the California Achievement Test. Classroom instruction was observed at one point during the year as an outcome using the Vermont Classroom Observation Tool. Students of alternatively certified teachers did not perform statistically

differently from students of traditionally certified teachers. Although average differences in reading and math were generally negative, they were not statistically significant.

Guyton, Fox and Sisk (1991) compared the test scores and teaching performance of 23 first year teachers who participated in a fast-track summer certification program and 26 traditionally certified teachers in Georgia. Student and school demographics were controlled in the study. The Gibson and Dembo's Scale, a teacher efficacy scale, and an educational attitude inventory were used to assess differences between traditionally and alternatively certified teachers. These researchers found the teachers to be similar on almost all measures except that traditionally certified teachers expressed more positive views of the profession. Similarly, Miller, McKenna and McKenna (1998) compared the teaching practices and student achievement of 41 traditionally certified and alternatively certified teachers over three years. They found no significant differences between the two cohorts on both measures of student achievement and teaching practices. When effects have been found, they have typically been described by the researchers as small.

In October of 2001, the Abell Foundation, a non-profit organization that focuses on urban poverty, issued a report that claims there is "no credible research that supports the use of teacher certification as a regulatory barrier to teaching" (Walsh, 2001, p. 5). However, Darling-Hammond (2002) notes that the Abell Foundation study was based on 44 research articles that were not peer-reviewed journal articles except for one. The Abell Foundation report caused the Department of Education to commission a panel of researchers to review 57 alternative certification studies that met specific research criteria, published after 1980 in peer-reviewed journals. The Department of Education commission concluded that the available evidence demonstrates an empirical relationship

between teacher education and teacher effectiveness (Wilson, Floden & Ferrini-Mundy, 2002). Furthermore, the review shows the empirical relationship between teacher qualifications and student achievement.

Content Knowledge

Teachers graduating from universities with teaching degrees have been immersed in subject matter knowledge. In lieu of content courses, alternatively certified teacher programs often require passage of a content based test such as Georgia's Assessment for Certification of Educators (GACE). In mathematics and science, a teacher's content knowledge has a significant impact on student achievement in those subjects (Goldhaber & Brewer, 1996). Monk and King concur that a "positive relationship exists between the number of subject related courses in a teacher's background and subsequent performance gain of these teachers' students within the indicated subject area" (1994, p 36).

Furthermore, Darling and Hammond (2000) conclude that "among variables assessing teacher quality, the percentage of teachers with full certification and a major in the field in which the teacher is a more powerful predictor of student achievement than teachers' education levels" (p 38). Researchers suggest that teachers with better specific content knowledge or coursework are associated with student achievement gains (Whitehurst, 2003).

Allen (2003) notes that the body of research on the effectiveness of a teachers' subject knowledge on student achievement moderately supports the importance of solid subject matter knowledge. One conclusion to be drawn from the data is that as content becomes more complex, student achievement is positively affected by the teacher's deeper understanding of the content

For all the researchers that support the notion that teachers with in-field degrees positively affect student achievement, there is also a body of research stating that in-field degrees do not affect student achievement. Allen (2003) concludes that the advantages of an undergraduate major in the subject taught are unfounded and, in fact, there may be a point after which additional courses are of minimal value. Researchers studying teacher performance on National Teacher Examination subject matter tests found no correlation between the measure of content knowledge and student achievement or supervisory ratings (Andrews, Blackmon & Mackey, 1980). Byrne (1983) further notes insignificant findings when reviewing 31 studies that relate teachers' content knowledge to student achievement. Byrne states 17 studies show a positive relationship and 14 studies show no relationship.

Classroom Management

A teacher's ability to manage the classroom affects student achievement. In a recent study, McGarty and Butts (2006) determined the relationship among teacher classroom management behavior, student engagement, and student achievement of middle and high school science students. Two week-long units were taught by 30 experienced science teachers. During this period of time teacher classroom management behavior, student achievement ($n = 570$), student engagement ($n = 269$), and student academic aptitude ($n = 649$) were measured. The Georgia Teachers Performance Assessment Indicators was used to measure teacher classroom management behaviors. Regression analysis was used to determine the relationship between the variables, and *post hoc* procedures were used. Analyses showed that there was a significant relationship among all variables. The particular management behaviors which were correlated with

achievement and engagement are: identifies students who do not understand directions and helps them individually, maintains learner involvement in lessons, reinforces and encourages the efforts of learners to maintain involvement, attends to routine tasks, uses instructional time efficiently, provides feedback to learners about their behavior, and manages disruptive behavior among learners.

Marzano (2003) conducted a meta-analysis that included the findings from more than 100 separate reports on classroom management. The researcher concluded that classes in which effective classroom management techniques are used have engagement rates for students that are .716 standard deviations higher than the engagement rates in classes where effective management techniques are not used. This translates into a 23-percentile point increase in engagement. From the meta-analysis, Marzano also concluded that classes with effective classroom management techniques reach achievement levels that are .521 standard deviations higher than the achievement in classes without effective classroom management techniques. The .521 standard deviation translates into a 20-percentile point increase in student achievement.

Instructional Planning

The use of effective instructional strategies in the classroom impacts student achievement. Only four states have no specific pedagogy requirements for teacher certification which demonstrates the importance of teachers being able to implement effective instructional strategies (Boyd, Goldhaber, Lankford, Wyckoff, 2007). In addition, Goldhaber (2002) notes that teacher preparation programs should address factors that impact student achievement. These factors are pedagogical background, content knowledge and certification exam scores. Wilson, Floden and Ferrini-Mundy

(2002) were asked by the Department of Education to provide a summary of rigorous empirical research on five questions. One of the key questions focused on the impact of pedagogical preparation on student achievement. To address the question of pedagogical preparation, the researchers compared certified teachers with their uncertified colleagues. The researchers found 5 relevant studies and concluded that research suggests some benefit of pedagogical preparation, but the measurements used make it difficult to see clear associations. Furthermore, the researchers found that four of the five studies concluded a positive correlation between a teacher's pedagogical knowledge and student achievement.

Varied Outcomes of Alternative Certification Research

Authors of studies on alternative certification tend to provide anecdotal evidence using a wide variety of methodologies and produce a wide variety of outcomes. The research on teacher alternative certification programs and their affects on student achievement are inconclusive. Some case studies and survey-based studies have examined alternatively certified and traditionally certified teacher classroom practices which have led to mixed findings (Lutz and Hutton 1989; Jelmberg 1996; Miller et al. 1998). The specific scope of many of these studies appears to have little relevance to the broad range of alternative certification programs operating across the country (USDOE, 2009). Also, Qu and Becker (2003) conducted a meta-analysis of 24 studies comparing traditional certification to alternate certification and concluded that “the magnitude of the difference between traditionally certified and alternatively certified varied by state, type of outcome, school level, subject taught, whether teacher experience was controlled, and the type of rater, but even with each sort of study results did not usually agree fully” (p.

37, 2003). Qu and Becker admit that teachers with traditional certificates tended to outperform teachers with alternative certification in some states, but not in others.

Rosenberg and Sindelar (2005) reviewed research on alternative routes to certification and concluded “the range and variability of alternative routes to certification programs, coupled with a shortage of reliable evidence, create a murky landscape, replete with potential threats, promises and challenges”. Furthermore, Rosenberg and Sindelar agree that the existing database has insufficient information to determine the long-term efficacy of various types of alternative certification programs. Podgursky (2004) agrees that there is little reliable research to inform most policy with regard to teacher training and licensing. Some researchers providing seemingly conclusive evidence have flawed methodology tactics making it difficult to base policy decision on flawed research.

Alternative certification programs from state to state have different requirements for teaching candidates. Different alternative certification requirements make it difficult to place confidence in student achievement research. Wilson (2001) agrees that future research will need to include more detailed descriptions of various alternative certification programs and content before conclusions can be drawn about characteristics that make for quality programs. Overall, the research on alternative certification is inconclusive due to the variety of methodologies, outcome variables and operational definitions (Miller, McKenna & McKenna, 1998). Laczko-Kerr & Berliner sum up the state of alternative certification by stating that “the large variability in alternative certification programs makes research on this phenomenon difficult” (2002, p.10).

Need for Research on TAPP

Research on the effectiveness of alternative certification programs is inconclusive because most research involves varying methodologies that examine programs with requirements that differ from state to state. Future studies should focus on individual program effectiveness rather than attempting to generalize results for all alternative certification programs. Research on the effectiveness of Georgia's Teacher Academy for Preparation and Pedagogy is non-existent except for a 2002 survey conducted by the Professional Standards Commission that noted 92 percent of respondents "somewhat" or "strongly" agreed that the Georgia TAPP program has provided them the necessary skills and training to be effective teachers. Research using principals' perceptions of traditionally certified and alternatively certified teachers from TAPP is crucial. Determining the quality of TAPP teachers is necessary due to the dependency of Georgia schools on the TAPP program for providing future teachers. Since 2001, the TAPP program has placed 2,800 teachers in Georgia school systems (GAPSC, 2009) without any regard to teacher effectiveness.

Statement of the Problem

Alternative certification programs have been implemented across the country in most states due to demand for teachers. Georgia's alternative certification program, Teacher Academy for Preparation and Pedagogy (TAPP), is producing approximately 20% of the teacher pool in Georgia; yet, little is known about the performance of alternatively certified teachers in Georgia classrooms compared to traditionally certified teachers. Principals are primarily responsible for evaluating teachers in areas of content, classroom management, and instructional planning. Moreover, principals are in a

position to evaluate and compare the performance of alternatively certified teachers and traditionally certified teachers. Therefore, the purpose of this study is to compare Georgia TAPP and traditionally certified teachers based on principal perceptions of content knowledge, classroom management and instructional planning.

Research Questions

One of the major roles of principals is to evaluate teacher effectiveness. The major research finding is that student achievement is related to teacher effectiveness in regards to content knowledge, classroom management and instructional planning (Kemp and Hall, 1992). Principals' perceptions of traditionally certified and alternatively certified teachers are paramount when assessing the differences between the two routes of teacher preparation. The overarching research question for this study is the following:

What are East Georgia RESA school principals' perceptions of traditionally certified teachers and TAPP teachers in regards to content knowledge, classroom management and instructional planning?

Significance

This study is significant in several dimensions. First, the study should be of interest to colleges and universities that provide teacher training in content knowledge, classroom management and instructional methodologies. Principals' perceptions of traditionally certified teachers' performance in the classroom could provide valuable information to colleges of education that produce traditionally certified teachers. The study should also be of interest to administrators of Georgia's TAPP program. Results from the study would provide the TAPP program with an assessment of the alternatively certified teachers being trained in the program based on principals' perceptions. TAPP

officials would be able to use the results of this study to validate the alternative certification program or consider changes to improve the quality of teachers being prepared.

At the state level, the Georgia Department of Education and Professional Standards Commission would benefit from a comprehensive study comparing principals' perceptions of traditionally certified teachers and alternatively certified teachers in the three domains of teacher preparation. The Department of Education promotes both alternative and traditional routes to teacher certification. Georgia's Department of Education recognizes TAPP teachers as highly qualified teachers if they pass the Georgia Assessment for the Certification of Educators (GACE) complete TAPP requirements, while traditionally certified teachers are considered highly qualified by successfully passing both GACE and graduating from an accredited college of education. Results of this study could further guide the Department of Education's support of both the traditional and alternative certification programs.

Principals would find the results of this study especially significant when hiring teachers. Currently, the teacher pool in Georgia consists of teachers from traditional certification programs and teachers from the TAPP program. Principals are charged with hiring the best teachers, but it is difficult to determine teacher effectiveness especially when comparing teacher certification. The researcher would provide principals with an assessment of traditionally certified and TAPP teachers based on principals' perceptions.

Future teachers in Georgia would also find the results of this study particularly interesting when determining whether to pursue certification through a college of

education or through the TAPP program. Future teachers would be able to choose which certification program better prepares teachers based on principals' perceptions.

Finally, the teacher pool has become diverse when comparing teacher preparation. The teacher pool consists of teachers that are traditionally certified and alternatively certified making it difficult for the researcher to choose the teacher that is going to positively impact student achievement. The results of the study are significant to the research because they would simplify the selection of potential teachers.

Procedure

Research Design

According to Borg, Gall, and Gall “some researchers believe that qualitative research was best used to discover themes and relationships, while quantitative research was best used to validate those themes and relationships in samples and populations” (2003, p 24). Furthermore, Borg, Gall, and Gall stated that qualitative research plays a discovery role, while quantitative research played a confirmatory role. The researcher planned to conduct a mixed methodology study of school principals in an East Georgia RESA district that currently employed a first year TAPP teacher to determine their perceptions of Teacher Academy for Preparation and Pedagogy (TAPP) and traditionally certified teachers. The researcher employed a survey instrument that also included a demographic survey and conducted interviews with representative principals to collect this information. A comparison of survey data and interview data were conducted to determine similarities and differences. Interview data was also used to compliment the survey data from principals.

Instrumentation

The survey instrument that was used in the study was developed by Michael Nusbaum (2002) in a study that compared principals' perceptions of traditionally certified and alternatively certified teachers in Hampton, Virginia. Nusbaum's survey was constructed using recommendations from Gall (1996) and Babbie (1990). The survey was also used in a similar study conducted by Jacquelyn Mahatha (2005) comparing principals' perceptions of traditionally certified and alternatively certified teachers in New Orleans public schools.

An interview guide was used to specify interview questions, sequence the order of questions and provided a guideline for beginning and ending the interview (Gall, Gall & Borg, 2003). Interview questions focused on the three areas of the research question and survey: content knowledge, classroom management and instructional planning.

In addition to collecting data concerning the principals' perceptions of traditionally certified and alternatively certified teachers, the researcher collected principals' demographic data.

Data Collection

Georgia Southern University had specific guidelines for research involving human subjects. To ensure compliance with the guidelines set forth by the Institutional Review Board (IRB), an application was submitted to the IRB and approval was granted before research began.

In addition, written permission was obtained from Dr. Charles Michael Nusbaum to use his survey titled Evaluation of Alternatively and Traditionally Certified Teachers that he used for his 2002 dissertation study. The Regional Educational Service Agency

(RESA) Coordinator in east Georgia provided contact information of principals that currently employ first year TAPP teachers and permission to use the contact information.

A cover letter and directions for completing the online survey was e-mailed to all the principals in the RESA district that currently employ a first year TAPP teacher.

Survey Monkey was used to administer surveys to principals. Each survey was coded with an identification number with the knowledge of the participant in order to identify the respondent as the survey was returned. A log was maintained to account for respondents and to identify non-respondents for subsequent e-mails. The initial email contained the following materials:

1. a letter requesting the principal's assistance through participation in the study with the assurance of confidentiality.
2. a survey entitled "Evaluation of TAPP Teachers and Traditionally Certified Teachers".
3. directions for completing the survey online.

Approximately two weeks from the first e-mail date, another e-mail was sent to the principals that had not completed the survey online. After three weeks from the initial e-mail, a follow-up phone call was made to any remaining non-respondents along with directions for completing the survey online. The survey was sent for approval to the Georgia Southern University Institutional Review Board (IRB).

Six principals of those that completed the survey were randomly selected to be interviewed. Principals were assigned a number and a random number generator was used to select the principals to be interviewed. The interviews were audio taped and

transcribed. Following the return of the surveys, the information gathered was sorted into the Statistical Package for the Social Science (SPSS Base 10.0, 2002).

Data Analysis

Upon receiving the surveys, the researcher retrieved data from Survey Monkey analysis. The data was entered into Statistical Package for the Social Science (SPSS) software. Descriptive statistics from the demographic data were used to describe the characteristics of the sample. A mean score for each of the 24 factors on the survey was calculated and a final analysis compared the means, standard deviation and range of each domain that principals scored TAPP teachers and traditionally certified teachers. The researcher used a t-test to "determine the level of statistical significance of the observed difference between the samples" (Borg, Gall, Gall, p. 137). To determine relationships between the three constructs, a Pearson Correlation and an ANOVA were conducted.

Transcripts from interviews with principals were reviewed to develop a set of categories of outcomes mentioned during the interviews. Based on principals' responses that match the set of categories, frequencies will be calculated for each question. Data collected from interviews with principals were compared to data collected from surveys.

Limitations

This study did not have any limitations.

Delimitation

In this study, there are two delimitations that the researcher imposed upon the study. The study's delimitations were the following:

1. The results of this study apply only to Georgia's TAPP program and do not apply to

other national alternatively certified programs that include Troops to Teachers or Teach for America.

2. Perceptions gained in this study are those of the public school principals within the RESA district. It cannot be assumed that the principals' perceptions reflect national perceptions.

Definition of Terms

1. Alternative certification- a process by which an individual may acquire a teaching certificate through a nontraditional certification program like Teacher Academy for Preparation and Pedagogy (TAPP).
2. Alternative certification program- a teacher preparation recognized by the state teacher licensing commission, Professional Standards Commission (PSC), that offers a non-traditional route to regular teacher certification. Teacher Academy for Preparation and Pedagogy (TAPP) is recognized program by the state department and the Professional Standards Commission as the alternative certification program in Georgia.
3. Classroom management- pedagogy skills teachers use to accomplish instruction by managing classroom group dynamics
4. Content knowledge- teacher understanding of the central concepts, methods of inquiry and structure of a specific discipline.
5. TAPP- Georgia Teacher Academy for Preparation and Pedagogy; Georgia's alternative teacher certification preparation program
6. Instructional planning- designing appropriate instructional experiences for students using all available resources

7. Traditional teacher certification- an accredited teacher preparation program at a college or university that requires completion of coursework, student teaching and passage of Georgia's Assessment for Certification of Educators (GACE) to obtain teacher certification.

Summary

Georgia's Teacher Academy for Preparation and Pedagogy (TAPP) is the primary source for alternatively certified teachers in Georgia. TAPP produces 20% of the teaching force in Georgia, yet an overall evaluation of the teachers from the TAPP program based on principals' perceptions does not exist. Current research focuses on student achievement comparisons and interviews with TAPP teachers and not principal perceptions. Researchers agree that data is inconclusive because of variability among alternative certification programs and failed attempts to make generalizations about all alternative certification programs. The purpose of this study is to provide principal perceptions of TAPP teachers and traditionally certified teachers without attempting to make broad generalization about all alternatively certified programs. The responsibility for assessing teachers falls mainly upon the school principal who is the most qualified to provide comparisons between TAPP teachers and alternatively certified teachers. The principals' perceptions of traditionally certified and TAPP teachers will provide crucial research to the TAPP program and to principals that are constantly hiring from a pool that contains both traditionally certified and alternatively certified teachers. The more information that principals have on the quality of teachers from the two types of certification routes, the better decision the principal is able to make when hiring teachers.

CHAPTER 2

REVIEW OF RESEARCH AND RELATED LITERATURE

Over the years, education reform research on the subject of teacher quality has resulted in tremendous changes in teacher certification. Research indicates that teacher quality is the single most important factor influencing student achievement (Darling-Hammond, 2006). School districts across the country are challenged to locate and employ highly qualified teachers to meet the demands of local and federal regulations. As a result of this demand for highly qualified teachers, many districts and states are turning to alternative teacher certification as an important method of expanding the pool of qualified teaching applicants.

In this chapter the researcher presents the relevant literature comparing alternatively certified teachers and traditionally certified teachers. The review at hand focuses on differences between content knowledge, instructional planning and classroom management of traditional and alternatively certified teachers. The review also addresses the effect of traditional versus alternatively certified teachers on student achievement and demonstrates the lack of research on the Georgia Teacher Academy for Preparation and Pedagogy (TAPP). Lastly, the literature shows the need for future research on the effect of teacher certification routes on student achievement. More specifically, the research on TAPP teachers versus traditionally certified teachers in Georgia is needed since that is Georgia's primary program for alternative teacher preparation.

Content Knowledge

No Child Left Behind (NCLB) federal legislation requires that highly qualified teachers have degrees in relevant subject areas, hold a standard license, and be able to

show command of subjects taught by passing content knowledge tests or having majored in the subject in undergraduate or graduate programs (GAPSC, 2006). Furthermore, Darling-Hammond (2006) notes that the focus on quality of teachers stems from the view that content knowledge among other factors are relevant professional criteria that have received considerable attention to enhance student learning outcomes. Although, most researchers agree that teacher quality is a complex phenomenon, there is little consensus regarding characteristics and how it should be measured (Darling-Hammond, 2000).

From what can be garnered, there are two major categories characterizing the work on teacher quality: classroom effectiveness and professional preparation (Heck, 2007). In his study that investigated professional preparation, Heck randomly sampled 197 elementary schools in Hawaii which involved over 14,000 fifth grade students to measure the students' true levels of academic achievement in math and reading. Researchers used scaled math and reading scores collected in third, fourth, and fifth grades. In comparison, teacher quality in the 197 elementary schools was determined based on the percentage of teachers at each school who were fully certified, passed content knowledge tests and met state performance standards. Over the three year period, some schools lost up to 3 percent of their qualified teachers, while other schools gained up to 31 percent of qualified teachers. Based on the study, Heck concluded that teacher quality is related to differences in student outcomes between schools. More importantly, Heck determined that higher school-level professional standards (i.e. certification, content knowledge and performance criteria) are positively associated with elementary students' achievement levels in reading and math. Heck noted teacher quality is important; however, there are many variables that collectively define teacher quality. Research specifically on the

effect of teachers' content knowledge on student achievement might pinpoint the crucial variable.

Teachers' content knowledge is a key component of teacher preparation. The United States Department of Education realized the importance of content knowledge and commissioned Wilson, Floden and Ferrini-Mundy (2002) to research key questions about teacher preparation. In particular, the first question was "What type of subject matter preparation, and how much of it, do prospective teachers need and are there differences by grade level or subject area?" After studying peer reviewed journal articles, the researchers concluded that no reports directly assessed prospective teachers' subject matter knowledge and evaluated the relationship between teacher subject matter preparation and student learning. However, seven studies related to subject matter preparation were reviewed and the researchers noted that several studies showed a positive connection between teachers' subject matter preparation and both higher student achievement and higher ratings on teacher performance evaluations, particularly in mathematics, science and reading. Furthermore, eleven studies suggest that subject matter preparation that prospective teachers currently receive is inadequate for teaching higher level standards and extending lessons beyond students' fundamental knowledge. The researchers note that a general weakness in the research is the wide variety of definitions for subject matter knowledge. Wilson and Floden (2003) followed up their initial study with further research including fourteen additional research articles. The researchers noted the difficulty in defining teachers' content knowledge:

The relationship between content knowledge and teaching effectiveness is neither consistent nor clear. The research suggests that grade level and the specific

content in question are important variables in understanding this relationship. Additionally, there are few satisfying measures of teacher subject knowledge. Researchers depend on proxies ranging from GPA to undergraduate degree majors and minors and none of these measures adequately represents teachers' subject matter preparation or subject specific pedagogical preparation (Wilson and Floden, pg. 14).

The importance of examining a teacher's content knowledge is further recognized by the federal government. Grover Whitehurst (2003), Director of the Institute of Education Sciences in the US Department of Education, noted that based on the Federal Title II Program, teacher quality is affected by a teacher's general knowledge, certification, experience, subject matter knowledge and in-service training. Furthermore, the federal government also notes in No Child Left Behind legislation that highly qualified teachers must meet two key requirements: full state certification and a high level of content knowledge.

Although teacher quality has been a key component of No Child Left Behind legislation, studies note that some aspects of teacher quality are more significant than others. Wenglinsky (2002) asserted that the key is to determine which aspect of teacher quality has the greatest impact on student academic performance. Wenglinsky used the performance of 7,146 eighth graders on the 1996 mathematics National Assessment of Educational Progress (NAEP) and background questionnaires completed by the mathematics teachers to determine which aspect of teacher quality is mostly closely related to student academic achievement. The research model used a single dependent variable, achievement, related to five independent variables, socioeconomic status (SES),

class size and three teacher inputs (teacher major, teacher education and teacher experience). SES had an effect size of .76 as compared to teachers' major effect size of .09. The teachers' level of education and years of experience proved unrelated to student achievement. The effect sizes for the statistically significant aspects of professional development total .33; and the effect sizes for the classroom practices total .56 as compared to .09 for teacher major. Wenglinsky concluded that a teacher's major in the content being taught is more positively related to achievement than teacher experience and degree.

Comparing student pass rates on state achievement tests with teacher certification can also help to reveal the relationship between two factors related to teacher quality: teacher preparation and classroom effectiveness. Fuller (1999) compared student pass rates on Texas Achievement Tests in districts with greater proportions of fully licensed teachers that passed content related certification exams while controlling for student socioeconomic status, school wealth, and teacher experience. Fuller found that students in districts with greater proportions of fully licensed teachers were significantly more likely to pass the Texas Achievement Tests. Similarly, Strauss and Sawyer (1996) found that average teacher scores on the National Teacher Examinations (NTE) measuring subject matter and teaching knowledge had a large effect on students' pass rates on the state achievement examinations. Specifically, "a 1% increase in teacher quality as measured by NTE scores was associated with a 3% to 5% decline in the percentage of students failing the exam" (1996).

Although, teacher content knowledge has been noted to have a significant effect on student achievement, a continual increase in teacher content knowledge does not

always lead to a continual increase in student achievement. Darling-Hammond (2000) recognized the necessity for studying content knowledge and that subject-matter knowledge is often found to be an important factor in teaching effectiveness. However, it appears that a teacher's content knowledge has a positive effect on student achievement up to a threshold level and then tapers off.

Instructional Planning

The role of pedagogy in student achievement has been recently scrutinized due to the emphasis on content knowledge rather than pedagogy in recent No Child Left Behind legislation regarding alternatively certified teachers. According to the United States Department of Education (2003), research evidence minimizes the value of training in pedagogy or practice teaching. However, only four states have no specific pedagogy requirements for teacher certification based data from the National Association of State Directors of Teacher Education and Certification (2006). Few studies demonstrate the role of pedagogy in student achievement. Boyd, Goldhaber, Lankford and Wyckoff (2007) agree that "of the few studies that examine the relationship between pedagogy coursework and student achievement, none finds causal evidence and only a few provide even general correlational evidence". Furthermore, the authors conclude that research does suggest that knowledge and teaching skills can influence student achievement, but no study identified which of these skills are important or how to develop the skills in prospective teachers.

Some research has found a link between student achievement and teachers that receive pedagogy training. Doherty and Hilberg (2007) conducted a study that examined the impact of teacher use of the standards for effective pedagogy on year-end

standardized tests of comprehension, reading, spelling and vocabulary. The study was conducted in two elementary public elementary schools in central California. One school received training on the five standards for effective pedagogy and the other school did not receive the training. Data from the California Department of Education was used to select the two schools that are very similar in homogeneity of population, student achievement and teacher credentials. Across both sites, 23 teachers and 394 students were involved in the study. The authors used a nonequivalent pretest and posttest control group design. The previous year's SAT-9 results were used as a pretest and the current year's SAT-9 for a posttest. The authors of the study concluded that teachers' use of the standards for effective pedagogy during language arts instruction predicted achievement reliably on year-end SAT-9 tests. After controlling for teachers' years of experience, language program, students' prior test performance, grade level, and English proficiency, as the teachers' use of the pedagogy standards increased, student achievement increased on tests of comprehension, language, reading and vocabulary by 1% to 2%. The authors note that the difference is small, but statistically significant. Furthermore, the authors explain that "across all SAT-9 tests, students in classrooms in which teachers transformed their pedagogy and organization showed greater achievement levels and gains".

In 2005, the Education Commission of the States released a review of research on pedagogical knowledge and the related teachers' effectiveness in promoting student achievement. Based on their criteria, the commission only found three studies comparing teachers' pedagogy and student achievement. The reports focused on studies that specifically related classroom practices to student achievement on standardized tests.

Goldhaber and Brewer (1996) used production function analysis techniques to analyze National Education Longitudinal data from 1988 to estimate the impact of observable and unobservable schooling characteristics on 10th grade mathematics standardized test scores. The study concluded that students with teachers who had little control over their teaching techniques demonstrated lower achievement on test scores.

The second study included in the Commission's report by Rowan, Correnti and Miller (2002) used hierarchical linear modeling to analyze data from Prospects: The Congressionally Mandated Study of Educational Opportunity, a large scale study of schools that served economically disadvantaged children, to determine if patterns of active teaching were related to classroom-level differences in students' academic growth. The study compared the impact of average minutes per week spent on instruction in reading and mathematics, time spent in active teaching formats and time spent on individualized and whole-class instruction. The study concluded that reading and mathematics achievement were positively related to active instruction as opposed to the other teacher factors.

Lastly, the Commission reviewed Wenglinsky's 2002 study that used multilevel structural equation modeling to analyze data from the 1996 National Assessment of Educational Progress for 7,146 eighth graders. Eighth grade mathematics teachers completed a questionnaire that measured teacher inputs: education level, whether teacher majored or minored in mathematics, and years of experience. Ten measures of professional development were also used to determine if teachers received any training in pedagogical topics ranging from higher-order thinking skills and portfolio assessment to interdisciplinary instruction. Lastly, the questionnaire focused on whether the teachers

utilized twenty-one classroom practices such as using worksheets and textbooks, to having students write reports, solving real-world math problems and students holding discussions in small groups. Wenglinsky's study concluded that teachers' use of specific classroom practices (small-group instruction, hands-on learning) had statistically significant relationships with student achievement scores. Specifically, students performed better on assessments when teachers used hand-on activities to illustrate concepts in mathematics and science. Also, teachers focusing on higher-order thinking skills and solving unique problems were associated with improved student performance. The results of the study confirmed the researchers' hypothesis that classroom practices had the greatest impact on student achievement. Effect sizes for the classroom practices total .56, professional development .33 and teacher input at .09. The teachers' level of education and years of experience prove unrelated to student achievement. However, Wenglinsky notes that the study only covered students at one grade level in two subject areas and that the study was cross-sectional and not longitudinal. Furthermore, the researcher suggests that in the future, better indicators of constructs are needed to identify socio-economic status. Wenglinsky asserts that the greatest influence on student's achievement comes from classroom practices and the professional development that supports them. Furthermore, "regardless of the level of preparation students bring to the classroom, decisions that teachers make about classroom practices can either greatly facilitate student learning or serve as an obstacle to it".

Classroom Management

Classroom management has been the most common concern of both pre-service and experienced teachers (Gee, 2001). A two year mixed methodology study of 149

teachers completing the non-traditional certification in California suggested that teachers would benefit from more training in classroom management. The participants in the study completed traditional classes in pedagogy and content; however, the participants skipped traditional student teaching and began as teachers of record straight from graduate school (Nakai and Turley, 2003). Furthermore, the authors note that many teachers “voiced classroom management and discipline as an area in which they could have had more preparation”. Also, a large number of respondents indicated a “desire for more instruction on management in their pre-service courses”.

A teacher’s ability to manage the classroom can affect student achievement. Freiber, Stein and Huang (1995) studied the achievement of elementary school students on two standardized tests, MAT6 and TEAMS. The researchers compared student performance on the two tests over a four year period to determine if teachers receiving classroom management training would affect student achievement on standardized tests. Teachers at one elementary school were trained in a classroom management program and the teachers at the comparison elementary school were not trained. Students at the elementary school that received training showed statistically greater achievement gains on both nationally normed achievement tests (MAT6) and on state criterion-referenced achievement battery than students at the comparison school in each of three years. The overall effect size due to program treatment on the MAT6 test scores was large, ranging from .43 (1986-87) and .83 (1987-88) during intervention to .73 (1988-89) after intervention. Similar results were found in the TEAMS test associated with the program intervention with overall effect size of 1.02 (1987-88) and .78 (1988-89) in mathematics, .68 and .77 in reading, and .59 and .77 in writing for the respective years. On measures of

learning environment, in a 1991 analysis, students at the school that received training perceived their environment to be significantly more positive than the comparison students.

Most research on the development of teacher attitudes toward classroom management has been conducted with teachers attending traditional teacher education programs and less on teachers from non-traditional alternative certification programs (Sokal, Smith, Mowat, 2003). To add to the minimal body of research, Sokal, Smith and Mowat examined the attitudes toward classroom management of teachers from an alternative certification program. Participants were divided into three groups: student teachers recently accepted into the alternative certification program, student teachers at the end of their first year in the program, and lastly student teachers at the end of their two year alternative certification program. The participants completed the Attitudes and Beliefs in Classroom Control Inventory. A 3 (Year in program) X 3 (Age group) general linear model was conducted with instructional management, people management and behavior management scores as dependent variables. The results of the study suggest that “teachers in an alternative certification program do not follow the same trajectory of classroom management attitudes as teacher in traditional teacher education programs, where attitudes do not generally change over the course of the program” (2003).

Traditional and Alternative Certification Comparison

As the number of alternative certification programs increased during the 1990's, research focused on the quality of alternatively certified teachers in comparison to traditionally certified teachers. Research has provided data to support both traditional and alternative routes to certification.

Research in favor of traditional certification has associated higher teacher efficacy with traditionally certified teachers. Darling-Hammond, Chung and Frelow (2002) surveyed all teachers with 4 years or less experience in the New York City school system. After reviewing 3,000 surveys, the authors concluded that teachers who entered through alternative pathways such as Peace Corps, Teach for America or Teacher Opportunity Corps rated their initial preparedness significantly lower than did graduates of teacher education programs on 25 of 40 survey items. The survey questions included core tasks of teaching such as designing curriculum and instruction, teaching subject matter content, using instructional strategies and understanding the needs of learners. Furthermore, the authors concluded that teachers prepared in a single formal program of preparation feel better prepared than those who take a series of courses from different institutions, who in turn feel better prepared than those who enter through alternative programs that minimize pre-service training and those who enter without prior experience or training.

Research supporting traditional certification also correlates higher student achievement to teachers with traditional certification. Laczko-Kerr and Berliner (2003) studied the performance of elementary school students in the classes of undercertified and certified teachers in five urban, poor school districts in Arizona. The researchers compared each class's mean scores on the Stanford Nine to compare student performance. Certified teachers were matched with undercertified teachers on the basis of grade level and highest degree obtained. The researchers were able to study 109 pairs of teachers in grades 3-8. Under-certified teachers were defined as teachers with bachelor's degree with little or no education coursework and provisional teachers that received some teacher education training but have not fulfilled requirements for

certification. Certified teachers had a bachelor's degree and completed 45 semester hours of elementary education coursework. Researchers evaluated the difference in matched teachers' student achievement scores and determined that in all six analyses, the three subtests of the SAT-9 in both years studied, the students of certified teachers had higher scores than did the students of undercertified teachers. The researchers concluded that "the advantage of having a certified teacher is worth about two months on a grade-level equivalent scale. In other words, students pay a 20 percent penalty in academic growth for each year of placement with an undercertified teacher" (2003).

Furthermore, Darling-Hammond, et al. (2005), replicated an earlier study of Teach for America recruits in Houston conducted by Ramond, Fletcher and Luque in 2001. Darling-Hammond, et al. went beyond earlier analyses and included a greater number of years with additional controls. The new research focused on the Houston Independent School District teachers and students in grades 3 through 5 from 1995 to 2002 which included a total of 271, 015 students and 15, 344 teachers. The data set contained student level data, teacher data, school data and identifier data linking students with teachers by school year. Student achievement was measured in mathematics and reading on three separate standardized tests administered by Houston during the period studied: the Texas Assessment of Academic Skills, the Stanford Achievement Test, 9th Edition (SAT-9), and the Aprenda. The researchers controlled for student prior achievement, student demographic characteristics, teacher's years of experience/highest degree obtained, classroom level variables and school level demographics. The achievement gains of students in grades 4-5 taught by alternatively certified teachers ranged from -2.31 to -0.818. However, the achievement gain on the Aprenda reading was

3.13. After analyzing student data, the researchers concluded that alternatively certified teachers had negative effects on achievement on these three sets of data. At the same time, on the Aprenda in reading, alternatively certified teachers had a significant positive effect. Overall, the researchers stated that “those taught by other teachers who are uncertified or who hold non standard certification generally achieve at levels 0.2 to 1.5 months behind their counterparts taught by standard certified teachers”. None the less, Teach for America teachers who received standard certification generally performed on par with other certified teachers, after controlling for degrees and experience. Furthermore, alternatively certified teachers, although generally less effective than standard certified teachers, had a strong positive effect on student achievement for Spanish-speaking students on the Aprenda in reading.

In the midst of some research promoting traditional certification over alternative, the Abell Foundation (2001) issued a report stating that there is “no credible research that supports the use of teacher certification as a regulatory barrier to teaching”. In 2002 the U.S. Secretary of Education cited the Abell Foundation paper in his Annual Report on Teacher Quality to support the deregulation of teacher certification. In response to the Abell Foundations statement, Darling-Hammond (2002) refuted the foundation’s stance on teacher certification by reviewing each study included in the Abell Foundation’s report. Darling-Hammond concluded that the Abell Foundation “dismissed or misreported much of the existing evidence base in order to argue that teacher education makes no difference to teacher performance or student learning and that students would be better off without state efforts to regulate entry into teaching or to ensure certain kinds of teachers’ learning.” Furthermore, Darling-Hammond stated that the evidence suggests

that lack of teacher preparation contributes to lower levels of learning, especially for those students who most need skillful teaching in order to succeed.

The US Department of Education released a study in 2009 that looked at 165 different alternative certification programs and selected a random sample of 63 programs across five states. Students in K-5 were randomly assigned to an alternatively certified teacher and a traditionally certified teacher within the same school. A t-test assured that there were no statistically significant differences among students in demographics, gender, race, socioeconomic and baseline achievement. The California Achievement Test was administered to students at the end of the year. There was no evidence of alternatively certified teachers having a different affect on students' math or reading achievement across K-5 grade levels. Although, the average differences in reading and math scores were generally negative for students taught by alternatively certified teachers, the difference was not statistically significant.

Kane, Rockoff and Staiger (2007) also focused on student achievement to demonstrate the congruity between the two routes of teacher certification. The researchers studied over 10,000 teachers in the New York City public education system and their students from 1998 to 2005. The researchers reviewed students' standardized math and reading examination results along with a variety of student demographic data for control purposes. Teachers included in the study were from four groups: regular certified, regular uncertified, teaching fellows and Teach for America. Based on the data, researchers concluded that a teacher's certification status matters little for student learning and the researchers found no difference between teaching fellows and traditionally certified teachers or between uncertified and traditionally certified teachers

in their impact on math achievement. Students of Teach for America teachers scored 2 percent of a standard deviation higher than students assigned to traditionally certified teachers. However, the students assigned to teaching fellows did underperform traditionally certified teachers by 1 percent of a standard deviation.

Classroom observations have also demonstrated similar performances between traditionally and alternatively certified teachers. Good et al. (2006) conducted a three year study on K-12 teachers in their first year of teaching in local school districts. Data for the first year was based on observations of 63 teachers; for the 2nd year, 131 teachers; and for the 3rd year, 139 teachers. Teachers selected for the study varied in preparation paths that led to certification. The researchers used the Tsang-Hester Observation Rubric (THOR) system as an observational instrument that describes teacher interactions with students. The instrument primarily describes the teacher in terms of three aspects of teaching practices: assessment of student learning, maintenance of classroom learning climate, and implementation of instruction. Observers were trained as a group using videotapes of classrooms practices. Reliability estimates were based on a coder's scoring of a single video taped classroom lesson and teacher planning interview. Results were subjected to Cronbach's alpha procedures to estimate reliability based on a 5-point scale. The second year reliability was based on two coders assigned to each classroom and the percentage within 1 point agreement between the two observers. The percent with exact agreement was 35 percent, but the percent agreement within 1 point was 81 percent. In general, teachers were observed to meet the criteria for realistic 1st year teaching practices in each of the three assessed domains: Assessment, Classroom Management, and Implementation of Instruction. However, "traditional preparation

better served teachers at the elementary and middle school levels than did nontraditional preparation. Second, nontraditional preparation appeared a better fit with high school teaching” (Good, 2006). Overall, the researchers concluded that beginning teachers from both types of preparation programs could teach at desired normative levels as defined by participating school districts.

Suell and Piotrowski (2006) also noted that traditionally and alternatively certified teachers perform equally during classroom observations. The researchers conducted a study on 43 alternative and traditional teachers in Escambia County School System in Florida. To be included in the study, the teachers could not have any previous teaching experience and must be a graduate of the university alternative program or certified through a traditional program. The researchers conducted classroom observations and used a Likert scale rating form based on Florida’s Accomplished Practices Survey. The sample population included 25 first year teachers in the alternate group and 18 first year teachers in the traditional group. Based on two-tailed independent sample t-tests ($p < .05$), there were no significant differences between the teacher groups on any of the 12 Florida Educator Accomplished Practices areas. These findings support the work of Stone (2000) and Wyaman et al. (2003) who found that teachers trained via alternative approaches express similar levels of competencies as teachers from traditional degree programs.

Meta-analyses of studies comparing traditionally and alternatively certified teachers have also revealed more similarities than differences. Qu and Becker (2003) conducted a meta-analysis of studies that were conducted in the United states during 1960 and 2003, examined k-12 grade teachers, provided sufficient data to calculate an

index of difference between groups of teachers with different types of certification and studies where teaching quality outcomes are represented in terms of either teacher performance measures or student achievement outcomes. The researchers identified 24 documents that met the criteria for the meta-analysis. Overall, the researchers concluded that traditionally certified teachers and alternatively certified teachers perform equivalently. The author specifically states that “teachers with traditional certificates tended to outperform teachers with alternative certificates in some states, but not in others. Dissertations tended to favor alternatively certified teachers but journals and reports showed virtually no difference.” Furthermore, the researchers agree that teachers from alternative programs are generally trained for less time than teachers with traditional certificates, by the conclusion of their training program, their outcomes appear to be similar to those for traditionally certified teachers. Of the 24 studies included in the meta-analysis, only one study compared traditional certification teachers to alternative certification teachers. The other 23 studies included in the meta-analysis compared traditional to provisional, emergency and out of field certification which is beyond the scope of this paper.

In another meta-analysis confirming that few differences exist between traditionally and alternatively certified teachers, Cochran-Smith and Zeichner (2005) authored *Studying Teacher Education: The Report of the American Educational Research Association (AERA) Panel on Research and Teacher Education*. Cochran-Smith and Zeichner employed the AERA guidelines for the selection of the studies to review and included only studies that had been peer reviewed and that provided adequate descriptions of the data collection and data analysis procedures. The researchers

identified 38 studies between 1986 and 2002 that met the qualifications. Based on the meta-analysis, the researchers concluded that “very little difference between alternatively and traditionally certified teachers exists”. However, the authors note that it is difficult to make generalizations about the different teacher preparation programs because of the many variations within each program.

Need for Future Research

A common theme throughout much of the research on traditional and alternative teacher preparation programs is the need for more research. Researchers state that most studies are hindered from conclusive outcomes regarding traditional and alternative certification because of the variety of alternative programs, methodologies, differing definitions and lack of peer reviewed studies. Miller, McKenna & McKenna (1998) reviewed a substantial body of research that compared alternatively and traditionally prepared teachers; however, the authors stated that, “overall, the research on alternative certification programs is inconclusive and somewhat contradictory” due to a wide variety of methodologies used to study traditional and alternative certification programs and a wide variety of outcome variables and operational definitions.

Researchers Good, McCaslin, Tsang, Zhang, Wiley and Bozack (2006) concur that it is difficult to evaluate the effectiveness of alternative certification because it can take so many different forms even within the same state. Furthermore, the researchers state the assessment of alternative certification effectiveness is difficult because much of the supportive literature is in the form of essay rather than research and like studies on traditional education, these studies are flawed. Laczko-Kerr and Berliner (2002) agree

that “the large variability in alternative certification programs makes research on the phenomenon difficult”.

In an effort to provide a definitive answer on the effectiveness of traditional and alternative certification programs, the American Education Research Association (AERA) Panel on Research and Teacher Education (2005) attempted to “make sense of what the research did and did not say about teacher education”. The panel depended on the AERA guidelines for the selection of the studies to review and included only studies that had been peer reviewed and that provided adequate descriptions of the data collection and data analysis methods. Authors Zeichner and Conklin identified 38 studies that met the criteria set by AERA and categorized the studies into 3 major categories: 1) studies of 4 year versus 5 year programs 2) alternative versus traditional certification based on sponsorship (state, university, school district) 3) case studies of teacher education programs. Although the research provided some evidence to make conclusions, the authors were quick to point out that “many factors greatly limit the usefulness of the findings” because there are so many variations, program requirements, institutional requirements, subject matter of the programs and the contexts in which the program graduates teach. Additionally, the authors note that the policies that each state has in place also vary greatly causing comparisons to be difficult and outcomes to be specific to the particular study rather than generally applicable.

In 2002, the North Central Regional Educational Laboratory (NCREL) also experienced the same obstacles when drawing conclusions from alternative certification research. NCREL conducted a literature review in conjunction with their study that sent surveys to a random sample of 2,600 principals in the seven states that represent their

region. The survey questioned principals' experiences with alternatively certified teachers, including questions about the number of alternatively certified teachers that they had hired and the quality of those teachers. North Central Regional Educational Laboratory received 1,019 responses from principals which was a return rate of 39 percent. The researchers concluded that attempts to determine the effectiveness of the alternative certification approach were complicated by a number of factors including the wide variety of alternative certification programs, the use of other teachers in comparison groups and the use of inadequate research methodologies.

The need for further research has also impacted the landscape of special education. To determine the impact, Rosenberg and Sindelar (2005) conducted a critical review of the literature pertaining to alternative certification in special education, creative approaches to special education teacher preparation and nontraditional approaches to special education teacher preparation. The researchers also conducted searches in *Teacher Education and Special Education* journal and the *Journal of Teacher Education*. The researchers were interested in a comprehensive view of the scope of alternative route programs in special education so the selection criteria for the review were left purposely broad. To be included in the review, studies had to only report empirical data on program outcomes. Being a peer reviewed study was not a requirement in the literature review which may have increased the impact of the review. The researchers concluded that "the range and variability of alternative routes to certification programs, coupled with a shortage of reliable evidence, create a murky landscape, replete with potential threats, promises and challenges" (2005).

A lack of evidence to support either alternative or traditional certification also seemed to be an issue when making policy for teacher preparation. Boyd, Goldhaber, Lankford and Wyckoff (2007) reviewed research to determine future policy on teacher preparation, but concluded that “in too many areas, the evidence is just too thin to have implications for policy”. Furthermore, the researchers agree that the “lack of convincing evidence in most of these areas is disturbing” when considering that education schools, future teachers, school districts and states depend on research to impact policy for teacher preparation and student achievement.

Wilson, Floden and Ferrini-Mundy (2002) encountered similar conclusions after being asked by the Department of Education to provide a summary of rigorous empirical research on teacher preparation and alternative routes to teacher certification. The researchers narrowed the research by only including peer-reviewed journal articles that described methodology and analysis. The research led the authors to a broader conclusion regarding the summary of rigorous empirical research on teacher preparation and alternative teacher certification. Wilson, Floden and Ferrini-Mundy concluded their research by stating that

Many reports were left out of our review because they did not include a description of research methods with enough details to judge the validity of the conclusion. When we failed to find such descriptions in papers that had been peer reviewed, we considered what basis the reviews had for making judgments. To move our collective understanding forward, and to give those outside our field reason to accept our claims, our research reports in journals or book need to devote more space to descriptions of research design, as well as data collection

and analysis so that the basis for conclusions is open to scrutiny. We also found that most scholarship was limited to small-scale interpretivist research. In summary, we were surprised at the lack of attention to the kinds of evidence used to support researchers' arguments (p. 201-202).

Research methods of current research on traditional and alternative teacher preparation tend to provide inconclusive results. Zeintek, Kadhi and Capraro (2003) concur in their meta-analysis of 77 articles related to alternative certification. In trying to determine the impact of alternatively certified teachers on student achievement, the authors concluded that the evidence is inconclusive mainly because the research is predominately qualitative with most quantitative studies using only descriptive statistics. Furthermore, "none of the 77 articles considered for this study reported the results of regression analyses or used multivariate methods". The researchers conclude that "the studies are so few, the sample sizes so small, and outcome measures so varied that it is not possible to draw conclusions that one certification route is better than the other".

In 2005, the Education Commission of the States (ECS) reviewed empirical research on the effectiveness of current approaches to licensing and certifying teachers. Specifically the Commission concluded that empirical research does not exist for determining whether there are differences between traditionally and alternatively certified teachers in their quality or effectiveness. Additionally, the researchers state that the variability in the structure and requirements among alternative routes to certification make it difficult, if not impossible, to make generalizations about these programs. Furthermore, "the field would benefit greatly by the completion of research incorporating more fine-grain variables in their comparisons" to include types of courses taken, timing

and structure of student teaching. The ECS agrees that “pulling these variables and their relationship to student achievement and teacher performance would lend more effective guidance to policy governing how teachers are prepared”.

In January 2002, the Education Commission of the States (ECS) commissioned Wilson and Floden to review recent research regarding teacher preparation. Wilson and Floden (2003) focused on empirical research and original research that met generally accepted standards for research traditions. After reviewing meta-analyses, Wilson and Floden concluded that “very little research exists that measures the difference in effectiveness between graduates of alternative certification and traditional teacher education”. The authors further explain that the research that does exist is “contradictory and inconclusive”. The research was considered to be inconclusive because there is such a wide variability in alternative programs and it is difficult to make any generalizations about alternative programs at large. Also commissioned by ECS, Mikulecky, Shkodriani and Wilner (2004) concur that the limited amount of research on the quality of alternative certification programs is inconclusive and sufficient research has not been conducted.

Georgia Teacher Academy and Preparation Program

According to the Secretary of Education’s Annual Report on Teacher Quality (2005), the top five states producing teachers through alternative certification were California, Georgia, New Jersey, New York and Texas. More specifically, during the 2006-2007 school year, 976 teachers entered the teaching profession in Georgia schools via Georgia’s Teacher Academy for Preparation and Pedagogy (TAPP). As of 2006-2007, there were a total of 4,770 TAPP teachers in the state of Georgia (GAPSC, 2007).

A recent study determined that there is no difference in attrition rates of teachers from Georgia's TAPP program and traditionally certified TAPP teachers on student achievement. Several studies were conducted on the teacher alternative preparation program prior to TAPP, but no studies have been conducted comparing the performance of TAPP and traditionally certified teachers.

One study did review first year teacher experiences while in the TAPP. Mallard (1998) conducted a qualitative study of six first year teachers from the Georgia Teacher Academy for Preparation and Pedagogy. The researcher served as a participant observer and took field notes, collected written documents, interviewed participants three times with 60-90 minutes per interview, observed classrooms, and debriefed. Data were analyzed through the constant comparative method of data analysis. Findings indicated that the six participants felt positively about the program but the training lacked a realistic depiction of a teacher's first year in the classroom. The participants were overwhelmed with resources and requirements, and the training sessions lacked practical relevance.

The number of teachers entering the teaching profession in Georgia through TAPP continues to increase each year (PSC, 2009). However, the lack of research on the effectiveness of teachers from the TAPP program is cause for concern. Future research should include evaluation of TAPP teachers and their effect on student achievement.

The revised TAPP creates an umbrella for all of the non-traditional routes to teacher certification into a single preparation rule (2009). Additionally, under the new TAPP umbrella, multiple pathways are designed to address the pedagogical knowledge and skills that non-traditional candidates lack. The revised TAPP prepares individuals with a minimum of a bachelor's degree in a content field or a degree that supports the academic

content knowledge of the teaching field for which the individual is seeking Clear Renewable Certification, but whose undergraduate or graduate work did not include pedagogical knowledge and skills. The program also provides a flexible timeframe for completion, but does not lead to a degree or college credit. The program also allows candidates to complete non-traditional preparation path requirements while employed as a classroom teacher fulltime or part-time for at least two classes per day in a regionally accredited school or school system. The candidate is supported by a Candidate Support Team comprised of a school-based administrator, a school-based mentor or teaching coach, a supervisor employed by the non-traditional preparation path provider, and a content specialist if either the mentor or supervisors are not also content specialist in the candidate's teaching field. Furthermore, TAPP requires an induction component that includes coaching and supervision for a minimum of one academic year and meets the standards and requirements delineated in Professional Standards Commission's Education Preparation Rule 5m.05-3-.86 Coaching Endorsement Program. The TAPP program provides individualized curriculum, performance-based instruction, and assessment focused on the pedagogical knowledge and skills necessary for the candidate to teach his/her validated academic content knowledge rather than coursework seat-time.

Admission requirements for TAPP include a bachelor's degree or higher from a Professional Standards Commission approved accredited college or university and a passing score on the Georgia Assessment for Certification of Educators (GACE) Basic Skills Assessment. Candidates with Master's Degrees or higher are exempt from the Georgia Assessment for Certification of Educators Basic Skills assessment. The requirements for specific core areas are below:

(I) Early Childhood Education and Special Education candidates who are teachers of record must have a passing score on the corresponding Georgia Assessment for Certification of Educators Content Assessment;

(II) Middle Grades math, science, reading, Language Arts, and Social Science must have a bachelor's degree or higher with a major in a concentration in the assigned teaching field or a transcript assessment confirming successful completion of 15 semester hours in the assigned teaching field or a passing score on the appropriate Georgia Assessment for Certification of Educators Content Assessment; if the candidate does not have a major in the assigned teaching field, for instance the candidate is accepted with a major in a related field or having experience that supports the knowledge and skills in the content area, he/she must have a passing score on the appropriate Georgia Assessment for Certification of Educators Content Assessment.

(III) Secondary math, science, all Social Studies areas, Foreign Language, and Fine Arts (art, music, band and chorus) must have a bachelor's degree or higher with a major in the assigned teaching field or a transcript assessment confirming successful completion of 21 semester hours in the assigned teaching field or a passing score on the appropriate Georgia Assessment for Certification of Educators Content Assessment; if the candidate does not have a major in the assigned teaching field, for instance the candidate is accepted with a major in a related field or having experience that supports the knowledge and skills in the content area, he/she must have a passing score on the appropriate Georgia Assessment for Certification of Educators Content Assessment.

CHAPTER 3

METHODOLOGY

This chapter represented a description of the research method and procedures that were used to study the differences in an east Georgia Regional Education Service Agency (RESA) district public school principals' perceptions of traditionally certified teachers and Teacher Academy for Preparation and Pedagogy teachers. The study was significant because the Bureau of Labor Statistics (2009) noted that the supply of teachers was expected to increase in response to additional teachers drawn from a reserve pool of career changers and teachers completing alternative certification programs. Also, employment of school teachers was expected to grow by 12 percent between 2006 and 2016 in the states where the largest enrollment increases are expected such as Nevada, Arizona, Texas, and Georgia. Due to the expected increase in enrollment in Georgia and the impact of alternative certification on teacher availability, it was important to evaluate the effectiveness of Georgia's alternative certification program, Teacher Academy for Preparation and Pedagogy (TAPP). This chapter discussed the purpose of this study, population to be studied, research design, instrumentation, data collection procedures, and data analysis methods.

Research Question

This study was designed to answer the following major research question: Do public school principals in the East Georgia RESA District perceive differences between traditionally certified teachers and TAPP teachers in regards to content knowledge, classroom management and instructional planning?

Participants

There were currently 71 Teacher Academy for Preparation and Pedagogy teachers enrolled in an East Georgia Regional Education Service Agency (RESA) Teacher Academy for Preparation and Pedagogy (TAPP) program for the 09-10 school year. There were 14 Teacher Academy for Preparation and Pedagogy teachers teaching in 12 elementary schools (K-5th grade), 18 Teacher Academy for Preparation and Pedagogy teachers in 12 middle schools (6th-8th grade) and 39 Teacher Academy for Preparation and Pedagogy teachers in 16 high schools (9th-12th grade). The 71 Teacher Academy for Preparation and Pedagogy teachers were supervised by 40 principals. There were 40 principals that were eligible to take the survey and be interviewed. The current principal of each public school in the Regional Educational Service Agency district represented 13 rural schools, 24 urban schools and 3 suburban school systems. Only school principals that evaluated currently enrolled Teacher Academy for Preparation and Pedagogy teachers completed the survey. The data was gathered from the respondents to give an accurate view of principals' perception of traditionally certified teachers and Teacher Academy for Preparation and Pedagogy teachers.

The sample of principals used for the study was small; however, the purpose of the study is to determine trends. To increase the amount of data beyond the 30 returned surveys, interviews were also conducted with principals. Six of the 30 principals that returned a survey were randomly selected to be interviewed. Principals were assigned a number and a random number generator was used to select the principals to be interviewed.

Research Design

The design of this descriptive study was sequential mixed methodology. Among the purposes for mixed-method evaluation design, Green et al. (1989) noted that the methodology clarifies and illustrates results from one method with the use of another method. Furthermore, integrating different methods was likely to produce better results in terms of quality and scope. In addition, it encouraged researchers to probe the underlying issues assumed by mixed-method (1989). Mixed methodology also allowed the researcher to conduct a quantitative phase of the study followed by a qualitative part of the study (Tashakkori & Teddlie, 1998). Because the two phases were distinct, this allowed the researcher to thoroughly present the paradigm assumptions behind each phase. The intended goal for the qualitative component of this study was to increase the interpretability and meaningfulness of the quantitative study. The researcher chose this method because the qualitative piece of interviewing principals provided an opportunity to obtain in-depth insight into the survey results of the principals' perceptions of TAPP teachers and traditionally certified teachers. Tashakkori and Teddlie further explained that mixed methodology is common for data collection and analysis of relatively unexplored topics. Studies examining the principals perceptions of TAPP teachers and traditionally certified teachers did not exist which calls for a mixed methodology.

A term often used by qualitative researchers to address issues of reliability and validity was "trustworthiness." One method for determining trustworthiness of qualitative research was the use of triangulation techniques. Originally a navigation term, triangulation referred to the way two points and the angles at those points could be used to determine the location of a third point. In research, the term came to mean combining

two or more data sources to study a single phenomenon (Tashakkori & Teddlie, 1998). In order to determine both reliability and validity, it was necessary to collect multiple measurements for comparison. Mixed methods research, with its multiple means of collecting data, was “almost by definition the very essence of what is needed to assess the validity of research” (Hunter & Brewer, 2003, p. 581).

Data from the principals was in the form of survey data and personal interview data. Quantitative results from the principals’ surveys were compared to the qualitative analysis of the researcher’s interviews with the principals to determine differences in principals’ perceptions of traditionally certified teachers and TAPP teachers. Qualitative data was also used to enhance the quantitative data from surveys.

The dependent variables in this study were the principals’ perceptions of traditionally and alternatively certified teachers. The independent variable was the type of training that teachers received for teacher certification: traditional training or TAPP.

Instrumentation

Three instruments were used in this study: Evaluation of Alternatively and Traditionally Certified Teachers (Nusbaum, 2002), a demographic survey and interview questions. Each instrument is described further below:

Evaluation of Alternatively and Traditionally Certified Teachers (Nusbaum, 2002)

Evaluation of Alternatively and Traditionally Certified Teachers is a 40 item Likert scale survey developed by Michael Nusbaum in 2002. The survey was reviewed three separate times for content validation. The results of the second validation survey proved that 30 of the 40 competency statements met or exceeded the established 80 percentile. Survey modifications were made to the wording of the competency

statements based on second validation study findings and a third validation survey was conducted. Results of the third survey showed that the competency statements all met 80 percentile and above.

It was initially projected that after return of the surveys, Cronbach's Alpha would be computed to determine the reliability coefficients and, therefore, the internal consistency of competency statements in each of the three domains of this study. Cortina (1993) found that a study's survey could be proven to be correct in expecting a certain grouping of items to determine interpretable statements about individual differences by use of a reliability coefficient. Alpha is defined as the average correlation of items for all possible splits of the items. If competency statement scores in a given domain are highly correlated, it is probable that the survey participants viewed the construct associated with the domain statements similarly. High levels of internal consistency enhance the validity of conclusions drawn from the study survey's data.

The survey measures five domains: Content Knowledge, Classroom Management, Instructional Planning, Human Relations, and Professionalism. For the purpose of this study, only three domains were included on this survey: Content Knowledge, Classroom Management and Instructional Planning. The domains, Human Relations and Professionalism, were removed from the survey for several reasons. First, the original survey was 40 questions and the survey for this study was 24 questions because the items related to Human Relations and Professionalism were deleted. By reducing the number of questions, the researcher intended to increase the chance that principals will answer the survey based on the brevity of the survey. Secondly, the researcher's interest was principals' perceptions of TAPP teachers and traditionally

certified teachers as it related to student achievement. According to Kemp and Hall, the major research finding was that student achievement was related to teacher effectiveness in regards to content knowledge, classroom management and instructional methods (1992).

Content Knowledge domain was defined as the teachers understanding of the central concepts, methods of inquiry, and structure of a specific discipline. The survey used only one question to assess content knowledge which is shown in Table 1; however, the author of the survey determined that one question was sufficient to determine principals' perceptions of content knowledge. Secondly, the Instructional Planning domain focused on the teachers' ability to plan for appropriate instructional experiences for students using all available resources and is explained in Table 2. The third domain, Classroom Management, focused on teachers' pedagogy and methods for dealing with student discipline issues which is explained in Table 3.

The resulting survey, Evaluation of TAPP Teachers and Traditionally Certified Teachers began with four questions addressing the demographics of the responding principals. Also included are a total of 24 statements to determine if principals' perceived differences between traditionally certified teachers and TAPP teachers. The survey provided principals the opportunity to rate traditionally certified teachers and TAPP teachers separately on each of the 24 descriptors. The last section of the survey provided an opportunity for principals to make any additional comments regarding observation of traditionally certified teachers and TAPP teachers. A four point Likert scale was chosen "for its appropriateness in collecting information on perceptions" (Popham, 1993, p. 53). Even-numbered responses eliminated the mid category response, thus forcing

respondents to make a choice (Popham, 1993). Principals responded to survey statements with values from the range of 1-4. Each response received a numerical weight with “strongly disagree” responses weighted with a value of 1, “disagree” responses weighted with a value of 2, “agree” weighted with a value of 3 and “strongly agree” responses weighted with a value of 4. For each statement, a higher average mean score for either alternatively certified teachers or traditionally certified teachers indicated greater principal agreement, while a lower average mean score for each statement indicated less principal agreement with the statement. For each statement, the higher mean score between traditionally certified teachers and TAPP teachers determined which type of teacher is more effective based on principals’ perceptions.

Table 1

Questionnaire Items Related to Content Knowledge

Item	Research	Domain
1. Mastery of subject	Darling-Hammond, 2007; Heck, 2007; Wilson & Floden, 2003	Content Knowledge

Table 2

Questionnaire Items Related to Instructional Planning

Item	Research	Domain
3. Utilizes curriculum Guides	Wenglinsky, 2007; Darling-Hammond, 2006	Instructional Planning
4. Long-range plans	Doherty & Hilbert, 2007; Wenglinsky, 2007; ECS, 2005	Instructional Planning
5. Plans for individual student differences	Wenglinsky, 2007; ECS, 2005;	Instructional Planning
6. Appropriate Assessments	Wenglinsky, 2007; ECS 2005;	Instructional Planning
23. Community resources	ECS, 2005; Wenglinsky, 2002	Instructional Planning

Table 3

Questionnaire Items Related to Classroom Management

Item	Research	Domain
2. Decision Making	Boyd, Goldhaber, Lankford & Wyckoff, 2007	Classroom Management
7. Utilizes instructional Resources	Boyd, Goldhaber, Lankford & Wyckoff, 2007	Classroom Management
8. Maintains classroom Environment	Doherty, Hilberg, 2007; ECS 2005	Classroom Management
9. Implements curriculum	Boyd, Goldhaber, Lankford & Wyckoff, 2007	Classroom Management
10. Focuses student attention	Boyd, Goldhaber, Lankford & Wyckoff, 2007	Classroom Management
12. Logical instructional Presentation	Doherty, Hilberg, 2007; Nakai & Turley, 2003	Classroom Management
13. Assigns homework	Boyd, Goldhaber, Lankford & Wyckoff, 2007	Classroom Management
14. Variety of Resources	Whitehurst, 2003; Rowan, Correnti & Muller, 2002	Classroom Management
15. Varied assessments	Nakai & Turley, 2003	Classroom Management
16. Modifies instruction based on student readiness	Boyd, Goldhaber, Lankford & Wyckoff, 2007	Classroom Management
17. Provides feedback to students and parents	Doherty & Hilberg, 2007	Classroom Management
18. Student-learning styles	Nakai & Turley, 2003	Classroom Management
19. High expectations		Classroom Management
20. Reteaches	Sokal, Smith & Mowat, 2003	Classroom Management
21. Good judgment	Doherty & Hilberg, 2007	Classroom Management
22. Routines	Gee, 2001	Classroom Management
24. Classroom discipline	Nakai & Turler, 2003; Gee, 2001	Classroom Management

Demographic Survey

The demographic survey (Appendix B) was administered electronically via Survey Monkey prior to the main survey. The survey contained four questions about gender, ethnicity, administrative experience and number of alternatively certified teachers on staff.

Principal Interview Questions

The principal interview questions listed in Table 4 were designed to promote conversation during the interviews. Interview participants will usually participate enthusiastically and without much prompting from the group moderator when they have a high level of commitment or emotional involvement in the topic being studied (Morgan, 2002). All survey questions were asked while interviewing the six principals. Interview questions were developed based on the answers to the surveys and the research in Chapter 2.

Table 4

Principal Interview Questions

Interview Questions	Research
1. What do you look for in observations when determining whether the teacher will be rehired?	Good, 2006
2. How would you rate the content knowledge of TAPP teachers as compared to traditionally certified teachers?	Qu & Becker, 2003
3. How would you rate the instructional planning of TAPP teachers as compared to traditionally prepared teachers?	Qu & Becker, 2003; USDOE, 2009
4. How would you rate the classroom management techniques of TAPP teachers as compared to traditionally prepared teachers?	Cochran, Smith & Zeichner, 2005
5. In general, do you think TAPP teachers compare favorably to traditionally certified teachers?	Marzano, 2003; Goldhaber, 2002; Kemp & Hall, 1992; Kane, Rockolf & Staiger, 2005
6. What would you consider the areas of weakness with TAPP teachers?	Suell & Piotrowski, 2006
7. What would you consider the greatest strength in general of TAPP teachers?	GAPSC, 2009

Procedure

Georgia Southern University had specific guidelines for research involving human subjects. To ensure compliance with the guidelines set forth by the Institutional Review Board (IRB), an application was submitted to the IRB and approval was granted before research began.

In addition, written permission (Appendix D) was obtained from Dr. Charles Michael Nusbaum to use his survey titled Evaluation of Alternatively and Traditionally Certified Teachers that he used for his 2002 dissertation study. The East Georgia RESA TAPP Coordinator also gave permission to use demographic information provided by RESA to contact principals regarding their participation in the study.

A cover letter and directions for completing the online survey was e-mailed to all the principals in the RESA that currently employ a first year TAPP teacher. Survey Monkey was used to administer surveys to principals. Each survey was coded with an identification number with the knowledge of the participant in order to identify the respondent as the survey is returned. A log was maintained to account for respondents and to identify non-respondents for subsequent e-mails. The initial email contained the following materials:

1. a letter requesting the principal's assistance through participation in the study with the assurance of confidentiality.
2. a survey entitled "Evaluation of TAPP Teachers and Traditionally Certified Teachers".
3. directions for completing the survey online.

Approximately two weeks from the first e-mail date, another e-mail was sent to the principals that had not completed the survey online. After three weeks from the initial e-mail, a follow-up phone call was made to any remaining non-respondents along with directions for completing the survey online. Following the return of the surveys, the information gathered was sorted into the Statistical Package for the Social Science (SPSS Base 10.0, 2002).

After the surveys were returned, six principals were randomly selected to be interviewed. Principals were assigned a number and a random number generator was used to select the principals to be interviewed. The interviews were audio taped and transcribed.

Data Analysis

Research Question: What are East Georgia RESA District school principals' perceptions of traditionally certified teachers and TAPP teachers in regards to content knowledge, classroom management and instructional planning?

First, after the surveys were completed, the survey data was analyzed using the Statistical Package for the Social Sciences (SPSS Base 10.0, 2002). Basic descriptive statistics (mean and standard deviation) were calculated for each item and domain. The data was holistically analyzed (means compared and standard deviations compared) to determine if there are differences in principals' perceptions of Teacher Academy for Preparation and Pedagogy teachers and traditionally certified teachers. A Pearson Correlation and ANOVA with Tukey's post-hoc analyses were conducted to determine relationships between the three constructs. Demographic data was used to present a descriptive profile of principals that employed Teacher Academy for Preparation and Pedagogy teachers and to holistically determine if differences exist.

Second, the interview data was analyzed by developing a category system. According to Gall, Gall & Borg (2003), the analysis of responses to open-form questions required the development of a category system. To create a category system, the interviews were transcribed and then analyzed to determine the types of outcomes mentioned by the principals. The comments were placed in categories and reviewed by

two other doctoral candidates for revisions. The researcher used the category system to code responses from all six interviews. The researcher then reported the number of times that each of the outcome categories were mentioned by the principals for each question. The information from interviews was used to further explain the conclusions gathered from the principals' surveys.

Third, the data from the interviews was analyzed to determine the differences in principal's perceptions between TAPP teachers and traditionally certified teachers. The data from the interviews was compared to the survey data to determine if the survey data validated the themes from the interview data. Data from the interviews was also used to increase the interpretability and meaningfulness of the survey data. Any differences between the two types of data were used to suggest future research.

Summary

In this chapter the researcher described the methods and procedures to be used in studying principals' perceptions of traditionally certified teachers and Teacher Academy for Preparation and Pedagogy teachers. Principals' perceptions were based on three categories: content knowledge, classroom management and instructional planning. The researcher wanted to determine if principals' perceived differences between traditionally certified teachers and Teacher Academy for Preparation and Pedagogy teachers in regards to the three categories.

The study used a mixed-methods research to collect data. The quantitative measurement tool was a survey that was administered to principals' to determine differences between traditionally certified and Teacher Academy for Preparation and Pedagogy teachers. The demographic data was collected on the survey and provided

descriptive statistics for the respondents. Two measurements were used to collect qualitative data. The survey provided an open-ended question for principals to answer. However, a large part of the qualitative data was collected during interviews with principals to discuss their perceptions of Teacher Academy for Preparation and Pedagogy teachers and traditionally certified teachers. To provide further insight into principals' perceptions of traditionally and Teacher Academy for Preparation and Pedagogy certified teachers, six principals were also interviewed. Interview questions focused on the three constructs that the survey was based on.

CHAPTER 4

REPORT OF DATA AND THE DATA ANALYSIS

The purpose of this study was to determine principals' perceptions of first year traditionally prepared teachers and first year Teacher Academy for Preparation and Pedagogy (TAPP) teachers in regards to content knowledge, instructional planning and classroom management. For this study, an electronic survey was sent to 40 principals in the East Georgia Regional Education Service Agency during the month of February 2010. Additionally, interviews were conducted with six principals that responded to the survey. The principals selected for the study employed one or more first year Georgia Teacher Academy for Preparation and Pedagogy teachers. In this chapter, the researcher reported and analyzed the data collected from the respondents of the survey instrument. This chapter contains sections addressing the research questions, findings, and responses to the research questions.

Introduction

The researcher used the validated Evaluation of Alternately Certified Teachers and Traditionally Certified Teachers instrument developed and used by Michael Nusbaum (2002). The survey consisted of a demographic section that included questions regarding sex, race, years of administrative experience and current number of first year Georgia TAPP teachers on staff. A 24 item Likert scale survey designed to determine principals' perceptions of traditionally certified and Teacher Academy for Preparation and Pedagogy teachers in regards to classroom management, content knowledge and instructional planning was used. Additionally, one open-ended question was used that provided principals the opportunity to comment regarding traditionally certified and

alternatively certified teachers. Six principals were interviewed to provide deeper insight into principals' perceptions of traditionally certified teachers and Teacher Academy for Preparation and Pedagogy teachers.

Research Question

Student achievement is related to teacher effectiveness in regards to content knowledge, classroom management and instructional planning (Kemp and Hall, 1992). One of the major roles of principals is to evaluate teacher effectiveness. Principals' perceptions of traditionally certified and alternatively certified teachers are paramount when assessing the differences between the two routes of teacher preparation. The overarching research question for this study was this:

What are East Georgia RESA District principals' perceptions of traditionally certified teachers and TAPP teachers in regards to content knowledge, classroom management and instructional planning?

The research question was addressed by using descriptive statistics for each of the three constructs: classroom management, instructional planning and content knowledge. For each construct, descriptive statistics were provided for each question that correlated to the construct, and summary descriptive statistics for each construct. Descriptive statistics were also provided for each construct grouped by elementary, middle and high school responses. A Pearson Correlation and an ANOVA with Tukey's post-hoc analysis were conducted to determine relationships between the constructs. Data from principal interviews was also used to further extrapolate data for each construct.

Response Rate

The response rate was based on the total number of completed surveys that were returned. An electronic survey was sent to 40 principals of elementary, middle and high schools in the CSRA that currently employed one or more first year TAPP teachers. Initially, twenty surveys were completed and electronically returned to the researcher. However, after a second request was emailed and principals were contacted by phone, ten more surveys were electronically returned to the researcher for an overall total of 30 completed surveys. The return rate of surveys from principals was 75%. The disaggregation of response data for the principals is presented in Table 5.

Table 5

Survey Participation and Response Rates for Principals

School Level	Number Surveyed	Number Responding	Return Rate	Useable Response Rate
Elementary	12	6	50.00%	100.00%
Middle	11	9	81.81%	100.00%
High	17	15	88.23%	100.00%
Total	40	30	75.00%	100.00%

Respondents

A total of 30 principals responded to the survey out of the 40 principals that were sent a survey. Demographic data of respondents and population was collected regarding gender and ethnicity. Information was also collected from the respondents regarding the

years of administrative experience and the number of first year TAPP teachers on each respondent's faculty. Also, a total of six principals were interviewed to provide further explanation of the quantitative analysis.

The ethnicity and gender of the respondents of the survey are displayed in Table 6. Overall, 11 (36.67%) respondents were African American, 18 (60%) respondents were Caucasian, and one (3%) respondent was Hispanic. More specifically, the ethnicity of the elementary principals that responded was four (13.33%) African Americans and two (6.67%) were Caucasian. The ethnicity of the middle school principals that responded was three (10%) African American, five (16.67%) Caucasian and one (3.33%) Other. The ethnicity of the high school principals that responded was four (13.33%) African American and 11(36.67%) were Caucasian.

Overall, 17 (56.66%) female principals responded to the survey, and 13 (43.34%) males responded to the survey. More specifically, at the elementary level, 4 (13.33%) females responded and 2 (6.67%) males responded. At the middle school level, 6 (20%) female principals responded, and 3 (10%) male principals responded. At the high school level, 7 (23.33%) female principals and 8 (26.67%) male principals responded.

The ethnicity and gender of all the principals in the RESA district are displayed in Table 7. The principals that responded to the survey were representative of the population of RESA district principals that currently employ a first year TAPP teacher. Based on data presented in Table 7, there were 25 (62.5%) female principals and 15 (37.5%) male principals in the RESA district with first year TAPP teachers. Of the 30 principals that returned the survey, there were 17 (56.66%) female and 13 (43.34%) male respondents in the representative sample. There was a minimal increase of male and

female representation in the sample as compared to the population. However, based on gender, the sample was representative of the population.

The ethnicity between the sample and population were also similar. In Table 7 there were 14 (35%) African Americans, 25 (62.5%) Caucasians and 1 (2.5%) Other in the population. Based on Table 6, there were 11 (36.66%) African Americans and 18 (60.01%) Caucasians and 1 (3.33%) Other in the sample. Based on ethnicity, the sample was representative of the population.

Overall, the differences between the sample and population were minimal. Inferences made from the sample were valid because the sample is representative of the population of principals in the RESA district that employ a first year TAPP teacher. A chart of each respondent's individual demographic data is listed as Appendix E.

Table 6

Demographics of Respondents in RESA District with First Year TAPP Teachers

Grades	Demographics				
	Gender		African American	Ethnicity	
	Female	Male		Caucasian	Other
Elementary	4 (13.33%)	2 (6.67%)	4 (13.33%)	2 (6.67%)	0
Middle	6 (20%)	3 (10%)	3 (10%)	5 (16.67%)	1 (3.33%)
High	7 (23.33%)	8 (26.67%)	4 (13.33%)	11 (36.67%)	0
All	17 (56.66%)	13 (43.34%)	11 (36.66%)	18 (60.01%)	1 (3.33%)

Table 7

Demographics of Principals in RESA District with First Year TAPP Teachers

Grades	Demographics				
	Gender		African American	Ethnicity	
	Female	Male		Caucasian	Other
Elementary	7 (17.5%)	2 (5%)	5 (12.5%)	4 (10%)	0
Middle	8 (20%)	3 (7.5%)	3 (7.5%)	7 (17.5%)	1 (2.5%)
High	10 (25%)	10 (25%)	6 (15%)	14 (35%)	0
All	25 (62.5%)	15 (37.5%)	14 (35%)	25 (62.5%)	1 (2.5%)

The administrative experience of the survey respondents is displayed in Table 8. Overall, 17 (56.67%) of the total respondents had between 10 and 19 years of administrative experience, and 11 (36.67%) of the total respondents has 6 to 9 years of experience. Only two (6%) respondents had 20 or more years of experience.

Table 8

Administrative Experience of Respondents

School Level	0-5 Years	6-9 Years	10-19 Years	20 Years or More
Elementary	0 (0%)	4 (66.67%)	1 (16.67%)	1 (16.67%)
Middle	0 (0%)	2 (22.22%)	6 (66.67%)	1 (11.11%)
High	0 (0%)	5 (33.33%)	10 (66.67%)	0 (0%)
Total	0 (0%)	11 (36.67%)	17 (56.67%)	2 (6%)

The number of TAPP teachers by school level is shown in Table 9. Overall, 30 principals reported 53 TAPP teachers on their current staff. The majority of TAPP teachers in the study are at the high school level with 30 (56.60%), and middle school having the next highest number of TAPP teachers with 13 (24.53%). The elementary level had the fewest number of TAPP teachers in the study with 10 (18.87%).

Table 9

Current Number of TAPP Teachers on Faculty

School Level	Number of TAPP Teachers
Elementary	10 (18.87%)
Middle	13 (24.53%)
High	30 (56.60%)
Total	53

The demographic data for the six principals that were interviewed are displayed in Table 10. There were four female principals and two male principal interviewed for the study. Four of the six principals that were interviewed were Caucasian and two were African American.

Table 10

Demographics of Six Principals Interviewed for Study

Grades	Demographics				
	Gender		African American	Ethnicity	
	Female	Male		Caucasian	Other
Elementary	1 (16.67%)	1 (16.67%)	1 (16.67%)	1 (16.67%)	0 (0%)
Middle	1 (16.67%)	0 (0%)	0 (0%)	1 (16.67%)	0 (0%)
High	2 (33.32%)	1 (16.67%)	1 (16.67%)	2 (33.33%)	0 (0%)
All	4 (66.66%)	2 (33.34%)	2 (33.34%)	4 (66.67%)	0 (0%)

Findings

Research Question: What are East Georgia RESA District school principals' perceptions of traditionally certified teachers and Teacher Academy for Preparation and Pedagogy teachers in regards to content knowledge, classroom management and instructional planning?

The survey used to answer the research question was composed of 24 questions that measured three constructs of Teacher Academy for Preparation and Pedagogy teachers and traditionally certified teachers. The three constructs were classroom management, instructional planning and content knowledge. The questions were based on prompts that were related to the three constructs and provided principals the opportunity to rate TAPP teachers and traditionally certified teachers on each prompt using a four-point Likert scale ranging from strongly disagree to strongly agree. The responses were given numerical values from one to four, and the quantitative analyses were based on the principals' responses to the questions. For interpretation purposes, it was assumed that the strength of agreement increased as the mean value approached four.

The results of the quantitative analyses were presented by first analyzing the mean and standard deviation by construct. Using SPSS Version 10.0, further analysis of the constructs was conducted with a Pearson Correlation analysis to determine correlations between the constructs. Finally, One-Way ANOVA tests with Tukey post-hoc analyses were also conducted to determine if any interactions existed between the three constructs.

Interviews of six principals were also used to answer the research question. Six of the 30 principals that responded to the survey were interviewed to obtain qualitative data regarding principals' perceptions of traditionally and alternatively certified teachers.

Transcripts from the interviews were analyzed by developing a category system for principals' responses to each interview question. Data from the interviews was tabulated by counting the number of times principals answered interview questions that related to the outcome categories.

Classroom Management

The six principals that were interviewed were asked to rate traditionally certified teachers and alternatively certified teachers in regards to classroom management. Two main themes were prevalent in the principals' responses to the classroom management prompt. First, five of the six principals stated concerns with TAPP teachers' ability to manage their classrooms. The principals that were interviewed rated classroom management as their greatest concern regarding TAPP teachers. The second theme from the principals' interviews regarding classroom management was TAPP teachers' lack of classroom experience prior to their first year teaching. Three of the six principals interviewed stated that traditional teachers are typically better prepared to handle classroom management issues due to their lab experience and student teaching under the supervision of an experienced teacher.

Principals were also surveyed using 18 questions that assessed classroom management. Table 11 provides a holistic picture of the descriptive statistics of the 18 comparative statements. The significance levels from the t-test of each descriptor are listed in Appendix F. The means for traditional teachers were higher than the TAPP means on 17 of 18 questions in the survey. However, principals rated TAPP teachers higher ($M=3.20$) than traditional teachers ($M=3.17$) on item 19 that referred to conveying high expectations to students. The principal at H1 High School related high

expectations set by TAPP teachers to their willingness to keep an open mind when dealing with students that struggle as compared to traditionally trained teachers. The principal stated the following:

The greatest strength of TAPP teachers is coming in with an open mind. The one on my staff is from Granite City and has a grudge against Granite City students. But TAPP doesn't have a history with bad kids, so they have an open mind; more open minded with helpful hints. They take helpful hints and run with them. They are eager to learn and don't have burn out.

Although traditionally certified teacher mean scores were higher than alternatively certified teacher mean scores on 17 of 18 questions, there were varying degrees of difference between the means. The largest difference in means between traditionally trained teachers and alternatively certified was survey item 8 which referred to maintaining the classroom environment conducive to learning. The mean for traditionally trained was 3.33 and the mean for alternatively certified was 2.83. The high school principal at H2 High School concurred that maintaining the classroom environment can be difficult for TAPP teachers. In response to interview question number four that asked principals to compare traditionally certified teachers and alternatively certified teachers in regards to classroom management, the H2 High School principal stated the following:

Classroom management is an area of weakness for most TAPP for a couple of reasons. Most have no training or experience with dealing with students. Most of their experience is dealing with adults in the business world. Some of the behavior is just teenage behavior that they should tolerate...they don't act like

adults...they are quick to the trigger for a discipline referral. They need more ways to manage behavior. They are quick to send them out to the administrator. They don't think about calling parents.

The principal at H1 High School also agreed that classroom management was a major concern with alternatively certified teachers. The principal at H1 High School stated:

Classroom management techniques of TAPP teachers are usually the weakest point. They know the content but they have trouble managing students while delivering the content. Also, TAPP teachers have to learn how important it is to deal with student misbehavior firmly, fairly, and swiftly to prevent it from becoming a habit. Like all new teachers, they usually get better over time; but, classroom management is one area that TAPP teachers usually have to really work on.

The second largest difference in means between traditionally trained and alternatively certified was survey item 24 which referred to planning and initiating a variety of resources into units of study. The mean for traditionally trained was 3.27 and the mean for alternatively certified was 2.80.

The third largest difference in mean between traditionally trained and alternatively certified was survey item 14 which referred to effectively addressing discipline in the classroom. The mean for traditionally trained was 3.10 and the mean for alternatively certified was 2.60. Interview data noted that the difference in their preparation as a reason for a difference in discipline approaches between TAPP and traditional teachers. Principal M3 stated the following:

Traditionally prepared teachers have managed classes through their lab work and student teaching and have the upper hand. They have observed several different teachers throughout their program and should have the advantage of different techniques and what works for certain groups. TAPP teachers tend to run the show just like they were taught and don't know what to do if the students don't perform the way they once did.

The principal at E3 Elementary also reported similar concerns with TAPP teachers' classroom management effectiveness. She stated the following:

Classroom management is the biggest weakness that I see in the TAPP teacher.

This can make or break a teacher and without the advantage of student teaching or having had a more traditional college preparation which includes classroom management training can be a huge disadvantage for the TAPP teacher.

The principal at E2 Elementary also concurred that the classroom experience included in traditional training may be the difference between traditionally certified and TAPP teachers discipline management. The principal concluded the following:

Classroom management was a difficult area for TAPP teachers because they have not had the experience of observing classes before taking them over as a student teacher for a grading period. The only difference I can figure out between TAPP and traditionally certified teachers is that they have more classroom experience that allows them to learn how to manage the classroom with the help of a supervising teacher.

The smallest difference between means of traditionally and alternatively certified teachers was survey item 19 which referred to conveying beliefs of high expectations.

The mean traditional average was 3.17 and the mean for alternatively certified was 3.20. Principal A1 High school commented that TAPP teachers often exhibit higher expectations of students. The principal stated:

My personal experience has been pretty good with TAPP. They know their content, but had trouble with delivery. Content is not necessarily the problem, but trying to get content to level of students is a major struggle. For example, a teacher may have a huge knowledge of physics, but can't believe they have to teach students how to input a physics problem into a calculator. They have higher expectations than a traditional teacher.

Table 11

Classroom Management Comparison between TAPP and Traditionally Certified

Survey Questions Related to Classroom Management	TAPP Mean (SD) n=30	Traditional Mean (SD) n=30
2. Uses decision making processes which allow for quality decisions.	2.93 (0.45)	3.17 (0.38)
7. Utilizes instructional assistants and resources appropriately and effectively.	3.17 (0.46)	3.33 (0.55)
8. Maintains classroom environment conducive to learning.	2.83 (0.46)	3.33 (0.55)
9. Implements district and state curriculum objectives.	3.37 (0.56)	3.43 (0.50)
10. Focuses students to tasks at the beginning of the lesson and maintains the focus.	2.93 (0.45)	3.20 (0.41)
11. Communicates instructional objectives, reviews previous learning, and makes lessons relevant.	3.00 (0.53)	3.21 (0.49)
12. Presents concepts and skills in a clear, coherent and logical manner using correct and appropriate techniques and professional practices.	2.83 (0.53)	3.23 (0.43)
13. Assigns appropriate amounts of homework and practice assignments.	2.87 (0.57)	3.03 (0.41)
14. Plans and initiates a variety of resources into units of study.	2.80 (0.48)	3.27 (0.58)
15. Evaluates student achievement using a variety of techniques.	2.70 (0.70)	3.13 (0.43)

Table 11 (*continued*)

16. Modifies instruction based on the needs of challenged students.	2.63 (0.56)	3.07 (0.58)
17. Evaluates classroom student achievement and provides feedback to the student and parents.	2.83 (0.53)	3.17 (0.53)
18. Varies instructional activities to address student learning styles.	2.57 (0.63)	2.97 (0.56)
19. Conveys a belief in high expectations.	3.20 (0.61)	3.17 (0.46)
20. Reteaches for mastery of instructional content.	2.80 (0.61)	3.03 (0.50)
21. Handles educational situations with poise and good judgment.	3.00 (0.59)	3.13 (0.43)
22. Establishes routines which keep students involved in the task at hand and which prevent potential behavioral problems.	2.77 (0.73)	3.13 (0.43)
24. Effectively addresses classroom discipline.	2.60 (0.67)	3.10 (0.48)
All	2.88 (0.37)	3.17 (0.33)

The classroom management construct data was also analyzed between elementary, middle and high school principals to determine differences between principals' perceptions at different school levels. Table 12 lists the means and standard deviations between the 18 questions answered by elementary school principals that are related to the classroom management construct.

Based on the data presented in Table 12, the means for each statement related to classroom management was higher than the mean for TAPP teacher on 17 of the 18

statements which indicated that principals perceive traditionally certified teachers more favorably than TAPP teachers in regards to classroom management. However, elementary principals rated traditionally certified teachers and TAPP teachers equally in regards to conveying high standards in the classroom. Comparative statement 19 referred to high standards set by teachers in the classroom. Based on principals' perceptions, the means of the statement are equal between TAPP and traditionally certified teachers.

Data presented in Table 12 also demonstrated that the largest difference between means is statement 11 and 22. Based on the significant difference between means on statement 22, principals perceived that traditionally certified teachers are better prepared to establish routines that promote student engagement and prevent potential behavior problems. Based on the difference in means in statement 22, principals also perceive that traditionally certified teachers communicated instructional objectives and makes lessons more relevant than TAPP teachers.

Table 12

Classroom Management Comparison between Elementary TAPP and Traditional

Survey Questions Related to Classroom Management	TAPP Mean (SD) n=30	Traditional Mean (SD) n=30
2. Uses decision making processes which allow for quality decisions.	2.67 (0.52)	3.32 (0.52)
7. Utilizes instructional assistants and resources appropriately and effectively.	3.33 (0.52)	3.67 (0.52)
8. Maintains classroom environment conducive to learning.	3.00 (0.63)	3.50 (0.50)
9. Implements district and state curriculum objectives.	3.50 (0.50)	3.83 (0.41)
10. Focuses students to tasks at the beginning of the lesson and maintains the focus.	2.83 (0.41)	3.33 (0.52)
11. Communicates instructional objectives, reviews previous learning, and makes lessons relevant.	2.83 (0.41)	3.67 (0.52)
12. Presents concepts and skills in a clear, coherent and logical manner using correct and appropriate techniques and professional practices.	3.00 (0.63)	3.67 (0.52)
13. Assigns appropriate amounts of homework and practice assignments.	3.00 (0.63)	3.33 (0.52)
14. Plans and initiates a variety of resources into units of study.	3.00 (0.63)	3.67 (0.52)
15. Evaluates student achievement using a variety of techniques.	2.83 (0.98)	3.33 (0.52)

Table 12 (*continued*)

16. Modifies instruction based on the needs of challenged students.	2.67 (0.82)	3.33 (0.52)
17. Evaluates classroom student achievement and provides feedback to the student and parents.	3.00 (0.63)	3.67 (0.52)
18. Varies instructional activities to address student learning styles.	2.67 (0.52)	3.33 (0.52)
19. Conveys a belief in high expectations.	3.50 (0.50)	3.50 (0.50)
20. Reteaches for mastery of instructional content.	3.17 (0.75)	3.40 (0.55)
21. Handles educational situations with poise and good judgment.	2.83 (0.41)	3.33 (0.52)
22. Establishes routines which keep students involved in the task at hand and which prevent potential behavioral problems.	2.67 (1.03)	3.50 (0.55)
24. Effectively addresses classroom discipline.	2.67 (1.03)	3.33 (0.52)

Table 13 listed the means between middle school principals' perceptions of TAPP and traditionally certified based on the 18 comparative statements. Based on the means, principals rated traditionally certified higher than TAPP on 15 of the 18 statements. The largest difference in means between traditionally certified and TAPP was statement 8 that referred to a teacher's ability to maintain a classroom environment conducive to learning. Traditionally certified had the higher mean ($M=3.33$) and TAPP had the lower mean ($M=2.67$) which indicated that middle school principals perceived that traditionally certified teachers maintain the classroom environment better than TAPP teachers. The

means between traditionally certified ($M=2.78$) and TAPP ($M=3.33$) was also significant which indicates that middle school principals perceive that traditionally certified teachers establish procedures that prevent behavior problems in the classroom more often than TAPP teachers.

In Table 13, the mean for TAPP teachers ($M=3.22$) was higher than the mean for traditionally certified ($M=3.00$) teachers on statement 19. The higher mean indicated that middle school principals considered TAPP teachers to set higher standards in the classroom than traditionally certified teachers. The means between traditionally certified and TAPP teachers in regards to implementation of the state curriculum were equal.

Table 13

Classroom Management Comparison between Middle School TAPP and Traditional

Survey Questions Related to Classroom Management	TAPP Mean (SD) n=30	Traditional Mean (SD) n=30
2. Uses decision making processes which allow for quality decisions.	3.00 (0.50)	2.67 (0.87)
7. Utilizes instructional assistants and resources appropriately and effectively.	3.22 (0.44)	3.33 (0.50)
8. Maintains classroom environment conducive to learning.	2.67 (0.50)	3.33 (0.50)
9. Implements district and state curriculum objectives.	3.44 (0.53)	3.44 (0.53)
10. Focuses students to tasks at the beginning of the lesson and maintains the focus.	3.00 (0.00)	3.11 (0.33)
11. Communicates instructional objectives, reviews previous learning, and makes lessons relevant.	3.22 (0.44)	3.38 (0.52)
12. Presents concepts and skills in a clear, coherent and logical manner using correct and appropriate techniques and professional practices.	2.56 (0.53)	3.11 (0.33)
13. Assigns appropriate amounts of homework and practice assignments.	2.56 (0.53)	2.89 (0.33)
14. Plans and initiates a variety of resources into units of study.	2.78 (0.44)	3.11 (0.60)
15. Evaluates student achievement using a variety of techniques.	2.78 (0.67)	3.11 (0.33)

Table 13 (*continued*)

16. Modifies instruction based on the needs of challenged students.	2.67 (0.50)	3.00 (0.71)
17. Evaluates classroom student achievement and provides feedback to the student and parents.	2.89 (0.60)	3.22 (0.44)
18. Varies instructional activities to address student learning styles.	2.56 (0.73)	2.89 (0.60)
19. Conveys a belief in high expectations.	3.22 (0.67)	3.00 (0.00)
20. Reteaches for mastery of instructional content.	2.56 (0.53)	2.89 (0.33)
21. Handles educational situations with poise and good judgment.	2.89 (0.60)	3.11 (0.33)
22. Establishes routines which keep students involved in the task at hand and which prevent potential behavioral problems.	2.78 (0.67)	3.33 (0.50)
24. Effectively addresses classroom discipline.	2.44 (0.53)	2.89 (0.33)

Data in Table 14 demonstrated that the high school principals perceived that traditionally certified teachers were more competent than TAPP teachers in 14 of the 18 comparative statements. More specifically, there were differences between the means of traditionally certified ($M=3.13$) and TAPP ($M=2.67$) teachers on item 24 which referred to effectively addressing classroom discipline. There were also differences between the means of traditionally certified ($M=3.20$) and TAPP ($M=2.73$) teachers on survey item 14 which related to integrating various resources into units of study. Based on means, principals perceived no differences between traditionally certified teachers and TAPP on

implementing the state curriculum and assigning appropriate amounts of homework and only minimal difference in regards to setting high expectations.

Table 14

Classroom Management Comparison between High School TAPP and Traditional

Survey Questions Related to Classroom Management	TAPP Mean (SD) n=30	Traditional Mean (SD) n=30
2. Uses decision making processes which allow for quality decisions.	3.00 (0.38)	3.13 (0.64)
7. Utilizes instructional assistants and resources appropriately and effectively.	3.07 (0.46)	3.20 (0.56)
8. Maintains classroom environment conducive to learning.	2.87 (0.52)	3.27 (0.59)
9. Implements district and state curriculum objectives.	3.27 (0.59)	3.27 (0.46)
10. Focuses students to tasks at the beginning of the lesson and maintains the focus.	2.93 (0.59)	3.20 (0.41)
11. Communicates instructional objectives, reviews previous learning, and makes lessons relevant.	2.93 (0.59)	2.93 (0.26)
12. Presents concepts and skills in a clear, coherent and logical manner using correct and appropriate techniques and professional practices.	2.93 (0.46)	3.13 (0.35)
13. Assigns appropriate amounts of homework and practice assignments.	3.00 (0.53)	3.00 (0.38)
14. Plans and initiates a variety of resources into units of study.	2.73 (0.46)	3.20 (0.56)
15. Evaluates student achievement using a variety of techniques.	2.60 (0.63)	3.07 (0.46)

Table 14 (continued)

16. Modifies instruction based on the needs of challenged students.	2.60 (0.51)	3.00 (0.53)
17. Evaluates classroom student achievement and provides feedback to the student and parents.	2.73 (0.46)	2.93 (0.46)
18. Varies instructional activities to address student learning styles.	2.53 (0.64)	2.87 (0.52)
19. Conveys a belief in high expectations.	3.07 (0.59)	3.13 (0.52)
20. Reteaches for mastery of instructional content.	2.80 (0.56)	3.00 (0.53)
21. Handles educational situations with poise and good judgment.	3.13 (0.64)	3.07 (0.46)
22. Establishes routines which keep students involved in the task at hand and which prevent potential behavioral problems.	2.80 (0.68)	3.00 (0.00)
24. Effectively addresses classroom discipline.	2.67 (0.62)	3.13 (0.52)

Summary of Findings for Classroom Management

The results of the survey demonstrated that principals rated traditionally trained teachers higher than TAPP teachers in 17 of 18 classroom management descriptors. Furthermore, principals reported that alternatively certified teachers are not as prepared as traditionally trained teachers in maintaining a classroom environment conducive to learning, planning a variety of resources for a unit and addressing classroom discipline. Principal interviews also reported that classroom management, particularly student behavior, is a concern with TAPP teachers. Principals reported that traditional teacher

preparation provided more opportunities to improve their skills with classroom management during student teaching opportunities and teacher observations. During interviews, principals consistently noted that TAPP teachers are at a disadvantage with classroom management because the TAPP program does not have a student teaching component that would allow them to learn classroom management skills from a supervising teacher.

Principals rated traditionally trained teachers and TAPP teachers similarly on implementing the district curriculum. However, principals rated alternatively certified teachers slightly higher on setting high expectations for students. One principal noted the reason for the difference in setting high expectations is due to TAPP teachers' experience in the business world.

Instructional Planning

The six principals that were interviewed were asked to rate traditionally certified teachers and alternatively certified teachers in regards to instructional planning. Two main themes were prevalent in the principals' responses to the instructional planning prompt. First, all six principals stated that TAPP teachers were not as prepared for instructional planning as traditionally certified teachers. However, all the principals mentioned that TAPP teachers eventually learn the skill of instructional planning if they are mentored by an experienced teacher or participate in collaborative planning. The second theme from the principals' interviews regarding instructional planning was TAPP teachers' inability to create instructional plans that use a variety of instructional strategies that increase student engagement. Four of the six principals stated their concerns regarding concerns with TAPP teachers' use of varied instructional strategies. Two

principals also were concerned about TAPP teachers' ability to vary instructional strategies for students that do not understand concepts on the first attempt.

Principals were surveyed using five comparative statements that correlate to instructional planning. The descriptive statistics are reported in Table 15. The significance levels from the t-test of each descriptor are listed in Appendix G. Overall, principals rated traditionally trained teachers higher on all five descriptors for instructional planning. The descriptors with the largest differences between the means of traditionally certified and TAPP teachers were evidence of long-range planning (item 4) and providing assessments to measure student growth (item 6). The mean for evidence of long-range planning for traditionally trained was 3.13 while the TAPP mean was 2.77.

The descriptor for instructional planning with the least difference between the means of traditional and TAPP teachers was survey item 23 which pertained to the inclusion of community and its resources in instruction. The mean for traditionally prepared was 2.67 and the mean for TAPP was 2.40.

Table 15

Instructional Planning Comparison between TAPP and Traditionally Certified

Survey Questions Related to Instructional Planning	TAPP Mean (SD) n=30	Traditional Mean (SD) n=30
3. Utilizes current curriculum guides and competency lists.	3.10 (0.49)	3.37 (0.40)
4. Shows evidence of long-range planning.	2.77 (0.53)	3.13 (0.63)
5. Plans for individual instructional differences among students	2.67 (0.61)	3.03 (0.67)
6. Plans appropriate assessment strategies for student progress	2.60 (0.67)	3.00 (0.69)
23. Includes the community and its resources in their instruction.	2.40 (0.62)	2.67 (0.66)
All	2.70 (0.42)	3.04 (0.42)

Table 16 below listed the perceptions of elementary principals in regards to instructional planning. Traditionally trained teachers' means were higher than TAPP teachers on all five comparative statements. However, principals rated TAPP (M=2.67) lower than traditional (M=3.50) on survey item 6 which referred to planning assessments to measure student progress. The results indicated that principals perceived that traditional teachers are better prepared to use assessments.

Table 16

Instructional Planning Comparison between Elementary TAPP and Traditional

Survey Questions Related to Instructional Planning	TAPP Mean (SD) n=30	Traditional Mean (SD) n=30
3. Utilizes current curriculum guides and competency lists.	3.33 (0.52)	3.67 (0.52)
4. Shows evidence of long-range planning.	3.17 (0.75)	3.50 (0.55)
5. Plans for individual instructional differences among students	2.83 (0.41)	3.33 (0.52)
6. Plans appropriate assessment strategies for student progress	2.67 (0.52)	3.50 (0.55)
23. Includes the community and its resources in their instruction.	2.50 (0.55)	3.00 (0.63)

In Table 17, middle school principals rated traditionally trained teachers higher on all five comparative statements related to instructional planning. The comparative statement with the largest mean difference was survey item 6 which referred to providing assessments to measure student progress. The mean for traditionally certified teachers was 3.11 while the mean for TAPP was 2.22. The comparative statement with the least mean difference was survey item 3 that pertained to the use of curriculum guides.

Table 17

Instructional Planning Comparison between Middle School TAPP and Traditional

Survey Questions Related to Instructional Planning	TAPP Mean (SD) n=30	Traditional Mean (SD) n=30
3. Utilizes current curriculum guides and competency lists.	3.22 (0.44)	3.33 (0.50)
4. Shows evidence of long-range planning.	2.56 (0.73)	3.22 (0.67)
5. Plans for individual instructional differences among students	2.44 (0.73)	2.89 (0.78)
6. Plans appropriate assessment strategies for student progress	2.22 (0.67)	3.11 (0.33)
23. Includes the community and its resources in their instruction.	2.11 (0.33)	2.44 (0.53)

The means for the five constructs related to instructional planning were all higher for traditionally certified than TAPP based on high school principals' survey results as shown in Table 18. The comparative statements with the largest difference in means were the use of assessments to measure student progress (item 6) and evidence of long-range planning (item 4). The least difference in means was item 3 regarding the implementation of curriculum guides which indicated that principals consider traditionally certified and TAPP teachers equally competent.

Table 18

Instructional Planning Comparison between High School TAPP and Traditional

Survey Questions Related to Instructional Planning	TAPP Mean (SD) n=30	Traditional Mean (SD) n=30
3. Utilizes current curriculum guides and competency lists.	3.07 (0.46)	3.20 (0.56)
4. Shows evidence of long-range planning.	2.73 (0.46)	3.00 (0.38)
5. Plans for individual instructional differences among students	2.73 (0.59)	3.00 (0.65)
6. Plans appropriate assessment strategies for student progress	2.80 (0.68)	3.00 (0.38)
23. Includes the community and its resources in their instruction.	2.53 (0.74)	2.67 (0.72)

Principals' interviews noted differences between instructional planning of traditionally trained and alternatively certified teachers; however, over time principals stated that TAPP teachers learn instructional planning. In response to interview question 3 that asked principals to compare traditionally certified and alternatively certified teachers in regards to instructional planning, the principal at H2 High School stated the following:

We may be unusual setting because we do so much collaborative planning. They participate in the group planning and don't stand alone. They get their feet wet at

first and later begin to contribute. Eventually, they bring in different types of labs and assessments. However, the TAPP teacher that quit in November was in isolation and that was his weakness.

The principal at H4 High School concurred that TAPP teachers struggle with instructional planning, but with the assistance of colleagues, the difference is minimized. He stated that “TAPP teachers need help at first with instructional planning. The TAPP program helps lay the foundation, but each system and school has varying expectations of what is needed. Usually, the TAPP teachers and their mentors can sit down and work through this the first few months and things are fine.” The principal at E3 Elementary also noted a difference between traditionally and alternatively certified teachers’ ability to instructionally plan. The principal at E3 Elementary noted that:

Instructional planning is an important part of being an effective teacher and a skill that TAPP teachers do not possess. Traditionally trained teachers have been exposed to standards based planning through their classes and this is something that the TAPP teacher must rely on the other more experienced teachers to guide them through. This requires time for the teachers to collaborate to make this work.

The principal at E2 Elementary agrees:

Instructional planning for TAPP really depends on how much support teachers get from their school to collaborate and have a mentor. TAPP will be ok if they work with other teachers that already know how to plan and use a variety of instructional strategies. TAPP also have problems with not planning enough instruction for a period and varying plans so that students stay interested and engaged.

During interviews, principals further noted differences in instructional planning between traditionally certified and alternatively certified teachers. Principal at H1 High School noted that

TAPP teachers have a hard time with planning. They spend more time learning how to plan and use different strategies. Majority of TAPP think they can lecture the whole time and not use different strategies. They resort back to how they were taught. We try to do peer observations to show them different methods of how to deliver the same content. It's a stretch for them to plan different types of delivery.

The M3 Middle School principal further noted that in the area of instructional planning she could see a big difference in this area:

Teachers that have gone through the traditional teacher certification process know more about the process of developing a unit. They know to have alternate plans to get a concept if the students don't get it the first time and they plan for this. They also know a little more about planning for a particular time span and what concepts are more important to cover than others.

Summary of Findings for Instructional Planning

Principals reported significant differences of instructional planning of TAPP and traditionally certified teachers, particularly in the area of long range planning and providing assessments to measure student growth. The least difference in instructional planning between traditionally certified and alternatively certified was with the involvement of the community and its resources in planning. Principal interviews noted a consistent concern with instructional planning, but added that over time most TAPP

teachers learn to effectively plan for instruction by collaborating with experienced teachers. Principals also added that TAPP teachers typically do not use a variety of instructional strategies to increase student engagement as compared to traditionally trained teachers.

Content Knowledge

The six principals that were interviewed were asked to rate traditionally certified teachers and alternatively certified teachers in regards to content knowledge. Two main themes were prevalent in the principals' responses to the content knowledge prompt. First, all six principals stated that TAPP teachers are equal to traditionally certified teachers in regards to content knowledge. One principal stated that TAPP teachers have more content knowledge than traditionally certified teachers. Principals stated that TAPP teachers tend to have college courses that prepare them for the content knowledge needed for teaching K-12. The second theme from the principals' interviews regarding content knowledge was that TAPP teachers knew the content, but often struggle with the delivery of the content. Three of the six principals interviewed stated that TAPP do not always understand how to take a difficult concept and teach it on a level that students understand.

Principals were surveyed using one question that correlated to content knowledge. Descriptive statistics are reported in Table 19. The significance levels from the t-test of each descriptor are listed in Appendix H. Principals rated traditionally trained teachers higher than alternatively certified teachers. The mean for TAPP teachers was 3.10 and the traditional teacher mean was 3.37.

Although principals rated traditionally trained higher in content knowledge than TAPP teachers on the survey, principal interviews provided a different perspective.

Principals that were interviewed had a positive experience with TAPP teachers in regards to their content knowledge. In response to interview question number 2, the principal at H2 High School stated the following:

To tell you the truth I think TAPP have more content knowledge because they come from math only programs rather than math education programs. Chemistry is another example. I have a TAPPer who decided to not go the medical school route and has taken advanced science classes. She knows her content. She is tech savvy and science savvy. She has been amazing.

The principal at H4 High School concurred that alternatively certified teachers' content knowledge is the same and sometimes superior to traditionally certified teachers. He stated that he would

rate the content knowledge of TAPP teachers as strong as or better than traditionally certified teachers. Most of our TAPP teachers had strong backgrounds in engineering or science and they took higher level content courses in college, so their content knowledge is strong.

The principal at E3 Elementary also noted high remarks for alternatively certified teachers' content knowledge. She stated that content knowledge "is their greatest strength in my opinion. And with the TAPP teachers ability to have been in the real world they can relate to how the students will need to use the content in the future." The principal at E2 Elementary echoed the same sentiment that "TAPP teachers sometimes have more content knowledge than traditionally certified teachers. They have the advantage of real-life experience that gave them the opportunity to apply their content knowledge."

Two principals also agreed that alternatively certified teachers' content knowledge is comparable with traditionally certified, but have concerns with delivery of the content.

The principal at H1 High School stated:

My personal experience has been pretty good with TAPP. They know their content, but have trouble with delivery. Content is not necessarily the problem, but trying to get content to level of students is a major struggle. For example, a teacher may have a huge knowledge of physics, but can't believe they have to teach students how to input a physics problem into a calculator. They have higher expectations than a traditional teacher.

The principal at M3 Middle School concurred that the content knowledge of traditionally certified and alternatively certified "is close, but they may just not know how to express it in different ways."

Table 19

Content Knowledge Comparison between TAPP and Traditionally Certified

Survey Questions Related to Content Knowledge	TAPP Mean (SD) n=30	Traditional Mean (SD) n=30
1. Exhibits mastery of instructional content for grade level.	3.10 (0.49)	3.37 (0.40)
All	2.96 (0.55)	3.36 (0.49)

Elementary principals perceive the largest gap between TAPP and traditionally certified teachers' content knowledge; however, high school principals perceive the smallest gap between TAPP and traditionally certified teachers' content knowledge. In Table 20, the difference between the means of elementary principals' was 0.67 while in the difference between the means of high school principals was 0.26 as shown in Table 22.

Table 20

Content Knowledge Comparison between Elementary TAPP and Traditionally Certified

Survey Questions Related to Content Knowledge	TAPP Mean (SD) n=30	Traditional Mean (SD) n=30
1. Exhibits mastery of instructional content for grade level.	2.83 (0.75)	3.50 (0.55)

Table 21

Content Knowledge Comparison between Middle School TAPP and Traditional

Survey Questions Related to Content Knowledge	TAPP Mean (SD) n=30	Traditional Mean (SD) n=30
1. Exhibits mastery of instructional content for grade level.	2.89 (0.33)	3.33 (0.50)

Table 22

Content Knowledge Comparison between High School TAPP and Traditionally Certified

Survey Questions Related to Content Knowledge	TAPP Mean (SD) n=30	Traditional Mean (SD) n=30
1. Exhibits mastery of instructional content for grade level.	3.07 (0.59)	3.33 (0.49)

Summary of Finding for Content Knowledge

During interviews, principals rated traditionally certified teachers and TAPP teachers equal in regards to content knowledge. However, the mean for the survey question for traditionally trained teachers was higher than the mean for TAPP teachers. The difference between the means was small.

Comparison of Three Constructs

An overall comparison of means between the three constructs was reported in Table 23. The mean of all questions related to each construct were compared to the means of the other constructs. Among all three constructs, traditionally certified teachers rated higher than TAPP teachers. The largest difference in means between traditionally certified and alternatively certified is classroom management. The classroom management mean for TAPP is 2.88 and the classroom management mean for traditionally certified is 3.17. The smallest difference between the means of TAPP and traditionally certified is content knowledge. The mean for TAPP is 2.96 and the mean for traditionally certified is 3.36.

Table 23

Comparison between TAPP and Traditionally Certified for All Three Constructs

Constructs	TAPP Mean (SD) n=30	Traditional Mean (SD) n=30
1. Classroom Management	2.88 (0.37)	3.17 (0.33)
2. Instructional Planning	2.70 (0.42)	3.04 (0.42)
3. Content Knowledge	2.96 (0.55)	3.36 (0.49)

To determine the correlation and significance of the correlation between the constructs, a Pearson Correlation was conducted. Results of the correlation are shown in Table 24. There was significant correlation between all three constructs. However, the strongest correlation was between classroom management and instructional planning at 0.768. The principal at H4 High School noted the correlation between classroom management and instructional planning. The principal stated that TAPP teachers “don’t realize the value of tapping into the student’s prior knowledge and experiences which, in turn, makes the content more relevant. Doing all of this usually helps keep the kids on task.” The principal at E2 Elementary School also noted a relationship between instructional planning and classroom management. She stated that “TAPP also have problems with not planning enough instruction for a period. They also struggle with

varying plans so that students stay interested and engaged.” Although still significant, the least amount of correlation occurred between classroom management and content knowledge.

Table 24

Pearson Correlation Matrix between Classroom Management, Instructional Planning and Content Knowledge

	Instructional Planning	Content Knowledge	Classroom Management
Instructional Planning	1.00	.472**	.768**
Content Knowledge	.472**	1.00	.422**
Classroom Management	.768**	.422**	1.00

**p < 0.01

To determine the interaction between the three constructs, an ANOVA was conducted. The results of the ANOVA are shown in Table 25. The interaction between the three factors yielded a statistically significant F ratio between groups of all three constructs. Classroom management received the highest F ratio value at 10.209 which indicates a significant interaction between classroom management and the other two constructs. The F ratio for instructional planning was 9.714 and the F ratio for content knowledge was 8.736.

Table 25

ANOVA Table: Comparison of Classroom Management, Instructional Planning, Content Knowledge,

		Sum of Squares	df	Mean Square	F	Sig.
PLANNING	Between Groups	1.734	1	1.734	9.714	0.003
	Within Groups	10.353	60	0.179		
	Total	12.087	60			
KNOWLEDGE	Between Groups	2.400	1	2.400	8.736	0.005
	Within Groups	15.933	60	0.275		
	Total	18.333	60			
MANAGEMENT	Between Groups	1.279	1	1.279	10.209	0.002
	Within Groups	7.266	58	0.125		
	Total	8.545	59			

Summary of Findings for Construct Comparison

Based on the principal surveys, TAPP teachers and traditionally certified teachers are most different in regards to classroom management. Traditionally trained teachers were rated higher than TAPP teachers in classroom management. However, the survey data reports that traditionally certified teachers and TAPP teachers are less different in regards to content knowledge. Generally, principal interviews also support the outcomes of the survey results. Furthermore, principals agreed that TAPP teachers are equal and sometimes superior to traditionally certified teachers in regards to content knowledge

because of the rigor of college courses taken for their original degree. There was a significant correlation and interaction between all three constructs.

Summary

The results of the survey demonstrated that principals rated traditionally trained teachers higher than TAPP teachers in the majority of classroom management descriptors. Furthermore, traditionally certified teachers had higher means than TAPP teachers on the majority of comparative statements when principals' ratings were divided by school level. Principals also reported that alternatively certified teachers are not as prepared as traditionally trained teachers in maintaining a classroom environment conducive to learning, planning a variety of resources for a unit and addressing classroom discipline. Principal interviews also reported that classroom management, particularly student behavior, is a concern with TAPP teachers. Principals reported the training included in traditional teacher preparation provide more opportunities to improve their skills with classroom management during student teaching opportunities and teacher observations.

Principals rated traditionally trained teachers and TAPP teachers similarly on implementing the district curriculum. However, elementary and middle school principals rated alternatively certified teachers slightly higher on setting high expectations for students, while high school principals perceived minimal difference. Principals also reported significant differences of instructional planning of TAPP and traditionally certified teachers, particularly in the area of long range planning. Analyzing the data by school level revealed that principals also had concerns with TAPP teachers being able to plan appropriate assessments to monitor student progress. Principal interviews noted a

consistent concern with instructional planning, but added that over time, most TAPP teachers learn to effectively plan for instruction.

On the survey, principals rated traditionally certified higher than alternatively certified teachers in regards to content knowledge. However, principals that were interviewed collectively agreed that traditionally and alternatively certified teachers are equally competent in content knowledge. In some cases, principals stated that alternatively certified teachers had a higher level of content knowledge due to the college courses required for their original career.

There was a relationship between classroom management and instructional planning. Content knowledge had a significant, but minimal impact on classroom management and instructional planning. Holistically, classroom management was the construct that TAPP teachers struggled with the most; however, further analysis showed that principals perceived that their inexperience with instructional planning affects the TAPP teachers' ability to manage the classroom environment

CHAPTER 5

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Summary

The purpose of this study was to determine principals' perceptions of traditionally certified teachers and Teacher Academy for Preparation and Pedagogy (TAPP) teachers in three areas: classroom management, instructional planning and content knowledge. Conclusions were based on the responses of a 24 item comparative survey received from 30 principals in an East Georgia RESA district that employed a first year TAPP teacher. Conclusions were also based on six principal interviews conducted by the researcher. The responses to the survey were analyzed through quantitative procedures and responses to the interview questions were analyzed through qualitative procedures to determine the principals' perceptions of traditionally certified teachers and TAPP teachers.

In February 2010, an electronic survey was sent to 40 principals that employed one or more first year TAPP teachers. Surveys were sent to 12 elementary principals, 11 middle school principals and 17 high school principals. Thirty principals returned the survey yielding a 75% return rate. The sample of 30 principals was demographically similar to the original population of 40 principals. Also, six principals were randomly selected from the respondents to participate in interviews to provide further explanation of the survey data. Three high school principals, one middle school and two elementary school principals were selected for interviews. The instrument used for the survey was adapted from Dr. Michael Nusbaum's (2002) Evaluation of Alternatively and Traditionally Certified Teachers. The survey was adapted to collect data only on three constructs. The four Likert scale items were used to create a forced choice.

The data collected from surveys was entered into Statistical Package for Social Science (SPSS 10.0) for a descriptive analysis. Data for traditionally certified teachers was compared to data for alternatively certified teachers among all three constructs. Also, trends among principals' interviews were examined to provide further insight into the descriptive analysis data. This final chapter presents conclusions and a discussion of how the findings relate to existing literature and to the educational community. Recommendations for further research were also provided.

Analysis of Research Findings

The analysis of survey data and principal interviews indicated there was a perception among principals that differences exist between traditionally certified teachers and alternatively certified teachers in regards to classroom management, instructional planning and content knowledge. Data derived from survey results and interviews support the perceived greater effectiveness of traditional certified teachers as compared to TAPP teachers. However, only 30 principals participated in the study, so the sample size should be considered when reviewing the outcomes.

There were 24 comparative statements to which principals responded to determine their perceptions of traditionally certified teachers and TAPP teachers. Of the 24 statements, 17 statements showed significant differences between the two types of certified teachers. The survey results indicated that traditionally certified teachers are superior to TAPP in regards to content knowledge, instructional planning and classroom management. Of the 24 statements on the survey, the traditionally certified teachers mean for each statement was higher than the mean for TAPP teachers on 23 statements.

The mean for TAPP teachers was higher than traditionally certified for the comparative statement regarding teachers conveying a belief in high expectations. Principals noted that TAPP teachers have higher expectations for students than traditionally trained teachers. One principal concurred that alternatively certified teachers often have higher standards because they are coming from the business world and have not been exposed to student expectations like traditionally trained teachers.

Principal interviews also revealed differences among traditionally certified teachers and TAPP certified teachers. Overall, all six principals reported that TAPP teachers' content knowledge was equal and occasionally superior to traditionally trained teachers. Five of six principals also noted that classroom management was the weakest area among the three constructs for TAPP teachers as compared to traditionally certified teachers. Finally, principals' perceptions about TAPP teachers' ability to instructionally plan were mixed. Two of the six principals rated TAPP and traditionally equally competent in instructional planning. However, the two principals reported alternatively certified initially struggled with instructional planning, but quickly learned the skill from fellow colleagues that were traditionally trained. The other four principals reported that traditionally certified teachers were superior to TAPP teachers in regards to instructional planning.

Comparison of Constructs

The data analysis also determined significant differences between traditionally certified teachers and TAPP teachers in regards to the three constructs: classroom management, instructional planning and content knowledge. Principals perceived that traditionally certified teachers are better prepared in all three constructs. The largest

difference between means of traditionally certified teachers and TAPP teachers occurred in the classroom management construct. Principals perceived that traditionally certified teachers are better equipped to manage the classroom particularly in regards to maintaining a classroom environment conducive to learning. After classroom management, principals perceived that there was a significant difference between traditionally certified teachers and TAPP teachers in regards to instructional planning and lastly content knowledge. There was significant correlation between instructional planning and classroom management. Principals agreed that effective instructional planning engages students and in turn prevents classroom disruptions and enhances the learning environment.

Classroom Management

Classroom management was the construct that principals perceived the most significant difference between traditionally certified teachers and TAPP teachers. Specifically, the survey contained 18 comparative statements regarding classroom management. Principals rated traditionally certified teachers significantly higher than TAPP teachers on 17 of those statements. Maintaining a classroom environment conducive to learning was the comparative statement that principals noted the largest difference between traditionally certified teachers and TAPP teachers. The second highest significant difference among traditionally certified teachers and TAPP teachers within the classroom management construct was incorporating a variety of resources into units of study. Principals also rated a traditionally certified teacher significantly higher on effectively addressing classroom discipline. Principals linked TAPP teachers' lack of resources in units to their inferior classroom environment. During the interview with the

D4 High School principal, he explained that alternatively certified teachers often lack the initiative to incorporate a variety of learning activities into lesson plans which often leads to classroom management issues. Principals explained that the reasons TAPP teachers had more discipline issues were because students became disengaged and disrupted the classroom environment when the instruction was mundane. Furthermore, the TAPP teachers often depend too much on lecture and do not use varied instructional strategies to engage students. Principals rated traditionally certified teachers higher on presentation of concepts than TAPP teachers. The presentation of concepts was linked to the incorporation of a variety of resources into units of study. The results of the comparative statements regarding content delivery demonstrated that principals recognized that TAPP teachers are less prepared than traditionally trained teachers to engage students with varied instructional strategies which lead to classroom management issues.

The relationship between management of classroom discipline and delivery of content was apparent from the data analysis. Two comparative statements in the classroom management construct were related to managing classroom discipline, and two comparative statements were related to delivery of content. All four comparative statements as a whole were rated by the principals as having the greatest difference between traditionally certified teachers and TAPP teachers as compared to the remaining 14 comparative statements in the classroom management construct. The remaining 14 comparative statements demonstrated mostly significant, but less difference between traditionally certified teachers and TAPP teachers. It was interesting to note that the remaining 14 comparative statements did not relate to classroom discipline or delivery of content. The data demonstrated that principals' overall concerns with alternatively

certified teachers and classroom management were directly linked to delivery of content and management of classroom discipline.

There were some comparative statements that principals noted less difference between traditionally certified teachers and TAPP teachers; however, the differences were insignificant. The comparative statements that principals reported less difference between traditionally certified teachers and TAPP teachers were (1) assigns appropriate amounts of practice and homework (2) implements district/state curriculum objectives (3) conveys a belief in high expectations (4) handles educational situation with poise and good judgment. During interviews, principals did not make reference to any of the comparative statements that were reported as less different between traditionally certified teachers and TAPP teachers.

Instructional Planning

Overall, principals noted significant differences between traditionally certified teachers and TAPP teachers in regards to instructional planning. Data derived from this study supports the perception that traditionally certified teachers are better prepared for instructional planning than TAPP teachers. The results from the principals' survey showed a significant difference between traditionally certified teachers and TAPP teachers on four of the five comparative statements related to instructional planning. Traditionally certified teachers had a higher mean than traditionally on all five of the comparative statements which demonstrates the principals' confidence in traditionally certified teachers' instructional planning.

Among the five comparative statements, the largest difference between traditionally certified teachers and TAPP teachers was evidence of long range planning.

The concern over TAPP teachers' planning skills was also evident in the principal interviews. Four of the six principals interviewed expressed concern about TAPP teachers' ability to instructionally plan. Principals also noted that TAPP teachers do not plan a variety of instructional strategies to engage students. However, the majority of principals further explained that the success of TAPP teachers with instructional planning was dependent on the school's framework for common planning. Principals stated that TAPP teachers' initially struggle with instructional planning, but eventually are successful after common planning with traditionally certified teachers in the same grade level or department. Two of the six principals reported positive responses in regards to TAPP teachers planning competency. However, they added that TAPP teachers are initially weak in instructional planning, but quickly learn from colleagues within their department or grade level that were traditionally certified.

Content Knowledge

All 6 principals that were interviewed overwhelmingly reported their satisfaction with TAPP teachers' content knowledge. Principals noted that TAPP teachers often have as much content knowledge, and in some case more, than traditionally certified. Principals also stated that TAPP teachers' content knowledge is due to the rigor of classes required for their undergraduate and graduate degrees. Furthermore, they reported the TAPP teachers' strong content knowledge is also due to their work experience before entering the teaching profession because the TAPP teacher used the content knowledge in real-world applications.

Survey results differ with principal interview responses in regards to content knowledge. There was a significant difference between principals' perceptions of

traditionally certified and TAPP teachers in regards to mastery of instructional content for grade level assigned. The mean for traditionally certified teachers was higher than the mean for TAPP indicating principals' confidence in traditionally certified teachers' content knowledge.

Discussion of Research Findings

The results of this study indicated there was a difference between principals' perceptions of traditionally certified teachers and TAPP teachers. Additionally, the results indicated that traditionally certified teachers are perceived to be superior to TAPP teachers in regards to instructional planning and classroom management. The results are mixed regarding principals' perceptions of TAPP and traditionally certified teachers in regards to content knowledge.

Overall Comparison of Traditionally Certified and Alternatively Certified

The findings of this study were in direct contradiction to recent meta-analysis studies that compared traditionally and alternatively certified teachers. Qu and Becker (2003) conducted a meta-analysis of studies from 1960-2003 and concluded that traditionally and alternatively certified teachers perform equivalently. However, Qu and Becker also noted that teachers with traditional certificates tended to outperform teachers with alternative certificates in some states, but not in others. Cochran-Smith and Zeichner (2005) also conducted a meta-analysis of studies between 1986 and 2002 and confirmed that very little difference between alternatively and traditionally certified teachers exist. Suell and Piotrowski (2006) studied alternatively certified teachers and traditionally certified teachers in classrooms and also concluded that there were no significant differences between the two teacher groups. However, all the studies

examined a variety of teachers from alternatively certified programs from across the United States which made it difficult to ascertain the effectiveness of specific alternative preparation programs. The definition of alternatively certified teachers also differs among the studies which make it difficult to make conclusions on specific alternative preparation programs. The results of this study demonstrated significant differences between principals' perception of traditionally certified and TAPP. Principals favored traditionally trained teachers which was different from the results of the meta-analyses. However, the results of this study were based solely on a Georgia's TAPP program and not a variety of alternative preparation programs with varying qualifications and definitions. This study focused on one alternative preparation program, TAPP, which makes the conclusions from the study specific to the program and should not be used to make generalizations about other alternative preparation programs.

Many studies comparing traditionally and alternatively certified teachers only examined student achievement. The studies that compared student achievement of traditionally and alternatively certified teachers found no significant differences. The United States Department of Education released a study in 2009 that looked at student achievement of students taught by teachers from 165 alternative certification programs across the country and students of traditionally certified teachers and concluded that the differences between the two groups are not significant. While student achievement was outside the parameters of this study, research supported the notion that the constructs of this study (classroom management, instructional planning and content knowledge) can impact student achievement. This study noted that principals' perceptions of traditionally

trained teachers are significantly different from TAPP in the three constructs that can impact student achievement.

Classroom Management

The results of this study demonstrated a significant difference between principals' perceptions of traditionally certified and TAPP teachers in regards to classroom management. Principals clearly reported that traditionally trained are more successful with classroom management than TAPP teachers. The results of this study concurred with the conclusions from Sokal, Smith and Mowat (2003) who found that teachers in alternative preparation programs do not follow the same trajectory of classroom management attitudes as teachers in traditional programs.

Classroom management was the construct with the most significant difference among principals' perceptions in this study. Principals were concerned with TAPP teachers' ability to manage classroom discipline issues and maintain a classroom environment that is conducive to learning. Nakai and Turley (2003) agreed that teachers who completed the non-traditional certification in California would benefit from more training in classroom management. Furthermore, Nakai and Turley noted that alternatively certified skipped traditional student teaching and began as teachers of record straight from graduate school which negatively impacted their classroom management skills. Principals that were interviewed concurred that classroom management is often learned during student teaching and classroom observations which are a major component of traditional teacher training programs. However, the TAPP program does not provide TAPP teachers the opportunities to student teach which puts them at a disadvantage when learning to manage the classroom environment.

Instructional Planning

Principal surveys and the majority of principals' interviews concurred that TAPP teachers were initially inferior to traditionally prepared teachers in regards to instructional planning. More specifically, principals were primarily concerned with TAPP teachers' ability to make long-range plans. Principals were also concerned with TAPP teachers' use of curriculum guides; planning for individual student differences and planning for appropriate assessments to determine student progress. However, principals note that alternatively certified teachers eventually learned to effectively plan for instruction once they participated in common planning or were paired with a mentor teacher that was traditionally certified. If the school did not have a framework for common planning or mentoring, principals anticipated that TAPP teachers would continue to struggle with instructional planning.

The majority of research on instructional planning focused on the effectiveness of pedagogy training in regards to student achievement. Minimal research existed that compared traditionally certified and alternatively certified teachers in regards to instructional planning. However, the current research played a significant role in including instructional planning as a construct within the study. Research on the importance of pedagogy in instructional planning is mixed, but the majority of the research emphasizes the importance of instructional planning and pedagogy. Wenglinsky (2002) supported the inclusion of instructional planning in this study that compared TAPP and traditionally certified teachers. Wenglinsky's research concluded that teachers' use of specific classroom practices such as small group instruction and hands on learning had statistically significant relationship on student learning. He further asserted

that the greatest influence on students learning comes from classroom practices and the professional development that supports them.

Content Knowledge

This study has a mixed outcome regarding principals' perceptions of traditionally certified teachers and TAPP teachers in regards to content knowledge. During interviews, principals clearly communicated their confidence in TAPP teachers' level of content knowledge. Principals were confident that TAPP teachers' undergraduate programs gave them the content knowledge necessary to be successful in the classroom setting. A couple of principals were so confident in TAPP teachers' content knowledge that some principals reported TAPP teachers superior to traditionally certified teachers. However, data from principals' surveys indicated that principals perceived traditionally trained teachers more favorably as compared to TAPP in regards to content knowledge. Principals may have misinterpreted the question because the survey comparative statement referred to mastery of instructional content and the interview question specifically asked about content knowledge.

There is minimal research on comparisons of traditionally certified and TAPP teachers' content knowledge. However, research does indicate the importance of including content knowledge in the current study due to its impact on student achievement. Wilson, Floden and Ferrini-Mundy (2002) reported that subject matter preparation was positively connected to higher student achievement and higher ratings on teacher performance evaluations. Darling-Hammond (2000) agreed that studying content knowledge was an important factor in teaching effectiveness.

Conclusions

The researcher has concluded from this study that:

1. Principals' primary concern with TAPP teachers was their ability to manage the classroom environment, particularly maintaining a classroom environment conducive to learning, effectively addressing classroom discipline, and initiating a variety of resources into units.
2. During interviews, principals credited the student teaching experience that traditionally certified teachers received during their training for their effective classroom management skills.
3. Principals perceived that TAPP teachers initially struggled with instructional planning that incorporated a variety of instructional strategies, but eventually learned to plan from traditionally certified colleagues during common planning and mentorships.
4. Principals' perceived that TAPP teachers' lack of instructional planning skills affected a TAPP teachers' ability to manage the classroom environment. TAPP teachers tended to make instructional plans that are not engaging which lead to student misbehavior and classroom disruptions.
5. Principals perceive that that TAPP teachers and traditionally certified teachers were equally competent in regards to content knowledge.
6. Principals perceived that TAPP teachers have higher expectations of students than traditionally certified teachers particularly in middle and elementary schools

Implications

This study has offered insight and should be of interest to the Georgia TAPP program. Results from the study should provide the TAPP program with an assessment of the alternatively certified teachers being trained in the program based on principals' perceptions. Georgia TAPP officials will be able to use the results of this study to validate the content knowledge of TAPP teachers. However, the Georgia TAPP program will be able to use the results of the study to consider adding a student teaching component to the program to effectively address classroom management issues perceived by principals. Additionally, the study also points out the need for further training for TAPP teachers in regards to instructional planning.

The study will also be of interest to colleges and universities that provide teacher training. Principals' positive perceptions of traditionally certified teachers' performance in the classroom could validate teacher education in regards to instructional planning, content knowledge and classroom management. However, the study also provides colleges and universities an issue that can be addressed in teacher education in regards to setting high expectations for students.

At the state level, the Georgia Department of Education, Professional Standards Commission, and the University System of Georgia will benefit from a comprehensive study comparing principals' perceptions of traditionally certified teachers and alternatively certified teachers in the three domains of teacher preparation. The Department of Education promotes both alternative and traditional routes to teacher certification. Results of this study could further guide the Department of Education's support of both the traditional and alternative certification programs.

Principals should find the results of this study especially significant when hiring teachers and providing support to new teachers. Currently, the teacher pool in Georgia consists of teachers from traditional certification programs and teachers from the TAPP program. Principals are charged with hiring the best teachers, but it is difficult to determine teacher effectiveness especially when comparing teacher certification. The results of the study should provide principals with an assessment of traditionally certified and TAPP teachers based on principals' perceptions. The study also identifies areas related to classroom management and instructional planning that principals may need to address when interviewing TAPP teachers. The study also provides areas of support that both TAPP and traditionally certified teachers may need during their first year of teaching.

Future teachers in Georgia would also find the results of this study particularly interesting when determining whether to pursue certification through a college of education or through the TAPP program. Future teachers will be able to choose which certification program better prepares teachers based on principals' perceptions.

Finally, the teacher pool has become diverse when comparing teacher preparation. The teacher pool consists of teachers that are traditionally certified and alternatively certified, making it difficult for the researcher to choose the teacher that is going to positively impact student achievement. The results of the study are significant to the research because they would simplify the selection of potential teachers and identify specific areas of support that principals need to provide during the first years of teaching.

Recommendations

1. Future research should focus on comparing student achievement of students taught by traditionally certified teachers to students taught by TAPP teachers.
2. Future research should focus on individual teacher preparation programs to determine effectiveness of programs rather than making generalizations about many alternative preparation programs.
3. Future studies should survey Georgia principals within each RESA district to determine differences between each TAPP program.
4. Future research should focus on the relationship between classroom management and content knowledge of TAPP teachers.
5. Future research should increase the size of the sample of principals to increase the validity of the outcomes.
6. Future research should compare principals' perceptions of traditionally certified teachers and alternatively certified teachers from schools that have met Adequate Yearly Progress and schools that have not met Adequate Yearly Progress.

Concluding Thoughts

Eight years ago, this researcher transitioned from being a high school science teacher to being a high school assistant principal for curriculum and instruction. As an assistant principal, this researcher played a significant role in interviewing prospective teachers that were from traditional programs and TAPP. Unfortunately, interviews, references and portfolios did not always provide enough information to discern if applicants from traditionally certified or TAPP applicants would be more effective in the classroom. Additionally, research comparing traditionally certified teachers and TAPP

teachers did not exist at that time. As a school leader, this researcher was continually perplexed when selecting the best teachers from a pool of applicants that contained both traditionally trained teachers and TAPP teachers.

Research has repeatedly shown that teacher quality is the number one factor that can impact student achievement. Hiring effective teachers is crucial to student learning and creating successful schools. The results of this study will ultimately assist school leaders in making informed decisions when determining whether to hire traditionally certified teachers or TAPP teachers and the type of support to provide newly hired teachers.

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APPENDICES

Appendix A

Institutional Review Board (IRB) Approval

Georgia Southern University Office of Research Services & Sponsored Programs Institutional Review Board (IRB)		
Phone: 912-478-0843		Veazey Hall 2021
		P.O. Box 8005
Fax: 912-478-0719	IRB@GeorgiaSouthern.edu	Statesboro, GA 30460

To: Kevin B. Campbell
716 Low Meadow Drive
Evans, GA 30809

CC: Charles E. Patterson
Associate Vice President for Research

From: Office of Research Services and Sponsored Programs
Administrative Support Office for Research Oversight Committees
(IACUC/IBC/IRB)

Date: February 16, 2010

Subject: Status of Application for Approval to Utilize Human Subjects in Research

After a review of your proposed research project numbered H10186 and titled "Principals' Perceptions of Teacher Academy for Preparation and Pedagogy Teachers and Traditionally Certified Teachers", it appears that (1) the research subjects are at minimal risk, (2) appropriate safeguards are planned, and (3) the research activities involve only procedures which are allowable. You are authorized to enroll up to 40 subjects.

Therefore, as authorized in the Federal Policy for the Protection of Human Subjects, I am pleased to notify you that the Institutional Review Board has approved your proposed research.

This IRB approval is in effect for one year from the date of this letter. If at the end of that time, there have been no changes to the research protocol; you may request an extension of the approval period for an additional year. In the interim, please provide the IRB with any information concerning any significant adverse event, whether or not it is believed to be related to the study, within five working days of the event. In addition, if a change or modification of the approved methodology becomes necessary, you must notify the IRB Coordinator prior to initiating any such changes or modifications. At that time, an amended application for IRB approval may be submitted. Upon completion of your data collection, you are required to complete a *Research Study Termination* form to notify the IRB Coordinator, so your file may be closed.

Sincerely,

Eleanor Haynes
Compliance Officer

Appendix B

Demographic Survey

1. What is your gender? female male

2. What best describes your ethnic background?
 Caucasian
 African American
 Hispanic
 Native American
 Asian or Pacific Islander
 Other

3. Including this year, you have how many years of experience?
 fewer than 5 years 5-9 years 10-19 years 20-29 years
 30 years or more

4. Approximately, how many alternatively certified teachers do you currently have on your staff?
 1 2 3 4 5 6

Appendix C

Principal Survey

Evaluation of TAPP Teachers and Traditionally Certified Teachers

Directions: Please mark the most appropriate abbreviation on the following scale to indicate your agreement with all items. You will mark one answer for TAPP teachers and one column for traditionally certified teachers for a total of two marks per question.





Strongly Disagree	Effectiveness Measures				Strongly Agree	TAPP Teachers				Traditionally Certified Teachers			
	1	2	3	4		1	2	3	4	1	2	3	4
This teacher...													
1.	exhibits mastery of instructional content for grade level.				1	2	3	4	1	2	3	4	
2.	uses decision making processes which allow for quality decisions.				1	2	3	4	1	2	3	4	
3.	utilizes current curriculum guides/competency lists.				1	2	3	4	1	2	3	4	
4.	shows evidence of long-range planning.				1	2	3	4	1	2	3	4	
5.	plans for individual instructional differences among students.				1	2	3	4	1	2	3	4	
6.	plans appropriate assessment strategies for student progress.				1	2	3	4	1	2	3	4	
7.	utilizes instructional assistants and resources appropriately and effectively.				1	2	3	4	1	2	3	4	
8.	maintains classroom environment conducive to learning.				1	2	3	4	1	2	3	4	
9.	implements district and state curriculum objectives.				1	2	3	4	1	2	3	4	
10.	focuses students to tasks at the beginning of the lesson and maintains the focus.				1	2	3	4	1	2	3	4	
11.	communicates instructional objectives, reviews previous learning, and makes lessons relevant				1	2	3	4	1	2	3	4	
12.	presents concepts and skills in a clear, coherent, and logical manner using correct and appropriate techniques and professional practices.				1	2	3	4	1	2	3	4	
13.	assigns appropriate amounts of homework and practice assignments.				1	2	3	4	1	2	3	4	
14.	plans and initiates a variety of resources into units of study.				1	2	3	4	1	2	3	4	
15.	evaluates student achievement using a variety of techniques.				1	2	3	4	1	2	3	4	
16.	modifies instruction based on the needs of challenged students.				1	2	3	4	1	2	3	4	
17.	evaluates classroom student achievement and				1	2	3	4	1	2	3	4	

	provides feedback to the student and parents.		
18.	varies instructional activities to address student-learning styles.	1 2 3 4	1 2 3 4
19.	conveys a belief in high expectations.	1 2 3 4	1 2 3 4
20.	reteaches for mastery of instructional content.	1 2 3 4	1 2 3 4
21.	handles educational situations with poise and good judgement.	1 2 3 4	1 2 3 4
22.	establishes routines, which keep students, involved in the task at hand and which prevent potential behavioral problems.	1 2 3 4	1 2 3 4
23.	includes the community and it's resources (partnerships, mentors, etc.) in their instruction.	1 2 3 4	1 2 3 4
24.	effectively addresses classroom discipline.	1 2 3 4	1 2 3 4
25.	Please list any additional comments you might have concerning your observations of TAPP teachers and traditionally certified teachers.		

Appendix D

Approval to Use Survey

Inbox > View Message

 reply
  reply all
  forward
  report misuse

From: Nusbaum, Michael (DOE)<Michael.Nusbaum@doe.virginia.gov> [Add to Address Book](#) [Block Address](#)
Sent: Wednesday, June 11, 2008 10:04:26 AM EDT
To: <bcampbell@lincoln.k12.ga.us>
Subject: RE: Permission Request

Delete Move to Folder Junk Mail Mark as Unread Flag Print View
 Close [Previous](#) [Next](#)

Absolutely. You have my permission and I wish you good luck. If I might suggest... when the survey has been verified and validated and you are ready to send, do it at a period in the school year when everyone else is not launching their surveys or whatever at the principals. You will get a much better response rate. I would suggest late January or perhaps the first week in December.

If I can be of any assistance please feel free to contact me. Good luck with your work.

Mike

From: Brian Campbell [mailto:bcampbell@lincoln.k12.ga.us]
Sent: Tuesday, June 10, 2008 10:38 PM
To: Nusbaum, Michael (DOE)
Subject: Permission Request

Dr. Nusbaum:

I am currently in a doctoral program at Georgia Southern University. I plan to survey principals across the state of Georgia to determine differences in principals' perceptions of traditionally certified teachers versus alternatively certified teachers. I have reviewed your dissertation and the survey you created to survey principals. Your survey would provide me the type of data I need to complete my study. I am requesting your permission to use the survey in my study.

Thank you for considering my request. If you have any questions, please let me know.
 Brian Campbell

Appendix E

Demographic Data of Respondents

Respondent	Demographics			
	Ethnicity	Years of Experience	Gender	# TAPP Teachers
E1 Elementary	African American	6-9	Female	1
E2 Elementary	Caucasian	10-19	Female	2
E3 Elementary	African American	6-9	Male	3
E4 Elementary	Caucasian	6-9	Female	1
E5 Elementary	African American	20 or more	Male	1
E6 Elementary	African American	6-9	Female	2
M1 Middle	Caucasian	10-19	Female	2
M2 Middle	Caucasian	6-9	Male	1
M3 Middle	African American	10-19	Female	2
M4 Middle	African American	10-19	Female	3
M5 Middle	Caucasian	20 or more	Male	1
M6 Middle	African American	10-19	Female	1
M7 Middle	African American	10-19	Female	1
M8 Middle	African American	6-9	Male	1
M9 Middle	African American	10-19	Female	1
H1 High	Caucasian	10-19	Female	4
H2 High	Caucasian	6-9	Female	2

H3 High	Caucasian	10-19	Male	1
H4 High	African American	6-9	Male	3
H5 High	African American	6-9	Male	2
H6 High	Caucasian	10-19	Female	2
H7 High	African American	6-9	Female	1
H8 High	African American	10-19	Female	1
H9 High	African American	10-19	Male	4
H10 High	African American	10-19	Male	3
H11 High	African American	10-19	Male	1
H12 High	African American	6-9	Male	2
H13 High	African American	10-19	Female	1
H14 High	African American	10-19	Male	2
H15 High	African American	10-19	Female	1

Appendix F

Classroom Management Comparison between TAPP and Traditionally Certified

Survey Questions Related to Classroom Management	TAPP Mean (SD) n=30	Traditional Mean (SD) n=30	T
2. Uses decision making processes which allow for quality decisions.	2.93 (0.45)	3.17 (0.38)	2.17*
7. Utilizes instructional assistants and resources appropriately and effectively.	3.17 (0.46)	3.33 (0.55)	1.28
8. Maintains classroom environment conducive to learning.	2.83 (0.46)	3.33 (0.55)	3.59**
9. Implements district and state curriculum objectives.	3.37 (0.56)	3.43 (0.50)	0.49
10. Focuses students to tasks at the beginning of the lesson and maintains the focus.	2.93 (0.45)	3.20 (0.41)	2.41*
11. Communicates instructional objectives, reviews previous learning, and makes lessons relevant.	3.00 (0.53)	3.21 (0.49)	1.56
12. Presents concepts and skills in a clear, coherent and logical manner using correct and appropriate techniques and professional practices.	2.83 (0.53)	3.23 (0.43)	3.21*
13. Assigns appropriate amounts of homework and practice assignments.	2.87 (0.57)	3.03 (0.41)	1.29
14. Plans and initiates a variety of resources into units of study.	2.80 (0.48)	3.27 (0.58)	3.37**

15. Evaluates student achievement using a variety of techniques.	2.70 (0.70)	3.13 (0.43)	2.88**
Table 12 (<i>continued</i>)	2.63 (0.56)	3.07 (0.58)	2.95**
16. Modifies instruction based on the needs of challenged students.			
17. Evaluates classroom student achievement and provides feedback to the student and parents.	2.83 (0.53)	3.17 (0.53)	2.43*
18. Varies instructional activities to address student learning styles.	2.57 (0.63)	2.97 (0.56)	2.62*
19. Conveys a belief in high expectations.	3.20 (0.61)	3.17 (0.46)	-.239**
20. Reteaches for mastery of instructional content.	2.80 (0.61)	3.03 (0.50)	1.61
21. Handles educational situations with poise and good judgment.	3.00 (0.59)	3.13 (0.43)	1.00
22. Establishes routines which keep students involved in the task at hand and which prevent potential behavioral problems.	2.77 (0.73)	3.13 (0.43)	2.37*
24. Effectively addresses classroom discipline.	2.60 (0.67)	3.10 (0.48)	3.31*
All	2.88 (0.37)	3.17 (0.33)	3.20**

* $p < 0.05$

** $p < 0.01$

Appendix G

Instructional Planning Comparison between TAPP and Traditionally Certified

Survey Questions Related to Instructional Planning	TAPP Mean (SD) n=30	Traditional Mean (SD) n=30	T
3. Utilizes current curriculum guides and competency lists.	3.10 (0.49)	3.37 (0.40)	2.30*
4. Shows evidence of long-range planning.	2.77 (0.53)	3.13 (0.63)	2.67**
5. Plans for individual instructional differences among students	2.67 (0.61)	3.03 (0.67)	2.23*
6. Plans appropriate assessment strategies for student progress	2.60 (0.67)	3.00 (0.69)	2.26*
23. Includes the community and its resources in their instruction.	2.40 (0.62)	2.67 (0.66)	1.61
All	2.70 (0.42)	3.04 (0.42)	3.12**

* p<0.05

**p<0.01

Appendix H

Content Knowledge Comparison between TAPP and Traditionally Certified

Survey Questions Related to Content Knowledge	TAPP Mean (SD) n=30	Traditional Mean (SD) n=30	T
1. Exhibits mastery of instructional content for grade level.	3.10 (0.49)	3.37 (0.40)	2.96**
All	2.96 (0.55)	3.36 (0.49)	2.96**

* p<0.05

**p<0.01

Appendix I

Comparison between TAPP and Traditionally Certified for All Three Constructs

Constructs	TAPP Mean (SD) n=30	Traditional Mean (SD) n=30	T	df
1. Classroom Management	2.88 (0.37)	3.17 (0.33)	3.20**	58
2. Instructional Planning	2.70 (0.42)	3.04 (0.42)	3.12**	58
3. Content Knowledge	2.96 (0.55)	3.36 (0.49)	2.96**	58

* p<0.05

**p<0.01