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A Comparison of 2009--2010 Curriculum Test Scores of Students Taught by Alternate Route and Traditional Route Teachers

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2011

Abstract

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by

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M.Ed., William Carey University, 2003

B.S., University of Southern Mississippi, 1996

Research Study Submitted in Partial Fulfillment

of the Requirements for the Degree of

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Teacher Leadership

Walden University

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Abstract

There is an increase in the popularity of alternative certification programs; however, some administrators are still reluctant to hire these graduates to teach within their schools. With the shortage of certified teachers in Mississippi, some school districts have no choice but to hire alternatively certified teachers. The purpose of this quantitative study was to determine if students taught by teachers trained in alternative teaching programs had significantly different changes in language arts scores on the Mississippi Curriculum Test 2nd edition, as compared to fellow students who were taught by teachers trained in traditional teaching programs. Scores from the 2008-2009 Mississippi Curriculum Test 2nd edition were used for base line data. Scores from the 2009-2010 Mississippi Curriculum Test 2nd edition were used to determine what degree of growth had taken place. The results were analyzed by using the educational software Statistical Package for the Social Sciences (SPSS) to conduct independent *t* tests. Data are presented using descriptive statistics. Results of the *t* tests confirmed that students taught by both types of teachers had some degree of success. Seventh grade students who were taught by traditional route teachers showed the greatest amount of growth difference. With the continuing debate over teaching certification programs, studies such as this can help create social change by providing statistical evidence of the effectiveness shown by teachers certified through both programs. School officials can use these results to help in making hiring decisions of potential teacher candidates. The end result is to provide students with the best possible teacher regardless of certification type.

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Dedication

This dissertation is dedicated to all my family and friends who have stood behind me and supported me throughout this process. I would first like to thank God for providing me with the ability to undertake and complete this process. To all my family and friends that provided support and encouragement, I say thank you. I owe you all. Lastly, this is dedicated to my late grandmother who always told me at some point I would become a professor. Granny, we made it! Again, thank you all for your prayers, support, and believing.

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Table of Contents

List of Tables iii

Chapter 1: Introduction to the Study.....1

Statement of the Problem…….4
Nature of the Study……..5
Research Questions……..6
Purpose of Study……..8
Conceptual Framework……9
Definition of Terms……12
Assumptions……...13
Limitations…….14
Scope and Delimitations……14
Significance of Study…….14
Transition Statement……..15

Chapter 2: Literature Review.....17

Introduction……17
No Child Left Behind Act of 2001……17
Highly Qualified……20
Effective Teachers…….21
Mississippi's Accountability System…….22
Mississippi Curriculum Test…….24
Alternate Route Certification……26
Standardized Testing…….32
Comparative Studies……..35
Summary……36

Chapter 3: Research Method.....38

Introduction……38
Research Design…….39
Setting and Sample……40
Instrumentation and Materials……...41
Data Collection and Analysis…….43
Role of the Researcher……...43
Measures for the Protection of Participants' Rights……...44
Transition Statement……..44

Chapter 4: Results 46

Introduction 46
Sample Information 47
Data Analysis Procedures 47
Descriptive Analysis 48
Seventh Grade Analysis 48
Eighth Grade Analysis 50
Statistical Analysis 52
Seventh Grade Analysis 53
Eighth Grade Analysis 54
Summary 56

Chapter 5: Discussion, Conclusions, and Recommendations 59

Introduction 59
Interpretation of Findings 61
Implications for Social Change 64
Recommendations for Action 64
Recommendations for Further Study 65
Concluding Statement 66

References 68

Appendix A: IRB Approval Letter 76

Appendix B: IRB Approval Letter 77

Appendix C: Data Request Letter 78

Appendix D: Data Use Agreement 79

Curriculum Vitae 82

List of Tables

Table 1 *Performance Levels of Seventh and Eighth Grade Students on MCT2* 42

Table 2 *MCT2 Levels and Range Scores* 42

Table 3 *Student Sample by Grade* 47

Table 4 *Seventh Grade Group Statistics* 49

Table 5 *Seventh Grade Descriptive Statistics of Scores of Students Taught by Alternate Route and Traditional Route Teachers* 49

Table 6 *Seventh Grade Descriptive Statistics of Students Taught by Alternate Route Teachers* 50

Table 7 *Seventh Grade Descriptives Statistics of Students Taught by Traditional Route Teachers*

50

Table 8 *Eighth Grade Group Statistics* 51

Table 9 *Eighth Grade Descriptive Statistics of Scores Taught by Alternate Route and Traditional Route Teachers* 51

Table 10 *Eighth Grade Descriptive Statistics of Students Taught by Alternate Route Teachers* 52

Table 11 *Eighth Grade Descriptive Statistics of Students Taught by Traditional Route Teachers* 52

Table 12 Seventh Grade *t* test Results……...55

Table 13 Eighth Grade *t* test Results……..57

Chapter 1: Introduction to the Study

Background

In the educational setting, the quality of teachers who have been trained and placed in classrooms is a major concern for parents and school officials. Parents want high quality teachers for their children. The No Child Left Behind Act of 2001 requires that all teachers be "highly qualified" in order to teach. To be deemed "highly qualified" a teacher must have at least a bachelor's degree, hold a regular teacher's license from a state, and have demonstrated appropriate knowledge of the subject matter they teach (Keller, 2003). Pillsbury (2005) stated that hiring the best teacher has a bigger effect on a child's education than any other administrative decision (p. 36).

Schools are faced with teacher shortages every year. According to Walker, Downey, and Kuehl (2008) one possible factor for teacher shortages is due to teachers leaving the profession within the first years at a rate of 30% nationally (p.960). To help with this ongoing situation, states have instituted new routes to teacher certification. Many new teachers have been certified through alternate certification programs. Some administrators are still hesitant about the performance abilities of alternatively-certified teachers. Even though many are in a situation where there is not a choice in which type of teacher to hire, many attitudes do not favor the alternate route teacher.

Since the 1980s, alternative routes to teacher certification have emerged with approximately 538 alternative certification programs (Salinas, Kritsonis, & Herrington, 2006). Honawar (2006) stated that, between 1995 and 2005, states that offered alternate route teaching programs increased from five to 48 (p. 2). Many states hire teachers from various alternative teaching programs; in New Jersey, for example, 22% of new teachers received teacher certification through alternative routes (Suell & Piotrowski, 2007). California hires approximately one in five new teachers in the concentration of English education via NUCP (Non-University Certification Programs; Steadman & Simmons, 2007). According to Tissington and Grow (2007), during a 5-year period, an average of 25,000 people per year have been certified through alternative routes (p. 24). A traditional certification for teachers is achieved by graduating from a 4-year university with a degree in teacher education, complete student-teaching, and pass mandatory certification tests such as the Praxis Exam. To gain an alternative certification, a person must have graduated from a 4-year university, pass certification tests, and complete a teaching program such as Teach for America. Various studies have reported both positive and negative benefits of AR programs. According to Zehr (2009), a study commissioned by the U.S. Department of Education's Institute of Education Sciences found no correlation between teacher effectiveness and the amount of coursework received in both types of teacher training (p. 9). Other studies have shown that students show greater academic achievement when taught by certified teachers (Viadero, 2005; Qu & Becker, 2003). Suell and Piotrowski (2006) noted a study that was conducted in Florida using the Florida Educator Accomplished Practices to compare confidence in instructional skills.

Results of the study showed no significant differences between the alternatively-certified and traditionally-certified teachers (p. 310).

Mississippi is one of many states that allows for a person to become a teacher through an approved alternate route program. According to the Mississippi Department of Education's website, there are four approved alternate route programs: (a) Master of Arts in Teaching, (b) MS Alternate Path to Quality Teachers, (c) Teach Mississippi Institute, and (d) American Board Certification for Teacher Excellence (Mississippi Department of Education, 2010). To become a qualified alternatively-certified teacher in Mississippi, the following requirements must be met before a teaching license can be issued:

- Graduate from an accredited college or university with at least a bachelor's degree;
- Decide on subject and age level to enroll in appropriate AR program;
- Pass the Praxis I and Praxis II teacher exams;
- Enroll in the appropriate AR program and successfully complete their requirements;
- Complete a one-year internship for which you will be paid for;
- After successfully completing the internship, submit all forms to apply for license (Mississippi Department of Education, 2010).

Various researchers have reported both positive and negative benefits of AR programs. A report published by the Thomas B. Fordham Foundation indicated that alternatively-certified teachers (AC) perform about as well as, or better than, traditionally-licensed teachers on various measures of effectiveness, using data from 1980s and early 90s (Wright, 2001). Peterson and Nadler (2009) stated that there is a

very little connection between the effectiveness of the classroom teacher and the type of certification they had obtained (p. 59). A study commissioned by the U.S. Department of Education's Institute of Education Sciences found no correlation between teacher effectiveness and the amount of coursework received in both types of teacher training (Zeher, 2009). Feistritzer (2007) stated that what route a person became certified to become a teacher did not play a part on how an effective teacher they became. Experience and proper mentoring were the most important factors (p. 3). Other researchers have shown that traditionally-certified teachers have a greater effect on students' achievement (Qu & Becker, 2003).

Herring (1997) compared the effectiveness of both the alternate route and traditional route teachers within the classroom. The researcher used the position and interpersonal skills evaluation instrument of the Mississippi Teacher Assessment Instruments to see how alternate route teachers faired in comparison to traditional route teachers when they were evaluated by their supervising principal. The group used for the study consisted of beginning teachers who were either alternatively- or traditionally-certified teachers. The results of the study showed that teachers who had followed the traditional route were given higher ratings on both skills evaluation by their principals (p. 65).

Problem Statement

Many school districts in Mississippi face a problem in determining whether to hire teachers who have been traditionally trained or those who have pursued alternative paths to certification. Currently, some administrators are reluctant to hire alternate route

teachers. According to Nagy and Wang (2006), these teachers require many hours of support and have shown problems in many areas of teaching such as basic classroom teaching activities such as discipline, preparing lessons, and teaching strategies within their first years of teaching (p. 3). However, many schools will be facing shortages in the near future due to retirements and teachers leaving to pursue other careers. These programs will help fill the more than 2.2 million teaching positions that will become open within the next 10 years. (Nagy & Wang, 2006). This problem impacts administrators and superintendents because colleges are not graduating future teachers fast enough to keep up with the high demands. There are many possible factors contributing to this problem, among which are the perceptions of the ability of alternatively-certified teachers to perform routing classroom procedures, and the quality of training provided by alternate route programs. If the traditional route is considered the appropriate course for producing better qualified teachers, then scores produced by students taught by traditional route teachers should be significantly different than those of students taught by the alternate route teacher.

Nature of the Study

A quantitative approach was used to conduct this study. According to Creswell (2003), a quantitative approach is suggested when an investigator uses experiments and surveys to collect data (p. 18). The focus of this study was to determine if students who were taught by alternate route teachers score significantly differently on the MCT2 when compared to students who were taught by traditional route teachers. The primary data collection instruments were the scores of the 2008-2009 and 2009-2010 MCT2. Teachers

were grouped based upon their type of teacher certification. Students' scores were categorized based upon which type of teacher they had for 2009-2010 school term. The teachers and their students' scores were divided into two categories. The categories were seventh grade language arts and eighth grade language arts. Each individual category was analyzed using SPSS to complete an independent *t* test. The reason for this test was to evaluate the mean score difference of students who were taught by either an alternate route or traditional route teacher for each section of the MCT2.

Research Questions

The following questions were designed to guide this research study:

- Do students achieve significantly different changes in scores with traditional route teachers on the Mississippi Curriculum Test 2nd edition (MCT2) in seventh grade language arts versus students with alternate route teachers?

Null Hypothesis:

There will not be significantly different changes in scores of the MCT2 in seventh grade language arts between students who are taught by alternative and traditional route teachers.

Alternative Hypothesis:

There will be significantly different changes in the scores of the MCT2 in seventh grade language arts between students who are taught by alternative and traditional route teachers.

- Do students achieve significantly different changes in scores with traditional route teachers on the Mississippi Curriculum Test 2nd edition (MCT2) in eighth grade language arts versus students with alternate route teachers?

Null Hypothesis:

There will not be significantly different changes in scores of the MCT2 in eighth grade language arts between students who are taught by alternative and traditional route teachers.

Alternative Hypothesis:

There will be significantly different changes in the scores of the MCT2 in eighth grade language arts between students who are taught by alternative and traditional route teachers.

The independent variable is generally defined as teacher certification type. The dependent variable was defined as the resulting test scores of the MCT2 (2010 scores). The 2009 MCT2 scores served as a pre-test baseline.

Using SPSS statistic program, an independent *t* test was done to evaluate the difference in scores between the pre-test (2009 scores) and post-test scores (2010 scores) of each student to determine if there is or is not a significant different changes in scores that are produced by students who are taught by both types of teachers. The design of the study and instruments that was used will be discussed in detail in section 3.

Purpose of Study

The purpose of this quantitative study was to determine if students taught by teachers trained by alternative teaching programs had significantly different changes in language arts scores that were significantly different as compared to fellow students who were taught by teachers trained in traditional teaching programs on the Mississippi Curriculum Test, 2nd edition in the area of language arts. Scores on the MCT2 test were used as the proxy measure of student learning outcomes.

Schools are faced with teacher shortages every year. It is estimated that upwards of 157,000 teachers decide to leave the field of teaching each year (Understanding and Reducing Teacher Turnover, 2008). Due to the high number of teachers leaving the profession, administrators must determine if they should hire alternate route or traditional route teachers. Some administrators are still hesitant about the performance ability of alternatively certified teachers. Even though many school districts do not have a choice of the type of teacher to hire, many principals do not favor hiring alternate route teachers.

Proponents of the alternative program have suggested that students of these types of teachers produce scores on various state exams that are equal to or above those of teachers trained in traditional teacher certification programs. Educators who are skeptical of alternative certification programs have suggested the opposite: students learn better with a traditional certified teacher. The results of this study will add information to this ongoing debate.

Conceptual Framework

In the past quarter century, prospective teacher candidates have been able to choose between the traditional college route and new alternate route programs. Alternate route programs were designed to allow professional the opportunity to change careers and enter the teaching field without having to return to college and complete a teacher education program. Alternate route programs allow for experienced individuals to move from various professional job sectors into education. Also, being able to go directly into teaching eliminates a delay in receiving compensation.

The theory of alternate route programs is that (a) they attract a more diverse population of teachers; (b) help fill teacher shortages in areas such as mathematics and science; and (c) allow for more mature professionals to enter the teaching profession without returning to college (Quigney, 2010). All of these listed items represent the positives that can come about by alternate route programs.

Opponents of these programs present a different view that is not in full support of the programs. Areas of concern were noted in an article by Nagy and Wang (2006), including that AR teachers show a deficiency in basic classroom skills concerning delivery of instruction, maintaining classroom discipline, and developmental issues concerning students (pp. 2-3). Arguments between the two certification routes are constantly being presented most notably in student achievement (Viadero, 2005), teacher attention rates (Wright, 2001), and quality of teacher training received (Qu & Becker, 2003).

Many colleges are changing the way students are trained to become teachers. For example, Alverno College requires students to redo all unsatisfactory work until it becomes satisfactory, Emporia State University requires 100 hours of supervised work with young adults before students can enter the teaching program, and Stanford University requires 20 hours a week of supervised work with a local high school (Levine & Project, 2006). By incorporating many hours of supervised training, teacher candidates will have some classroom knowledge before they take responsibility of their own classroom. Also, proper induction programs can provide valuable knowledge to inexperienced teachers. Wood and Stanulis (2009) stated that quality induction provides for (a) greater teacher retention of beginning teachers; (b) promote the well-being of beginning teachers; (c) improvement in the teaching abilities of beginning teachers; (d) help increase the performance of beginning teachers, which in turn will help increase student achievement; and (e) meet requirements for teacher certification (p. 4-5). Mentors allow for one-on-one conversations and the sharing of years of teaching experience.

In the context of this study, if teachers are properly educated in their perspective educational training programs, there should be consistency in their teaching and students' performance on standardized tests. Each subject has a written curricula with specific objectives and benchmarks that teachers must address throughout the course of a school year. These objectives must be covered regardless of the type of certification held by the teacher who is teaching the course. At the end of the school term, students are tested on their knowledge of the objectives and benchmarks for each subject.

Since No Child Left Behind (NCLB) became law, the push for accountability of schools has become a major issue for all stakeholders. Benigno (2005) stated that, in order for schools to receive federal funding under NCLB, they must be tested yearly, make academic progress, give public data, and employ highly qualified teachers (pp. 26-27). Parents, school officials, state and national leaders, and members of the public begun to pay closer attention to the daily work of teachers. Results of state tests are a way to determine the success or failure of a school. Since NCLB was passed, test scores have been connected to the teaching abilities of the classroom teachers.

According to Hoff (2009), by making schools become more accountable for their actions, negative issues that have been taking place for years in schools now have come to light and can be addressed (p. 2). Schrag (1995) stated that teachers should be able to defend their actions in the classroom with precise explanations (p. 642). For example, if a teacher decides to have students create a project, it must be connected to a state objective or benchmark.

The value of using one style of teaching has been negated due to the wide variety of students, learning styles, and the construction of state test questions. Teachers have to adjust in order to help all students gain knowledge and become successful. The style of teaching is vital to the success of students' test scores which in turn is connected to the school's accountability. It can be inferred that schools with high scores are doing what they are supposed to be doing which is educating its students properly. According to the accountability section of NCLB, schools with high scores are working properly and will not need any outside intervention. Schools with constant low scores will receive

intervention. In extreme cases, school districts can be taken over by the state. In Mississippi, for example, if a school does not meet test standards after 3 years, the school's educational staff from the teacher to the school board can be removed and the State Board of Education will then run the school (Benigno, 2005).

In Mississippi, the test given to measure the amount of learning that has taken place in the classroom is the Mississippi Curriculum Test 2nd edition, which is given in the spring of each school year. The scores students produce on standardized tests will reflex upon the teaching they received during the school year. Today, scores are attached to teachers' teaching performance in the classroom. If the teacher is knowledgeable in the subject matter and has successfully instructed all students, then there should be a positive correlation between instruction and successful MCT2 scores of their students.

Definition of Terms

Alternative Certification Program: According to Tissington and Grow (2007) these programs allow professionals with at least a bachelor's degree the opportunity to receive coursework in order to obtain a teaching license without having to return to college full time (p. 24).

Alternative Route Teacher: "Alternative route teachers have a bachelor's degree in some subject matter and no student teaching experience" (Qu & Becker, 2003, p. 8).

Highly Qualified: A term to distinguish the certification of a teacher. "NCLB law states that highly qualified teachers must 'hold at least a bachelor's degree from a four-year institution; hold full state certification; and demonstrate competence in their subject area'" (Berry, Hoke, & Hirsch, 2004, p. 685).

High-Stake Test: "The practice of attaching important consequences to standardized test scores, and it is the engine that drives the No Child Left Behind (NCLB) Act. The importance of the tests is the promise of rewards for greater academic achievement and ensure teachers are working more effectively" (Nichols & Berliner, 2008).

Mississippi Curriculum Test 2nd Edition (MCT2): According to the Mississippi State Department of Education (2002), the MCT2 is given each May to students in grades 3 through 7 in order to show which students have met the required benchmarks for each grade (p. 8).

No Child Left Behind (NCLB) Act: This is a federal law that states that all students will perform at the proficient level on states' tests by school year 2013-2014 (Center of Education Policy, 2008).

Traditional Certification Program: "In most teacher preparation programs, there is a mix of university coursework and field (classroom/practicum) experience, which affords preservice teachers opportunities to be both students and teachers" (Jarvis-Selinger, Pratt, & Collins, 2010, p. 70).

Traditional Route Teachers: These are teachers who earned a bachelor's degree in education and completed student teaching (Qu & Becker, 2003).

Assumptions

For this study, the following assumptions were noted:

1. All students covered the same amount of information in their classes needed to successfully attempt the MCT2.

2. All schools were session for the same amount of time during the school year without major interruptions such as natural disasters or factors out of the school's control.
3. All students were taught by a highly qualified teacher as defined by NCLB.

Limitations

For this study, the following limitations were noted:

1. The study used students and teachers from a single school district in Mississippi.
2. A convenient sample of students and teachers was used.

Scope and Delimitations

1. This study focused on the MCT2 within a particular school year.
2. This study used archived data.

Significance of Study

With the possible impact that teacher shortage can have on schools at all levels, the practice of hiring alternatively-certified teachers is steadily increasing. With the increase of hiring alternatively-certified teachers, the concern of their ability to perform in the classroom is always a matter of importance for administrators. Should the results of this study be in favor of the alternative teachers, this will add to the positive perception of alternative certification programs and enable administrators to feel more confident in hiring teachers from alternative certification programs to teach in their schools.

On the other hand, if results are in favor of traditional route teachers, this study will add to the positive perception of continuing the traditional college teacher preparation programs.

In terms of teacher retention of beginning teachers, two different arguments are made concerning alternate route and traditional route teachers. For traditional route teachers, Keller (2004) noted that is it more likely for teachers who did not attend traditional college teacher training programs to exit the teaching profession within their first few years (p. 20). However, the opposite can be stated in favor of alternative teachers. According to Wright (2001), alternate route teachers last longer in the teaching profession than graduates of regular college teaching programs (p. 25). In the realm of student achievement, Zehr (2009) stated that there is not any difference in student achievement regardless of which type of certified teacher is placed in the classroom (p. 9). Viadero (2005) stated that when students are taught by traditionally-certified teachers, student success is increased (p. 1).

Transition Statement

Debates over which program produces the better-trained teacher has been ongoing since the creation of Alternate Route programs in the early 1980s. Supporters of both alternate and traditional teaching programs that show success of their particular program and the less desirable effects of their opponent have conducted research. With the demanding pressures of No Child Left Behind and the increase in teacher shortages across the United States, principals are facing a dilemma: who to hire? Which research study should principals base their hiring decisions upon?

Many researchers in the field of education and research companies and foundations are continually producing studies that are constantly "fueling the debate" over which type of teacher is better and stands to produce the greatest results. The

following quote shows exactly what is happening by these researchers and their loyalty to a particular teacher certification program: “A handful of studies indicate that traditionally licensed teachers out perform alternatively-certified teachers. Another handful claim the opposite” (Glass, 2009, p. 6).

The opinions of today’s administrators with regard to alternatively-certified teachers can have an impact on the number of professionals who decide to enter the teaching profession through these programs. If their ability to be a productive teacher is perceived to be less than proficient from the start, individuals may decide not to purse a teaching career. Many schools across the nation are constantly facing teacher shortages each year. Principals are looking to both colleges and alternative teaching programs to find quality teachers to staff there schools. With the continuing debate over teaching certification programs, studies such as this can help create social change by providing statistical evidence of the effectiveness shown by teachers certified through both programs. School officials can use these results to help in making hiring decisions of potential teacher candidates. The end result is to provide students with the best possible teacher regardless of certification type.

In the following sections, the details of this study are discussed in detail. Section 2 provided a review of current literature of No Child Left Behind, alternative and traditional teacher certification programs, and current issues related to the research question. Section 3 includes details for the methodology of the study. Results of the study are discussed in Section 4. Discussions and conclusions of the study are provided in Section 5.

Chapter 2: Literature Review

Introduction

This chapter serves as a review of literature relating to the comparison between alternative and traditional certified teachers. The literature review will begin with a discussion of the No Child Left Behind Act. Next, information will be presented to clarify what constitutes a highly qualified teacher in Mississippi and throughout the United States, followed by characteristics and benefits of effective and ineffective teachers. A discussion of Mississippi's Accountability System and State Curriculum Tests will be presented. An in-depth presentation of the alternate route teaching certification program will follow. Areas of interest include the history of the program, process of gaining certification, fears, concerns and bias of the program. Lastly, standardized tests are discussed.

Key terms and phrases were used to search for current literature. The most effective terms were No Child Left Behind, alternative certification, alternate route teachers, teaching certification, traditional teacher programs, highly qualified teachers, effective and ineffective teachers, and standardized test.

No Child Left Behind Act

"The No Child Left Act of 2001 (NCLB) is the most significant and controversial change in federal education policy since the federal government assumed a major role in American education almost 4 decades ago" (Sunderman & Kim, 2004, p. 1). Salinas (2006) stated that all students have to be on grade level in major areas such as math, science, and reading by 2013-14 school year in order to satisfy the objective of No Child

Left Behind (p. 1). Under this law, every state is required to (a) submit a plan of action to show how 100% of the students will be at the proficient level (Center on Education Policy, 2008), (b) have a highly qualified teacher in every classroom (Granger, 2008), and to use standardized tests to determine which students are gained proficiency and who have been "left behind" (Oswald, 2008).

In order to show that progress is being made to reach the 100% proficient goal, NCLB requires testing of every student at various levels in their education. Testing schedules for students was scheduled by each state. The states would decide the appropriate times students should be tested which most often was once during elementary, middle, and high school (Hoff, 2008). Now, every state will know when to test their students and at what point in their educational process this should take place. Since 2006-08 school years, students have been tested annually in reading, mathematics, and science for grades three through eight (Jennings & Rentner, 2006), and once during high school, with yearly progress being met in all groups of students (Hoff, 2007).

Improvements in the educational system have been noted since NCLB was instituted. "Scores on state tests have increased consistently and significantly in the five years since the No Child Left Behind Act became law, and there's some evidence that gains that started in the 1990s accelerated after the law's enactment" (Hoff, 2007, p. 1). Hoff (2007) stated that when using three years of data, in 31 states out of 41, elementary students increased one percentage point in math. Also, for elementary reading, 29 states out of 41 reported "moderate to large" gains (p. 2). Areas of concern and critiques have increased over the proposed positive impact students should incur due to NCLB.

According to Smyth (2008), many educators have noted concerns in areas such as the lack of funding and the number of students who are falling behind (p. 133).

Many states have not met one of the most important tasks of NCLB six years after it became law, the requirement that states develop a testing system to track all students' progress in math and reading as they work toward proficiency (Hoff, 2008). Some educators claim that such a high focus on reading in math leads to less time for other classes such as history and civics (Cavanagh, 2007) and writing, arts, humanities, and technology (Pederson, 2007). Also, many states have not met the stipulation of having all core classes staffed with a highly qualified teacher. "Only one state – North Dakota – met last year's deadline to have highly qualified teachers in 100 percent of its core-subject classes" (Honawar, 2008, p. 14).

Another concern is the way classes are taught. With the major concern being to increase test scores, the term "high-stakes testing" is becoming more and more prevalent. Nichols and Berliner (2008) defined high stakes testing as a practice where more consequences are attached to test scores produced by students. This is what drives the NCLB Act (p. 41). Some teachers are now changing the way they teach and test within the classrooms from lifelong learning techniques to focusing on teaching to the test (Smyth, 2008). Granger (2008) stated that, thus far, there is no evidence indicating that NCLB has contributed positively to students' performance on nationally administered tests, including stalwarts like the Scholastic Aptitude Test and ACT (p. 208).

Highly Qualified

Highly qualified is a new standard that emerged as a result of NCLB. Each state is required to establish guidelines in order for the teachers to meet the requirements of NCLB. "In general, a teacher, to be deemed highly qualified, must hold a bachelor's degree, be fully certified by a state, and have demonstrated knowledge of the subjects taught" (Keller, 2003, p. 2). According to the Mississippi Department of Education (2005), teachers must have obtained a bachelor's degree, completed approved training programs, and passed the PRAXIS exam (p. 9). By 2005-06 school year, all elementary classroom teachers and secondary teachers of core subjects – English, mathematics, science, foreign languages, social studies, and the arts – had to be highly qualified (Keller, 2003).

Gaining this status is required by all teachers, from beginners to experienced. According to Olson (2004), all new teachers must be able to show mastery of subject matter by passing a content test or have a major in the area that they are teaching (p. 25). Experienced teachers can gain this status by meeting the standards set forth by HOUSEE (high, objective, uniform state standard of evaluation) (Olson, 2004), or by acquiring points for professional development activities, serving on a committee, certification through the National Board for Professional Teaching standards, or pass a test offered by the American Board for Certification of Teacher Excellence (Jacobson, 2005).

How many classrooms are staffed by a highly qualified teacher? According to Honawar (2008), 94 percent of the classrooms in the United States were staffed by highly qualified teachers during the 2006-07 school year (p.14). The distribution of highly

qualified teachers is not even between low- and high-poverty schools. "That year, 96 percent of core-subject classes in low-poverty schools were taught by highly qualified teachers, compared with 91 percent in high-poverty schools, according to the U.S. Department of Education" (Honawar, 2008, p. 14).

Effective Teachers

When students are taught by teachers who rank in the upper percent of their staff based on effectiveness, scores tend to rise. Haycock and Crawford (2008) stated that students in Los Angeles improved approximately five percentile points when taught by teachers in the top quartile of effectiveness. But, when students were taught by bottom quartile teachers, they lost the same amount (p. 14).Haskins and Loeb (2007) noted that, when effective teachers teach the same students for 3 years in a row, their students scored about 50 percentile points better than students who were taught the same amount of time by teachers ranked in the lowest fifth of teacher effectiveness (p. 51).

According to a study completed by Benigno (2005), there were 40,200 teachers who have gained National Board for Professional Teachers status in 2004. Scores on the Florida Comprehensive Assessment Test showed that the "effect size" of a national-board-certified teacher to be .07 as compared to .017 for a graduate-degree teacher and .06 for a state high school certified teacher (Jacobson, 2004). Using Cohen's *d* evaluation chart, .07 means that there is a large effect (seven-tenths of a standard deviation) as compared to .017 which means a small effect (one-tenth of a standard deviation) and .06 which has a medium effect (one-sixth of a standard deviation). Test scores should not be the only judging factor in the effectiveness of a teacher. "Rather, school systems should

judge teachers on a combination of student gains, principal evaluations, parent evaluations, and perhaps other measures, using a procedure developed cooperatively by school administrators, teachers, teachers unions, and perhaps parents" (Haskins & Loeb, 2007, p. 53).

Mississippi's Accountability System

To meet the stipulations of NCLB, Mississippi instituted a new accountability system for every school district. Senate Bill 2156 of the Mississippi Student Achievement Act of 1999 required the Mississippi State Board of Education to create a performance-based accreditation system for all school districts and schools within each district. Also, this bill required that performance standards be created so that schools could be measured in terms of student growth annually (Mississippi State Department of Education [MSDE], 2002).

To meet school accreditation, schools had to first meet annual growth expectation and a percentage of students proficient at grade level (MSDE, 2002). The Mississippi Department of Education (MDE) monitors all districts to ensure that they are meeting the requirements set forth by the state and NCLB. The state also mandates what should take place if a school or district does not satisfy state requirements each year. "Senate Bill 2488 of the 2000 Mississippi Legislative Session specified that the MDE must identify schools that do not meet expected levels of student achievement and label them as Priority Schools" (Mississippi State Department of Education, 2005, p. 1). Schools that are labeled as Priority Schools will be provided an intensive assistance program (MSDE, 2005).

To show the level of achievement of each student in Mississippi, a system of four categories is used. The levels are advanced, proficient, basic, and minimal. Based on NCLB, all students should be at the proficient level by 2013-14 (Center on Education Policy, 2008). Schools are also graded by their overall student performance and designated a particular level. According the Mississippi State Department of Education (2005), the levels range from level one to level five with level five being the best. Level one is for low-performing schools (priority schools). Level two is for under-performing schools (failed to meet growth). Level three is for successful schools meaning they met their growth. Level four is for exemplary schools (schools exceeded growth expectations). Level five is for superior-performing schools (schools with the highest achievement level. (p. 3).

According to the Mississippi State Department of Education (2005), in order to graduate from high school in Mississippi, all students must meet the requirements of their particular school district and show proficiency in the following assessments: (a) reading, language, and math between grades two through eight; (b) science between grades five and eight; and (c) Algebra I, English II, Biology I, and U.S. History from 1877 between grades 10-12 (pp. 7-8).

To be considered as a highly qualified teacher in Mississippi, the following guidelines have been instituted in order to meet NCLB requirements:

1. Hold a baccalaureate degree and
2. Acquire the necessary pedagogical skills by completing one of the following
    - an approved pre-service teacher preparation program for elementary

education from a regionally/nationally-accredited institution of higher learning; or

- an approved alternate route to certification program (4-8 only) for middle/secondary education; and

3. Demonstrate content knowledge by passing rigorous State approved tests (PRAXIS) covering subject knowledge and teaching skills in reading, writing, mathematics, and other areas of the basic elementary school curriculum.

(MSDE, 2005, p. 9)

Mississippi Curriculum Test

When No Child Left Behind began federal law, every state had to develop a standardized test that will test all of its students at the required grade levels throughout their school years. For Mississippi, students are tested in elementary, junior high, and high school. In grades 2 through 8, students are tested in areas of math, language, and reading. Once students enter high school, they are tested in Algebra I, Biology I, English II, and United States History from 1877. Successful completion of all tests is required in order to graduate high school in Mississippi (Mississippi Department of Education, 2007).

The Mississippi Curriculum Test (MCT) was designed by classroom teachers in Mississippi using the state curriculum frameworks as a guide. The standards were set by a committee consisting of 210 teachers. The teachers were grouped according to grade level (2-3, 4-5, and 6-8) and subject type (reading, language, and math). These members set the standards to judge level of success on the test and three cut scores to determine

which level a student's score should be placed. This untimed test is given each May. The test is made up of two sections, which are forty five multiple choice questions and four open-ended questions (Mississippi Department of Education, 2007). The four levels of proficiency used to determine the success of students are as followed:

1. Advanced: Students showed great success in their work and are ready for the next grade.
2. Proficient: Students showed considerable success in their work and are ready for the next grade.
3. Basic: Students passed half of the required elements and some assistance may be needed in the next grade in order to obtain mastery on required skills.
4. Minimal: Students did not show that mastery of skills had been met and will need remediation in order to become successful. These students are most likely failing in the subject matter (Mississippi Curriculum Test, 2007).

According to Benigno (2005) the validity of the MCT was obtained by constructing a sample test to review questions and search for potential bias. After completion of initial test, statistical reviews were completed and questions that showed major bias were deleted (p. 34). The MCT is divided into three academic areas which are reading, language, and mathematics. Each area covers specific content information. In reading, areas of importance include context clues, word structure, word patterns, vocabulary, main ideas and details, expanded comprehension, and workplace data. In language, areas of importance include capitalization and punctuation, spelling, sentence structure, and meaning. In mathematics, areas of importance include patterns, Algebraic thinking, data

analysis, prediction, measurement, geometric concepts, and number sense (Mississippi Department of Education, 2007). The purpose of these tests is to measure students' success and growth.

In Mississippi, schools are given a descriptive label that shows how their students are performing on state tests. The labels are way of ranking the schools from 1 (lowest) to 6 (highest). A level six school would be designated a Star school. A level five school would be designated a High Performing school. A level four school would be designated a Successful school. A level three school would be designated an Academic Watch school. A level two school would be designated an At Risk of Failing school. A level one school would be designated a Failing school (Mississippi Department of Education, 2009). The goal of all schools is to show student growth on all state tests and to achieve the rank of a Star school. If schools do not meet their yearly growth, they can be placed on improvement. In order to be removed from improvement, schools must increase their test scores on the next year's tests.

Alternate Route Certification

Alternate Route (AR) teacher certification is relatively new in comparison to the traditional route of becoming a teacher. "Alternative route certification (ARC) programmes [sic] have existed in the USA for more than 20 years" (Salinas, Kritsonis, & Herrington, 2006, p. 241). "Virginia established the first statewide ATEP program in 1982. California followed in 1983, and Texas and New Jersey began their programs in 1984" (Suell & Piotrowski, 2007, p. 55). According to Walsh and Jacobs (2007), 47 states offered some type of alternate route education programs as compared to only a few

states in the past few decades (p. 13).

AR programs began to help combat teacher shortages that many school districts were facing in the early 1980's and are still continuing today. Nagy and Wang (2006) stated that within the next five to six years, more than one million teachers will retire and there will be 2.2 million teaching positions that will be open within the next ten years (p. 2). "Florida, for example, expected the shortfall of classroom teachers to approach 32,000 by the opening of the 2006-07 school year, and California forecasts a teacher shortage of 100,000 by 2016" (Steadman & Simmons, 2007, p. 19).

Superintendent Annie Wimbish (2009) stated that at the beginning of the 2008-09 school year in Mississippi, there were four times the people eligible for retirement than graduates of state teaching programs (p. 26). The amount of time a person works as a teacher is decreasing which, in turn, is another factor leading to teacher shortages. "Nearly 25% of new teachers remain in the classroom two years or less, and almost 50% leave the field within five years" (Steadman & Simmons, 2007, p. 19). Suell and Piotrowski (2007) noted that teachers in special education, mathematics, and science leave at the rate of 20% each year (p. 55).

The AR program was established to get professionals into the field of teaching without having to complete a full teacher education program. Also, these professionals will need to be considered as highly qualified teachers. One concern for these professionals was the amount of time it would take to become a highly qualified teacher. Many career changers could not afford to return to college and spend two or more years completing a teacher education program. Sander (2007) pointed out that "one solution

being utilized is the implementation of alternative certification (AC) programs which give individuals opportunities to earn their teaching certification in abbreviated periods of time-often teaching while they complete program requirements" (p. 31). These programs attracted college students, experienced professionals from business, military, and other sectors (Rochkind, Ott, Immerwahr, Doble, Johnson, & Public Agenda Foundation, 2007). By being able to teach and complete a program at the same time, people will not have to go without receiving a paycheck. Many of these candidates do not have the time and or money to re-enter college and complete a traditional education course of study.

If it were not for the AR programs, many of today's new teachers would not have entered the teaching profession. According to a Survey on Alternate Route Teachers (2005), many participants stated that if it had not been for alternate route programs, they would not have become a teacher (p. 8). Wright (2001) expressed that professionals can become teachers through accredited programs without having to stop work and go back to school. These professionals can begin work as teachers and still complete their education training at the same time and still draw a paycheck (p. 24).

There are numerous AR programs and the requirements for completion vary from state to state. Reese (2009) stated that a study completed by the National Research Center for Career and Technical Education (NRCCTE) noted that there are more than 100 different AR programs and also that no two states have the exact requirements (p. 16). Teach For America (TFA) (Glass, 2009), The New Teacher Project (TNTP) (Walsh & Jacobs, 2007), Troops to Teachers, Transition to Teaching and Passport to Teaching (Glazerman, Seif, Baxter, & Mathematica Policy Research, 2008) are a few of the larger

AR programs that are available.

A candidate for AR programs has to meet set entrance requirements that are common in majority of all programs. "Typical requirements include a bachelor's degree with significant coursework in the subject that an individual intends to teach, a minimum college GPA, and passing scores on the same content-based tests required of other beginning teachers" (Wright, 2001, p. 24). "Nearly eight out of 10 enter an alternative certification program with a bachelor's degree or higher in a field other than education" (Survey on Alternate Route Teachers, 2005, p. 8). Some programs are very selective when choosing applicants while others are not. "Teach For America accepts just one in six applicants. The New Teacher Project accepts just 12 percent of applicants to its New York program. On the other hand six programs (12 percent) accept *virtually anyone* who applies" (Walsh & Jacobs, 2007). Length of class time and coursework varies from each different AR program. "Programs now range from 2 weeks of training prior to classroom assignment to 2 years of coursework and up to 3 years of mentoring" (Suell & Piotrowski, 2007, p. 54).

Walsh and Jacobs (2007) stated that many states have different requirements towards going an alternate route certification. Some states require only nine hours such as Mississippi and Georgia. Utah mandates 30 hours. A Master's degree is required in 27 states. There are not any academic standards in 21 states. Above-average academic performance is required in 12 states. The state of Florida prohibits education coursework (p. 18).

As determined by the 2003 Education Commission of the States, key factors for a successful AR program was noted as being a strong partnership between preparation programs and schools, good screening, strong mentoring, solid curriculum and as much training and coursework as possible prior to teaching (Suell & Piotrowski, 2007).

With the high number of AR programs nationwide, the number of credentialed teachers is steadily rising. Glazerman et al. (2008) stated that since the 1980s, one-third of all new teachers each year have become certified through some alternative certification program (p. 1). The New York City-based Teach For America, which started in 1990, had a record 17,000 applicants apply for teaching assignments in 2005-06 school year (Viadero, 2005). California and Texas gets more than 15 percent of its teachers through AR programs while New Jersey gets 22 percent (Wright, 2001). "According to the National Center for Alternative Certification, about 60,000 new teachers completed some sort of alternative training in 2005-2006" (Rochkind et al., 2007, p. 7).

Studies have been conducted to determine if AR graduates are providing a good education to their students. A study by Mathematica Policy Research Inc researchers found that math students in elementary located in eight cities taught by TFA recruits learned more math over the school year than did their peers taught by traditional route teachers (Viadero, 2005). In Louisiana, a study of 155 new AR teachers in math, science, and social studies concluded that they performed as well as or better than experienced teachers in 2005-06 (Honawar, 2007). Rochkind et al. (2007) concluded that 55 percent of public school principals stated that alternate route teachers are just as good as teachers from traditional education programs (p. 7).

In contrast, results of studies conducted on the effectiveness of AR programs show a different perspective. A study was conducted a Stanford University research team using scores from schools in Houston. The results showed "Students learn more from certified teachers than they do from uncertified teachers, even when the uncredentialed teachers are Teach For America recruits from some of the nation's top colleges (Viadero, 2005, p. 1). In a 2002 report by Linda Darling-Hammond, she stated that AR participants are twice as likely to leave teaching due to the lack of student teaching experience (Sander, 2007). One comprehensive study examining the difference between the two certification programs showed that students taught by traditionally certified teacher were roughly two months ahead statistically on a grade-equivalent sale (Steadman & Simmons, 2007). "A handful of studies indicate that traditionally licensed teachers outperform alternatively certified teachers. Another handful claim the opposite" (Glass, 2009, p. 6).

Stoddart, Floden, and National Center for Research on Teacher Learning (1995) stated that according to alternate route supports, people with a combination of subject matter knowledge and support can become teachers. Proponents of the traditional college teacher training programs believes it takes not only knowledge of subject matter but also courses in education along with student teaching (p. 9). Surprisingly, there are also studies that have been conducted that determined there is no significance between which type of training a teacher received. Qu and Becker (2003) stated that teachers with traditional and alternative certificates are equally effective in teaching performance and student achievement (p. 4). "Miller et al. concluded there were no differences in teaching behavior, student output, or perception of competence between these two groups of

teachers, regardless of their preparation program" (Suell & Piotrowski, 2007, p. 57). Zehr (2009) stated when comparing teacher effectiveness and the amount of coursework of type of teacher took while in training, no correlation was noted (p. 9).

Standardized Testing

Standardized testing is not a new invention in the field of education as some people outside of education might think. According to Longo (2010), the use of standardized tests has been used since the mid 1800s with Horace Mann introducing the concept. During World War II and the Cold War, standardized tests were used to place students based on skills in leadership, academics, and managerial skills. Title I of the Elementary and Secondary Education of 1965 used standardized test results to determine the allocation of federal monies (p. 55). Today, schools are required by No Child Left Behind to test students yearly using standardized test.

These yearly examines serve many purposes to students, teachers, school officials, parents, and stakeholders within the communities. "Annual state and local district standardized tests serve annual accountability purposes, provide comparable data, and serve functions related to student placement and selection, guidance, progress monitoring, and program evaluation" (Chappuis, Chappuis, & Stiggins, 2009, p. 17). Stakeholders in the community also use a school district's test scores in their business transactions. Tanner (2010) gives an example of real estate agents that use district test scores to convince potential home buyers that schools in certain areas are of high quality in order to sell homes (p. 31).

Scores are also used to determine the quality of teaching taking place in today's schools. If scores are high, it is assumed that teachers are providing high level instruction. The opposite can be said if scores are low. According to Tanner (2010), the scores from these tests should be able to how effective teachers and school officials are doing their jobs within the school (p. 31). School districts are using standardized tests scores to determine what teachers to keep and if merit pay is due. According to an article entitled "Highlights From States' Proposals" (2010), some states such as Georgia, Illinois, Louisiana, Tennessee, and the District of Columbia are proposing various plans such as connecting student achievement and test scores to at least part of a teacher's evaluation (p. 27). In an article by Smyth (2008), not only is teacher salary in some states affected by these test scores but so is student promotion, school accreditation, student placement, district funding, and graduation opportunity (p. 133). Standardized tests has its "hand" in just about every aspect of a school district from the top to the bottom.

Is there a consensus among American teachers in using standardized test? Arguments have been made for and against the use of these tests by teachers from all grade levels and parts of the country. In a study by Buck, Ritter, Jensen, and Rose (2010), they found five themes of attitudes towards standardized tests after interviewing a group of Arkansas teachers. The themes were (a) tests provide useful data, (b) testing and standards help create a road map for the year's instruction, (c) test-prep does not necessarily sap creativity, for teachers or students, (d) testing can lead to collaboration, and (e) accountability is useful. Some noted comments made the Arkansas teachers was "tests 'hold accountable' those teachers who 'are just there to get summers off and an 8-

to-3 job," and "[It] helps us be better teachers and not just take the day off because we don't feel like it and let [the students] watch a movie" (p. 50-54).

A statement given in an article by Wolf (2007) summarizes the intention of standardized tests and accountability in that "Accountability tests literally force someone or something to account for outcomes" (p. 692). Richard Phelps (2006) lists three likely consequences that could happen if standardized testing is eliminated; (a) social promotion, (b) increase in remedial programs for college students to help in areas of lacking skill not received in high school, and (c) schools would have to rely heavily on the teacher-made tests and their own grading system (p. 25).

Many school officials and parents have voiced opinions not in favor for standardized testing. Stuart, et al. (2010) stated that many teachers have changed their teaching styles from creative to a more process of memorization (p. 50). Some teachers have left the educational field because they felt that all they were doing was prepping students for these tests (Kohn, 2010, p. 4). Many teachers feel as if the new main style of teaching is drill and kill. Kinkead (2005) stated that teachers tend to focus on test preparation more and move away from various types of tests except ones used on standardized tests (p. 3).

Stress and anxiety factors are also a concern with standardized tests. All members of the educational field feel stress over the concerns of standardized tests. Even the younger children are not safe. "Research reports that elementary students experience high levels of anxiety, concern, and angst about high-stakes testing" (Smyth, 2008, p. 133). The approach and attitudes taken by school officials and teachers towards the

importance of standardized test can help in easing the amount of stress and anxiety students might face.

As with many changes in education, there are always pros and cons as mentioned above. The overall purpose for these changes is to ensure that teachers are providing an appropriate education to their students and those students are learning in order to become productive members of society.

Comparative Studies

Since the introduction of alternate route programs, educators and researchers have questioned their ability in the classroom. Questions of concern have been centered on their effectiveness within the classroom. Are alternate route teachers capable of maintaining a classroom, perform all required teaching duties, and most of all, how successful are the students that are taught by teachers certified through alternate route programs?

Viadero (2010) stated that results of a study presented in a report by the National Research Council, there is not sufficient data to determine if alternate route teachers are any better or worse than traditional route teachers. The chairwoman stated that the committee looked at the best evidence possible and that evidence stated there was not a significant difference between the two programs (p. 1). Scherer (2010) stated in an article that both teaching programs have its share of producing more and less effective teachers (p. 1).

Evidence using data on Teach for America showed that students taught by teachers from this program faired the same or better than students taught by teachers from

the university route. Another study in North Carolina showed that students also taught by Teach for America teachers had greater gains over the course of year than a traditional route teacher's students (Grossman & Loeb, 2010). Clotfelter, Ladd, and Vigdor (2010) also did a study comparing alternate route and traditional route teachers in North Carolina and found that students taught by a regular licensed teacher averaged 0.06 standard deviations higher than students taught by other certified teachers (p. 670).

Another study completed in North Carolina used Teach for America (TFA) teachers. That particular study used 69 TFA teachers in 23 school districts. The study compared TFA teachers and non TFA teachers. About 6,000 students were used. The students used had at least one TFA and one non TFA teacher. Test scores were used as data in the study. The results showed that students taught by TFA improved from the 50th to the 54th percentile (WWC Quick Review, 2008).

As each school year comes to an end, researchers and school officials will again look to data to try to answer the ongoing debate over which type teacher is better suited to be successful in the classroom. Classroom observations and test scores will again be used to try to settle this debate. As stated previously in Section One, one quote that helps to sum up this ongoing debate is "A handful of studies indicate that traditionally licensed teachers outperform alternatively certified teachers. Another handful claim the opposite" (Glass, 2009, p. 6).

Summary

The purpose of this quantitative study was to determine if students taught by teachers trained by alternative teaching programs had significantly different changes in

language arts scores that were significantly different as compared to fellow students who were taught by teachers trained in traditional teaching programs on the Mississippi Curriculum Test, 2nd edition in the area of language arts.

Section 1 discussed the problem statement, nature of the study, justification, definitions of terms, assumptions, limitations, scope and delimitations, significance of study, and summary. Section 2 provided a review of related literature. Section 3 contains information about the research design, population and sample determination, data collection, and data analysis. The results of the survey are presented in Section 4. Section 5 includes a summary of the study, conclusions obtained from the data, and recommendations.

Chapter 3: Research Method

Introduction

Section 3 will provide information on the following: (a) an introduction of the study, (b) the design of the research, (c) setting and sample, (d) instrumentation and materials, (e) data collection and analysis, (f) role of the researcher, and (g) steps taken to ensure the protection of participants.

The purpose of this quantitative study was to determine if students taught by teachers trained by alternative teaching programs had significantly different changes in language arts scores that were significantly different as compared to fellow students who were taught by teachers trained in traditional teaching programs on the Mississippi Curriculum Test, 2nd edition in the area of language arts. Scores on the MCT2 test will be used as the proxy measure of student learning outcomes.

Research Questions

In this study, I addressed the following research questions:

Do students achieve significantly different changes in scores with traditional route teachers on the Mississippi Curriculum Test, 2nd edition (MCT2) in seventh grade language arts versus students with alternate route teachers?

Do students achieve significantly different changes in scores with traditional route teachers on the Mississippi Curriculum Test, 2nd edition (MCT2) in eighth grade language arts versus students with alternate route teachers?

I compared the raw scores of the MCT2 taken by students of one school district in grades seven and eight in the area of language arts. I analyzed teacher-matched pairs (TR

and AR) who taught the same subject and on the same grade level. Results of the 2008-2009 MCT2 were used as pre-test data in order to set the base line and were compared to the 2009-2010 MCT2 data. An independent *t* test was conducted on the difference between the two sets of data to determine the amount of difference in each area over a particular school year.

Research Design

This study was designed to compare scores of the language arts section of the Mississippi Curriculum Test, 2nd edition (MCT2) of seventh and eighth grade students who were taught by alternative and traditional certified teachers in a single school district. The study was of a retrospective design because all information used consisted of archived data. The design had mixed within-subjects pre-post test and between- subjects (AR versus TR teacher certification) elements. For this study, a 2 x 2 designed was used. The independent variable was the type of teacher certification. The dependent variable was the resulting test scores of the students. Data was first collected using the 2008-2009 MCT2 scores to serve as a base line. The second set of data was gathered from the results of the 2009-2010 MCT2. Next, the difference of each student's scores was obtained and put into a column in order to be analyzed by SPSS to conduct an independent *t* test. The design and analysis were replicated for both the seventh and eighth grade. The data results included individual MCT2 mean scores, standard deviation, and standard error mean in language arts for each student taught by particular teachers.

Setting and Sample

According to the Mississippi Department of Education (2010), there were 152 school districts consisting of 493,302 students and 33,972 teachers during the 2009-2010 school term. Data from one Mississippi public school district provided the data for this study. This school district was chosen because the researcher is currently employed as a first-year alternate route teacher in the selected district. The purpose of the analysis was to compare changes in scores of alternate route teachers' students on the MCT2 to students taught by the traditional route teachers within this school district. All test results that were used as data occurred prior to the employment of the researcher. The results of this study provided the district's educational leaders valuable comparison data..

This particular district consisted of three middle schools. The district served 3,266 students and employs 242 teachers of which 93.40% are classified as highly qualified teachers. 78.49% of the students qualify for free lunch. The racial make-up of the school district was 0.18% Asian, 54.65% Black, 1.01% Hispanic, 0.00% Native American, and 44.15% White. The graduation rate for this school district was 63.9% which is below the state rate of 72.0 %.

The sample consisted of all students assigned to seventh and eighth grade teachers employed in three middle schools from a single Mississippi school district. District enrollment for the three middle schools in 2008-2009 consisted of 248 seventh graders and 240 eighth graders. These students were tested each May using the MCT2 while in middle school. Only students who had a MCT2 test score for both school terms were

used for the study. As a result, the sample consisted of 202 seventh grade students and 214 eighth grade students. The student scores were divided into two groups, those for students assigned to alternate route teachers and those assigned to traditional route teachers. For this study, there were two comparison groups which were (a) seventh grade language arts group and (b) eighth grade language arts group. Scores produced by the students were examined for each comparison group using SPSS.

Instrumentation and Materials

This study used the raw scores from 2009 and 2010 Mississippi Curriculum Test 2nd edition (MCT2) as the source of data collection (Mississippi Department of Education, 2002). The Mississippi Department of Education was responsible for the creation of the test. According to Benigno (2005) the MCT is a combination of sample test questions from the California Achievement Test (CAT-6) and various published test forms (p. 62). Teachers across Mississippi then evaluated the potential questions for connections with the Mississippi Curriculum Frameworks of each class. Once a pool of questions had been developed, a sample test was given in September, 2000. The purpose of this test was to identify questions with bias. Any question that was determined to have high bias was then deleted from the question bank (Mississippi Curriculum Test, 2004).

Scores produced by students on the Mississippi Curriculum Test 2nd edition are first given as a raw score and then converted to a scale score. The raw score is the total number of questions the students got correct. According the Mississippi Curriculum Test, 2nd edition (2010), results of the latest test given (2010), the mean score for all students in the seventh grade (N = 36,354) was 34.1. Mean score result for all eighth

grade students (N = 35,695) was 34.8 (p. 6). Table 1 (See below) shows the performance levels of all seventh and eighth grade students that took the MCT2.

Table 1

Performance Levels of Seventh and Eighth Grade Students on MCT2

Grade	Minimum %	Basic %	Proficient %	Advance %
Seventh Grade	15	32	47	5
Eighth Grade	18	35	40	6

Note. All percentages might not equal 100% due to rounding. (Mississippi Curriculum Test, 2nd edition, 2010, pp. 14-15).

Students' scores were ranked on four levels. The four levels were advanced, proficient, basic, and minimum. Each level had a range score that determined if a student's score was placed on a particular level. The range of scale scores for each test and level are listed in the table. The long range goal of Mississippi is to have all students score 100% mastery all state exams. Table 2 (See below) shows the score ranges for each level.

Table 2

MCT2 Levels and Range Scores

Test	Advanced	Proficient	Basic	Minimum
Language – 7	168 and above	150-167	138-149	137 and below
Language – 8	167 and above	150-166	138-149	137 and below
Math – 7	164 and above	150-163	142-149	141 and below
Math – 8	164 and above	150-163	142-149	141 and below

Note. Mississippi Department of Education, 2010

Data Collection and Analysis

The researcher was responsible for collecting all data from the school district that was used for this study. A letter was presented to the superintendent and school board of the selected school district requesting a copy of all MCT2 scores for their district for the 2008-2009 and 2009-2010 school years (See Appendix A). The MCT2 was given in early May of 2009 and 2010. Scores for each student were listed and coded by whether their teacher was certified by either the AR or TR method. Once all groups had been made, the researcher analyzed the data by using the SPSS statistical software.

The researcher used an independent *t* test to evaluate the mean score difference and report the findings using alternate route and traditional route teachers as variables. According to Gravetter and Wallnau (2008), an independent *t* test is used when a researcher uses data from two samples in order to compare the mean difference between the two groups (p. 259). In this study, the two populations were the seventh grade and eighth grade students who took both the 2009 and 2010 MCT2.

Role of the Researcher

The researcher was employed as an alternate route teacher in this particular school district. This was the researcher's first year as a teacher in this district. The researcher was responsible for teaching a self-contained classroom. The researcher had no position of supervision or evaluation of teachers employed within the selected school district. The students involved in this study were not taught by the researcher. All results of the 2009 and 2010 MCT2 were produced before the researcher was employed with the selected school district.

Measures for the Protection of Participants' Rights

A proposal for conducting this study was presented to the IRB of Walden University for approval. Once IRB approval was obtained (IRB # 02-07-11-0376013), then collection of data took place (See Appendices A and B). Due to the use of past test scores, this was a study of archival data. Since the researcher used only scores produced by students, there were not any participants. A letter stating the purpose of this study and permission for the release of MCT2 scores, employment list, and teacher certification was sent to the Superintendent's Office of the selected county (See Appendix C). Consent forms were not required; only a data use agreement (See Appendix D) was needed. A permission form was signed by the superintendent of the participating school district (See Appendix D). The permission form listed all rights of the participant and contact information should the participant need to speak with an individual with Walden University. All information was kept secure by the researcher. Only the researcher had access to the MCT2 scores. All names of students and teachers and the name of the school district were replaced with letters and numbers to ensure confidentially. This code was known only by the researcher. All data were kept by the researcher in a locked, secure location for a period of five years. At the end of five years, all forms of data will be properly destroyed.

Transition Statement

The purpose of this quantitative study was to determine if students taught by teachers trained by alternative teaching programs had significantly different changes in language art scores as compared to fellow students who were taught by teachers trained

in traditional teaching programs on the Mississippi Curriculum Test 2nd edition (MCT2) in the area of language arts. Section 1 included an introduction of the study, problem statement, nature of study, purpose of study, theoretical base, definition of important terms, assumptions, limitations, scope, and delimitations, and significance of the study. Section 2 provided an in-depth review of current literature pertaining to No Child Left Behind, Mississippi Accountability System, effective and ineffective characteristics of teachers, Mississippi Curriculum Test, a background of the alternate route program and information on standardized testing. Section 3 provided information pertaining to research design, the setting and sample, instrumentation and materials, data collection and analysis procedures, role of the researcher, and protection of participants' rights. Section 4 will include a discussion of the data analysis for the study. Section 5 will provide an interpretation of the findings, implications for social change, and recommendations for future studies.

Chapter 4: Results

Introduction

A quantitative approach was used to conduct this study. The focus of this study was to determine if students who were taught by alternate route teachers had changes in scores that were significantly different on the MCT2 when compared to students who were taught by traditional route teachers. The primary data collection instruments were the 2008-2009 and 2009-2010 language arts scores on the MCT2. Students' scores were categorized based upon which type of teacher (AR or TR) they had for 2009-2010 school term. The students' scores were divided into two categories. The categories were seventh grade language arts and eighth grade language arts. Each individual category was analyzed using SPSS to complete an independent *t* test. The results of the tests provided statistical evidence to answer the following guiding research questions:

- Do students achieve significantly different changes in scores with traditional route teachers on the Mississippi Curriculum Test 2nd edition (MCT2) in seventh grade language arts versus students with alternate route teachers?
- Do students achieve significantly different changes in scores with traditional route teachers on the Mississippi Curriculum Test 2nd edition (MCT2) in eighth grade language arts versus students with alternate route teachers?

Sample Information

The study sample consisted of 202 seventh grade students and 214 eighth grade students attending three middle schools in a Mississippi school district. All teachers primarily taught language arts. Qualifying students were divided into two comparison groups based upon grade level during the 2009-2010 school year and which person was their language arts teacher.

The first comparison group (seventh grade language arts) consisted of a total of 202 students. There were 98 students taught by AR teachers. There were 104 students taught by TR teachers. The second comparison group (eighth grade language arts) consisted of a total of 214 students. There were 32 students who were taught by an AR teacher. There were 182 students who were taught by TR teachers (See Table 3).

Table 3

Student Sample by Grade

	Seventh Grade	Eighth Grade
Alternate Route Group (N =)	98	32
Traditional Route Group	104	182
Total	202	214

Data Analysis Procedures

Scores produced by students on the 2009 and 2010 Mississippi Curriculum Test 2nd edition were used as the quantitative data for this study. The scores were entered into

SPSS 16.0 and coded based upon the year the test was taken and the type of teacher (AR or TR) they were instructed by. This information enabled the formation of two comparison groups (seventh and eighth grade groups). Next, the difference in the student's scores was calculated by subtracting the pre-test score from the final score. Using SPSS 16.0, an independent *t* test was conducted on the difference scores for all students in each comparison group. The independent *t* test was used because the researcher wanted to evaluate the mean difference of scores produced by the students to determine if students taught by alternate route teachers scored significantly different that students who were taught by traditional route teachers. Scores produced in 2009 were used as the pre-test data. Scores from 2010 were used as the post-test data. Type of teacher was used as the grouping variable. Results of the tests provided the following descriptives: Levene's Test for Equality of Variances, *F* factor, significance, *t* score, degrees of freedom, significance (2-tailed), mean difference, standard error difference, and 95% Confidence Interval of the Difference. Tables of this information are displayed under statistical analysis heading of Section Four.

Descriptive Analysis

Seventh Grade Analysis

Data supplied by the school district produced two comparison groups; which were seventh grade language arts and eighth grade language arts. For the seventh grade, group one consisted of 98 students who were taught by alternate route teachers and group two consisted of 104 students who were taught by traditional route teachers. The group statistics provided a mean change in pre-test to post-test scores of 0.22 for students taught

by AR teachers and 2.38 for students taught by TR teachers. The standard deviation for students taught by AR teachers was 5.480 compared to 6.622 for students taught by TR teachers. The standard error of the mean for students taught by AR teachers was 0.554 while the students taught by TR teachers had 0.649 (See Table 4).

Table 4

Seventh Grade Group Statistics

	AR Teachers	TR Teachers
N	98	104
Mean	0.22	2.38
Std. Deviation	5.480	6.622
Std. Error Mean	0.544	0.649

The number, minimum, maximum, mean, standard deviation, and variance of both alternate route and traditional route students' scores are provided in Table 5. For the alternate route, students' scores showing the same information can be found in Table 6. Table 7 provides the same information for students taught by traditional route teachers.

Table 5

Seventh Grade Descriptive Statistics of Scores of Students Taught by Alternate Route and Traditional Route Teachers

	Difference	MCT2 2010	MCT2 2009
N	202	202	202
Minimum	-13	12	12
Maximum	26	60	53
Mean	1.33	31.67	30.34
Std. Deviation	6.174	10.338	8.958
Variance	38.123	106.868	80.246
Std. Error Mean	0.434	0.727	0.630

Table 6

Seventh Grade Descriptive Statistics of Students Taught by Alternate Route Teachers

	Difference	MCT2 2010	MCT2 2009
N	98	98	98
Minimum	12	15	-12
Maximum	60	51	12
Mean	29.7551	29.5306	0.2245
Std. Deviation	10.05865	7.98349	5.48011
Variance	101.177	63.736	30.032

Table 7

Seventh Grade Descriptives Statistics of Students Taught by Traditional Route Teachers

	Difference	MCT2 2010	MCT2 2009
N	104	104	104
Minimum	16	12	-13
Maximum	57	53	56
Mean	1.012	0.958	0.649
Std. Deviation	10.318	9.765	6.622
Variance	106.466	95.358	43.848

Eighth Grade Analysis

The eighth grade group consisted of 32 students who were taught by one alternate route teacher and 182 students who were taught by two traditional route teachers. There were 214 scores produced by their students (See Table 8). The group statistics provided a mean of 0.22 for students taught by AR teachers and -0.57 for students taught by TR teachers. The standard deviation for students taught by AR teachers was 5.235 compared to 7.020 for students taught by TR teachers. The standard error of the mean for students taught by AR teachers was 0.925 while students taught by TR teachers had 0.520. Data

results are provided in Table 6. The number, minimum, maximum, mean, standard deviation, and variance of both alternate route and traditional route students' scores are provided in Table 9. Alternate route students' results can found in Table 10. For the traditional route, students' scores showing the same information can be found in Table 11.

Table 8

Eighth Grade Group Statistics

	AR Teachers	TR Teachers
N	32	182
Mean	0.22	-0.57
Std. Deviation	5.235	7.020
Std. Error Mean	0.925	0.520

Table 9

Eighth Grade Descriptive Statistics of Scores Taught by Alternate Route and Traditional Route Teachers

	Difference	MCT2 2010	MCT2 2009
N	214	214	214
Minimum	-0.19	10	13
Maximum	21	62	60
Mean	-0.45	30.77	31.22
Std. Deviation	6.778	11.809	10.218
Variance	45.939	139.454	104.407

Table 10

Eighth Grade Descriptive Statistics of Students Taught by Alternate Route Teachers

	Difference	MCT2 2010	MCT2 2009
N	32	32	32
Minimum	-13	11	13
Maximum	12	47	45
Mean	0.2188	27.8125	27.5938
Std. Deviation	5.23471	9.48492	8.03564
Variance	27.402	89.964	64.572

Table 11

Eighth Grade Descriptive Statistics of Students Taught by Traditional Route Teachers

	Difference	MCT2 2010	MCT2 2009
N	182	182	182
Minimum	-19	10	13
Maximum	21	62	60
Mean	-0.5659	31.2912	31.8571
Std. Deviation	7.01959	12.11947	10.44382
Variance	49.275	146.882	109.073

Statistical Analysis

An independent samples *t* test was conducted on two separate comparison groups (seventh grade and eighth grade) using scores produced by students on the 2009 and 2010 Mississippi Curriculum Test, 2nd edition by students who were taught by alternate route and traditional route teachers. The following research questions were studied:

- Do students achieve significantly different changes in scores with traditional route teachers on the Mississippi Curriculum Test 2nd edition

(MCT2) in seventh grade language arts versus students with alternate route teachers?

- Do students achieve significantly different changes in scores with traditional route teachers on the Mississippi Curriculum Test 2nd edition (MCT2) in eighth grade language arts versus students with alternate route teachers?

Seventh Grade Analysis

In the area of seventh grade language arts, an independent samples *t* test was conducted. There were 202 students used in this test. The mean difference score for the AR group was 0.22 and 2.38 for the TR group. The standard deviation for the AR group was 5.480 and 6.622 for the TR group (See Table 4). According to Levene's Test of Equality of Variances, the groups were equivalent (significance of 0.289 >.05). Results of the independent samples *t* test provided $t(200) = -2.506$, $p=.013$, $r^2 = .03$ (See Table 12). The percentage of variance shows a small effect when $r^2 = 0.01$. Based upon the results of the independent *t* test the null hypothesis was rejected. Difference scores produced by the students in the TR teacher group ($M = 2.38$) were significantly greater than those in the AR ($M = .22$) teacher group. The Pearson correlation coefficient .804 is significant at the 0.01 level (2-tailed). To check for the inequality of using two groups, the Bonferini Inequality was used. The Bonferini Inequality stated that the significance level be divided by two to get a base number. If the *t* test significance level is less than the base number, the null hypothesis is rejected. For this study, the confidence level was .05 and the significance level was .013. When the confidence level is divided by two, the

result is .025. Since .013 is less than .025, then the null hypothesis is rejected.

Table 12

Seventh Grade t-test Results

Independent Samples Test

			Difference	
			Equal variances assumed	Equal variances not assumed
Levene's Test for Equality of Variances	*F*		1.128	
	Sig.		.289	
t-test for Equality of Means	*T*		-2.506	-2.520
	Df		200	196.764
	Sig. (2-tailed)		.013	.013
	Mean Difference		-2.151	-2.151
	Std. Error Difference		.858	.853
	95% Confidence Interval of the Difference	Lower	-3.842	-3.833
		Upper	-.459	-.468

Eighth Grade Analysis

In the area of eighth grade language arts, an independent samples *t* test was conducted. There were 202 students used in this test. The mean of the difference scores of students taught by AR teachers was 0.22 and -0.57 for students taught by TR teachers. The standard deviation of students taught by AR teachers was 5.235 and 7.020 for students taught by TR teachers (See Table 8). According to Levene's Test of Equality of

Variances, the groups were nonequivalent (significance of 0.019 < .05). Results of the independent samples *t* test for nonequivalent groups $t(52.797) = .739$, $p=.463$, $r^2 = .01$ (See Table 13). The percentage of variance shows a small effect when $r^2 = 0.01$. Based upon the results of the independent *t* test, the null hypothesis was not rejected. Difference scores produced by the students in the AR teacher group ($M = .22$) were greater than those in the TR teacher group ($M = -.57$). The Pearson correlation coefficient .804 is significant at the 0.01 level (2-tailed). To check for the inequality of using two groups, the Bonferini Inequality was used. The Bonferini Inequality stated that the significance level be divided by two to get a base number. If the *t* test significance level is less than the base number, the null hypothesis is rejected. For the eight grade students, the confidence level was .05 and the significance level was .463. When the confidence level is divided by two, the result is .025. Since .463 is greater than .025, then the statistic failed to reject the null hypothesis. Scores produced by the students were not significantly different.

Table 13

Eighth Grade t-test Results

Independent Samples Test

			Difference	
			Equal variances assumed	Equal variances not assumed
Levene's Test for Equality of Variances	*F*		5.604	
	Sig.		.019	
t-test for Equality of Means	*T*		.603	.739
	Df		212	52.797
	Sig. (2-tailed)		.547	.463
	Mean Difference		.785	.785
	Std. Error Difference		1.301	1.062
	95% Confidence Interval of the Difference	Lower	-1.780	-1.345
		Upper	3.350	2.914

Summary

The purpose of this quantitative study was to compare the seventh and eighth grade language arts scores produced by students taught by traditional route and alternate route teachers on the Mississippi Curriculum Test 2nd edition to ascertain if there was a significant difference between results of the groups. The independent variable was the type of teacher certification. The dependent variables for this study were the differences between the 2009 and 2010 MCT2 test scores. An independent samples *t* test was

conducted on each comparison group (seventh grade and eighth grade) to determine the degree of significance in the difference of raw scores. There were a total of 5 teachers, 416 students, and 836 test scores that were used as data for the study.

For the first comparison group (seventh grade language arts), the groups were considered equivalent using the results of the Levene's Test of Equality of Variances (.280 > .05). The results of the independent t-test provided $t(200) = -2.506$, $p=.013$, $r^2 = .03$. As a result of the *t* test, the null hypothesis was rejected. There was a significant difference in the scores produced by students who were taught by alternate route and traditional route teachers.

For the second comparison group (eighth grade language arts), the groups were considered as nonequivalent groups using the results of the Levene's Test of Equality of Variances (.019 < .05). The results of the independent *t* test provided for nonequivalent groups $t(52.797) = .463$, $p=.463$, $r^2 = .01$. As a result of the *t* test, the null hypothesis was not rejected. The scores produced are not statistically different.

As a result of the two independent *t* tests, three of the four groups of students did make a positive gain from 2009 to 2010. In the seventh grade, both groups of students made positive gains based upon the mean scores. The students taught by traditional route teachers made a larger gain than students taught by alternate route teachers. In the eighth grade, only the students taught by alternate route teachers made positive gains. The students taught by traditional route teachers had a negative growth result.

Section 4 has provided a brief introduction, sample information, data analysis procedures, descriptive and statistical analysis, and summary. Section 5 will provide an

interpretation of the findings, possibility for social change, recommendations for further studies, and conclusion.

Chapter 5: Discussion, Conclusions, and Recommendations

Introduction

The focus of this study was to determine if students who are taught by alternate route teachers score significantly different on the MCT2 when compared to students who were taught by traditional route teachers. I sought to answer the following research questions.

- Do students achieve significantly different changes in scores with traditional route teachers on the Mississippi Curriculum Test 2nd edition (MCT2) in seventh grade language arts versus students with alternate route teachers?

Null Hypothesis:

There will be a significant difference in the difference scores of the MCT2 in seventh grade language arts of students taught by alternative and traditional route teachers.

Alternative Hypothesis:

There will not be a significant difference in the difference scores of the MCT2 in seventh grade language arts of students taught by alternative and traditional route teachers.

- Do students achieve significantly different changes in scores with traditional route teachers on the Mississippi Curriculum Test 2nd edition (MCT2) in eighth grade language arts versus students with alternate route teachers?

Null Hypothesis:

There will be a significant difference in the difference scores of the MCT2 in eighth grade language arts of students taught by alternative and traditional route teachers.

Alternative Hypothesis:

There will not be a significant difference in the difference scores of the MCT2 in eighth grade language arts of students taught by alternative and traditional route teachers.

The primary data collection instruments were the scores of the 2008-2009 and 2009-2010 MCT2. Students' scores were categorized based upon which type of teacher they had for 2009-2010 school term. Scores for students in seventh grade and eighth grade language arts classes were analyzed separately. A total of five teachers, 418 students, and 836 test scores were used for this study.

Each individual category was analyzed using SPSS to complete an independent *t* test. The reason this test was used was to evaluate the mean raw score difference produced by students who were taught by each type of teacher for each section of the MCT2. Results of the findings showed that in the seventh grade comparison group, scores were significantly different based upon $t(200) = -2.506$, $p=.013$, $r^2 = .03$. Therefore, the null hypothesis was rejected. In the eighth grade comparison group, the groups were nonequivalent based upon Levene's Test of Equality of Variances ($.019 < .05$). Results of the findings showed that the scores were not significantly different based upon $t(52.797) = .739$, $p=.463$, $r^2 = .01$. Therefore, the statistic failed to reject the null hypothesis.

Interpretation of Findings

The purpose of this study was to determine if students taught by traditional route teachers achieve higher scores on the Mississippi Curriculum Test 2nd edition in language arts versus students with alternate route teachers. Data that were used for the study included two traditional route teachers, three alternate route teachers, 418 students, and 836 test scores.

Research Question One Findings:

- Do students achieve significantly different changes in scores with traditional route teachers on the Mississippi Curriculum Test 2nd edition (MCT2) in seventh grade language arts versus students with alternate route teachers?

In the area of seventh grade language arts, an independent t-test was conducted on the raw score differences. Results of the findings showed that in the seventh grade comparison group, scores were significantly different based upon $t(200) = -2.506$, $p=.013$, $r^2 = .03$. Therefore, the null hypothesis was rejected. The results from independent *t* test are shown in Table 12.

Research Question Two Findings:

- Do students achieve significantly different changes in scores with traditional route teachers on the Mississippi Curriculum Test 2nd edition (MCT2) in eighth grade language arts versus students with alternate route teachers?

In the eighth grade comparison group, the groups were nonequivalent based upon Levene's Test of Equality of Variances (.019 < .05). Results of the findings showed that the scores were not significantly different based upon $t(52.797) = .739$, $p=.463$, $r^2= .01$. Therefore, the statistic failed to reject the null hypothesis. The results from the independent *t* test are shown in Table 13.

As mentioned in the literature review (Section 2), many arguments have been made in favor of both types of certified teacher. Various studies have been conducted with some results showing students score better with traditional route teachers and others show students fair better with alternate route teachers. The overall concern is the effectiveness of the teacher in the classroom regardless of which certification program they are a graduate of. Parents want competent teachers teaching their children. Just because a person graduates from a particular program, does that automatically make the new teacher a better qualified teacher than the graduate of the other program?

This study has provided favorable results for both types of teachers. For students in the seventh grade, there was a significant difference in the scores that were produced. Students taught by traditional route teachers showed an increase in their test scores and this increase was significantly greater than that produced by students taught by the alternative route teachers. On the other hand, students in the eighth grade, there was not a significant difference in the scores that were produced. Students taught by alternate route teachers had a positive gain in their test scores, whereas students taught by traditional route teachers showed a negative growth in their test scores. Based upon the results of the *t* test, the difference in scores were not significant.

In the literature review, many arguments were made that traditional route programs produced the most successful teachers. Based upon this expectation, the results of this study both proved and disproved this notion. In the case of the seventh grade comparison group, students taught by traditional route teachers within this school district did produced significantly higher changes in scores than students taught by alternate route teachers. The results for the eighth grade were inconclusive.

Principals could evaluate both types of language arts teachers to determine what degree of teaching is going on in both classrooms. Principals could compare teaching styles to devise a plan of improvement in order to assist the alternate route teachers' performance within their classrooms. The optimal situation would be to hire a traditional route teacher when possible. This study has shown that students had greater degree of success when taught by TR teachers than by AR teachers. By hiring TR teachers, school districts would provide their students with capable and competent teachers, which in turn will help them in their preparation for the state test.

If principals are in a situation where hiring an AR teacher is the only option, programs could be instituted in order to provide ongoing assistance to the alternate route teachers. Principals could establish a teacher mentoring program. Under this program, AR teachers could be paired with TR teachers so that teaching information could be shared and performance can be monitored throughout the year. This could be done by providing a common planning period so these teachers could meet daily for discussion. Also, principals could require AR teachers attend various professional development seminars that would provide continuing assistance in the art of teaching.

Programs that provide alternative certification could use these results to determine what possible changes could be made to their respective programs. More comparison should be made by these program directors to ensure that AR teachers are being trained with the most up-to-date information and skills in order to be better prepared when they enter the classroom. If they should see major differences between the programs, changes should be made to align AR programs as closely as possible to TR programs. By taking these steps, AR teachers can only become better equipped with teaching skills when they enter the classroom setting. With the importance of today's testing, teachers cannot afford to be lacking in teaching skills.

Implications for Social Change

Many schools across the nation are constantly facing teacher shortages each year. Principals are looking to both colleges and alternative teaching programs to find quality teachers to staff there schools. As mentioned in the literature review, there are many studies that show both the benefits and negatives of hiring both types of certified teachers. With the continuing debate over teaching certification programs, studies such as this can help create social change by providing statistical evidence of the effectiveness shown by teachers certified through both programs. School officials can use these results to help in making hiring decisions of potential teacher candidates. The end result is to provide students with the best possible teacher regardless of certification type.

Recommendations for Action

Both programs need to continue to evaluate their training methods in order to produce highly-qualified and effective teachers. Requirements from No Child Left

Behind are helping to ensure that a quality person is being hired to teach. Schools are using data more often to determine the success of both the students and the productivity of its teachers. Both programs should continue to conduct research studies to determine the effectiveness of their graduates. By having current data, changes can be made to ensure that their candidates are receiving the most up-to-date training methods in order to have the most success possible in the classrooms.

Principals are the main individuals who have to pay attention to results of studies like this. These individuals have to make the hard decision of who to hire to teach their students. The problem they are faced with is that there is not a definite scale for determining which type of teacher is best to hire. They must take into consideration the pros and cons of both types of programs, results from various studies, and "gut feeling." In the end, principals are still taking a chance on the person they hire regardless of their program of study. Data results such as these can help in their decision but can also add to the dilemma due to conflicting results.

Recommendations for Further Study

Since the creation of alternate route programs, arguments have been made over which program is producing the best teachers for today's students. This is sure to be an ongoing debate as long as there is more than one way to receive teacher training. In order to add more research evidence to this debate, it is recommended that future studies be conducted in comparison of both the alternate route and traditional route program in the following areas:

1. Conduct a similar study but also include areas of mathematics and reading.

2. Use a larger student and teacher sample population from various districts across not only this state but the nation to determine if the results produced in this study can be replicated.

3. Conduct similar studies but also include variables such as sex of teacher, teachers of different ethnic backgrounds, and ages of teachers.

Concluding Statement

Arguments will continue to be made concerning the effectiveness of both types of teacher training programs as long as there is more than one in existence. Principals will be faced with the decision of who is best teacher to hire for their students. The results of this study provided positive evidence for both types of certified teachers. In the area of seventh grade language arts, students taught by both AR and TR teachers had positive mean growth in the difference of scores. Difference scores produced by the students in the TR teacher group ($M = 2.38$) were significantly greater than those in the AR teacher group ($M = 0.22$). Based upon the results of the independent t test ($t(200) = -2.506$, $p=.013$, $r^2 = 0.01$), the null hypothesis was rejected. In the area of eighth grade language arts, difference scores produced by the students in the AR teacher group ($M = 0.22$) were greater than those in the TR teacher group ($M = -0.57$). Based upon the results of the independent t test ($t(52.797) = 0.739$, $p=.463$, $r^2=.01$) the null hypothesis was not rejected. Overall, out of four different groups (seventh grade TR and AR students and eighth grade TR and AR students), three groups had a positive mean score difference.

Using results of various studies such as this one can only help principals in their decision making process. Both programs have their share of positive and negative aspects

based upon literature that has been reviewed. Principals should not let the type of teacher certification be a deciding factor when determining who they should hire.

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Appendix A: IRB Approval Letter

Original E-mail
From: IRB <IRB@waldenu.edu>
Date: 02/07/2011 12:50 PM
To: James Wallacei
Subject: Conditional IRB Approval-James Wallace

Dear Mr. Wallace,

This email is to notify you that the Institutional Review Board (IRB) has approved your application for the study entitled, "A Comparison of 2009-2010 Mississippi Curriculum Test 2nd edition Scores of Students Taught by Alternate Route and Traditional Route Teachers." conditional upon the approval of community research partner, as documented in a signed data use agreement. Walden's IRB approval only goes into effect once the Walden IRB confirms receipt of that data use agreement.

Your approval # is 02-07-11-0376013. You will need to reference this number in your doctoral study and in any future funding or publication submissions.

Your IRB approval expires on February 6, 2012. One month before this expiration date, you will be sent a Continuing Review Form, which must be submitted if you wish to collect data beyond the approval expiration date.

Your IRB approval is contingent upon your adherence to the exact procedures described in the final version of the IRB application materials that have been submitted as of this date. If you need to make any changes to your research staff or procedures, you must obtain IRB approval by submitting the IRB Request for Change in Procedures Form. You will receive an IRB approval status update within 1 week of submitting the change request form and are not permitted to implement changes prior to receiving approval. Please note that Walden University does not accept responsibility or liability for research activities conducted without the IRB's approval, and the University will not accept or grant credit for student work that fails to comply with the policies and procedures related to ethical standards in research.

When you submitted your IRB application, you've made commitment to communicate both discrete adverse events and general problems to the IRB within 1 week of their occurrence/realization. Failure to do so may result in invalidation of data, loss of academic credit, and/or loss of legal protections otherwise available to the researcher.

Both the Adverse Event Reporting form and Request for Change in Procedures form can be obtained at the IRB section of the Walden web site or by emailing irb@waldenu.edu: http://inside.waldenu.edu/c/Student_Faculty/StudentFaculty_4274.htm

Researchers are expected to keep detailed records of their research activities (i.e., participant log sheets, completed consent forms, etc.) for the same period of time they retain the original data. If, in the future, you require copies of the originally submitted IRB materials, you may request them from Institutional Review Board.

Please note that this letter indicates that the IRB has approved your research. You may NOT begin the research phase of your doctoral study, however, until you have received the **Notification of Approval to Conduct Research** (which indicates that your committee and Program Chair have also approved your research proposal). Once you have received this notification by email, you may begin your data collection.

Both students and faculty are invited to provide feedback on this IRB experience at the link below:

Please note that this letter indicates that the IRB has approved your research. You may NOT begin the research phase of your doctoral study, however, until you have received the **Notification of Approval to Conduct Research** (which indicates that your committee and Program Chair have also approved your research proposal). Once you have received this notification by email, you may begin your data collection.

1 of 3

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Both students and faculty are invited to provide feedback on this IRB experience at the link below:

http://www.surveymonkey.com/s.aspx?sm=qHBJzkJMUx43pZegKlmdiQ_3d_3d

Sincerely,
Jenny Sherer, M.Ed., CIP
Operations Manager
Office of Research Integrity and Compliance
irb@waldenu.edu
Tollfree : 800-925-3368 ext. 1341
Fax: 626-605-0472
Office address for Walden University:
155 5th Avenue South, Suite 100
Minneapolis, MN 55401

Appendix B: IRB Approval Letter

Forwarded Message: Notification of Approval to Conduct Research-James Wallace

Notification of Approval to Conduct Research-James Wallace

Thursday, February 17, 2011 1:31 PM
From:
"IRB" <IRB@waldenu.edu>
To:
"James Wallaceii" <
Cc:
"mel.finkenberg@waldenu.edu" , "Doctoral Study"

Dear Mr. Wallace,

This email confirms receipt of the signed data use agreement for your community research partner and also serves as your notification that Walden University has approved BOTH your doctoral study proposal and your application to the Institutional Review Board. As such, you are approved by Walden University to conduct research.

Please contact the Office of Student Research Support at doctoralstudy@waldenu.edu if you have any questions.

Congratulations!

Jenny Sherer

Operations Manager, Office of Research Integrity and Compliance

Leilani Endicott

IRB Chair, Walden University

Appendix C: Data Request Letter

February 8, 2011

Dear

I am currently in the process of obtaining my Ed.D from Walden University in the area of Teacher Leadership. I have completed all of my course work and I am now in the process of completing my dissertation.

I am writing to request permission from the School District to use test data from the 2009 and 2010 Mississippi Curriculum Test, 2nd edition for all seventh and eighth graders during this two year period and the teachers who taught them. This information is vital to my dissertation that will be presented to my dissertation committee.

Please know that all information provided will be kept confidential by the researcher. All names of students, teachers, and school district will be changed and replaced with a code known only by the researcher.

Thank you for your time.

Sincerely,

James H. Wallace, II

Appendix D: Data Use Agreement

DATA USE AGREEMENT

This Data Use Agreement ("Agreement"), effective as of February 8, 2011 is entered into by and between James H. Wallace, II and School District. The purpose of this Agreement is to provide Data Recipient with access to a Limited Data Set ("LDS") for use in research in accord with the HIPAA and FERPA Regulations.

1. Definitions. Unless otherwise specified in this Agreement, all capitalized terms used in this Agreement not otherwise defined have the meaning established for purposes of the "HIPAA Regulations" codified at Title 45 parts 160 through 164 of the United States Code of Federal Regulations, as amended from time to time.

2. Preparation of the LDS. School District shall prepare and furnish to Data Recipient a LDS in accord with any applicable HIPAA or FERPA Regulations

3. Data Fields in the LDS. No direct identifiers such as names may be included in the Limited Data Set (LDS). In preparing the LDS, School District shall include the **data fields specified as follows**, which are the minimum necessary to accomplish the research: Names and scores of all students who took the Mississippi Curriculum Test 2nd edition in 2009 and 2010 for seventh and eighth grade language arts and mathematics. Also, the names and certification type of all mathematics and language arts teachers involved in teaching the students in 2009 and 2010.

4. Responsibilities of Data Recipient. Data Recipient agrees to:

   a. Use or disclose the LDS only as permitted by this Agreement or as required by law;

   b. Use appropriate safeguards to prevent use or disclosure of the LDS other than as permitted by this Agreement or required by law;

   c. Report to Data Provider any use or disclosure of the LDS of which it becomes aware that is not permitted by this Agreement or required by law;

   d. Require any of its subcontractors or agents that receive or have access to the LDS to agree to the same restrictions and conditions on the use and/or disclosure of the LDS that apply to Data Recipient under this Agreement; and

   e. Not use the information in the LDS to identify or contact the individuals who are data subjects.

5. Permitted Uses and Disclosures of the LDS. Data Recipient may use and/or disclose the LDS for its Research activities only.

6. Term and Termination.

   a. Term. The term of this Agreement shall commence as of the Effective Date and shall continue for so long as Data Recipient retains the LDS, unless sooner terminated as set forth in this Agreement.

   b. Termination by Data Recipient. Data Recipient may terminate this agreement at any time by notifying the Data Provider and returning or destroying the LDS.

   c. Termination by Data Provider. Data Provider may terminate this agreement at any time by providing thirty (30) days prior written notice to Data Recipient.

   d. For Breach. Data Provider shall provide written notice to Data Recipient within ten (10) days of any determination that Data Recipient has breached a material term of this Agreement. Data Provider shall afford Data Recipient an opportunity to cure said alleged material breach upon mutually agreeable terms. Failure to agree on mutually agreeable terms for cure within thirty (30) days shall be grounds for the immediate termination of this Agreement by Data Provider.

   e. Effect of Termination. Sections 1, 4, 5, 6(e) and 7 of this Agreement shall survive any termination of this Agreement under subsections c or d.

7. Miscellaneous.

   a. Change in Law. The parties agree to negotiate in good faith to amend this Agreement to comport with changes in federal law that materially alter either or both parties' obligations under this Agreement. Provided however, that if the parties are unable to agree to mutually acceptable amendment(s) by the compliance date of the change in applicable law or regulations, either Party may terminate this Agreement as provided in section 6.

   b. Construction of Terms. The terms of this Agreement shall be construed to give effect to applicable federal interpretative guidance regarding the HIPAA Regulations.

   c. No Third Party Beneficiaries. Nothing in this Agreement shall confer upon any person other than the parties and their respective successors or assigns, any rights, remedies, obligations, or liabilities whatsoever.

   d. Counterparts. This Agreement may be executed in one or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument.

e. Headings. The headings and other captions in this Agreement are for convenience and reference only and shall not be used in interpreting, construing or enforcing any of the provisions of this Agreement.

IN WITNESS WHEREOF, each of the undersigned has caused this Agreement to be duly executed in its name and on its behalf.

DATA PROVIDER	DATA RECIPIENT
Signed: _	Signed: J. H. Wallace, III
Print Name:	Print Name: James H. Wallace, III
Print Title: Superintendent	Print Title: Teacher / Researcher

Curriculum Vitae

James Howard Wallace, II, B.S., M.Ed.

E-mail: james.wallaceii@waldenu.edu

ACADEMIC EXPERIENCE

2007 – 2011	Doctor of Education – Teacher Leadership Walden University, Minneapolis, Minnesota
2002 – 2003	Master of Education – Secondary Education William Carey University, Hattiesburg, Mississippi
1994 – 1996	Bachelor of Science – Coaching/Sports Administration University of Southern Mississippi, Hattiesburg, Mississippi
1992 - 1994	Student, Jones County Junior College Ellisville, Mississippi
1992	Graduate, North Forrest High School Hattiesburg, Mississippi

RELEVANT PROFESSIONAL EXPERIENCE

1998 – 2011	Junior high and high school history teacher.

LICENSURE AND CERTIFICATIONS

114 – Driver Education (7-12)
144 – Physical Education (K-12)
192 – Social Studies (7-12)
221 – Mild/Moderate Disabilities (K-12)

PROFESSIONAL ORGANIZATIONS

Mississippi Association of Coaches

HONARS AND AWARDS

Kappa Delta Pi Honor Society Member
Alpha Epsilon Xi Member – Walden University