The Influence of Classroom Instruction and Test Preparation on School Accountability Levels

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THE INFLUENCE OF CLASSROOM INSTRUCTION 
AND TEST PREPARATION ON SCHOOL 
ACCOUNTABILITY LEVELS

by

Karen Adair Carter Bryant

Abstract of a Dissertation
Submitted to the Graduate School 
of the University of Southern Mississippi
in Partial Fulfillment of the Requirements
for the Degree of Doctor of Philosophy

May 2012
Federal and state educational agencies provide guidelines for public schools across the United States to follow (Linn, 2008; Levy, 2008). During a time of high-stakes testing fueled by school accountability standards, educators strive to meet requirements for academic growth in order to maintain a successful accountability level and avoid being labeled as a school under improvement (Behrent, 2009; Hardman & Dawson, 2008). Some argue that the demands of accountability standards pressure administrators and teachers to provide less than adequate instruction in order to focus on the content of mandatory state tests (Abrams & Madaus, 2003; Anderson, 2009; Behrent, 2009; Hamilton, 2003; Neill, 2003; Pedulla, 2003). This study examined the instructional strategies prevalent in public schools across the state of Mississippi. The study compared instructional strategies supported by research with test practice activities and the relationships of each to school accountability levels. Other components under investigation included school poverty levels, instructional materials, test prep materials, and teacher opinions about mandatory state testing.

The results indicated that for the sample in this study, instructional strategies did not predict accountability levels, but the results identified three other variables that
possibly predicted accountability. A higher percentage of students in a school below the poverty level and the use of curriculum pacing guides predicted a lower accountability level for the sample in this study. Evidence of a variety of test prep materials also predicted a higher accountability. Waiting until near the end of a course to begin test prep activities, also slightly predicted accountability levels to increase for the sample in this study.

Further investigation revealed that most teachers surveyed spent several days per week on test practice rather than engaging students in activities supported by research. The frequency of test prep activities by most of the teachers surveyed revealed that mandatory state tests place an astounding level of influence on public school education. Although most surveyed teachers confirmed that they frequently engaged students in test prep activities, the high performing schools that participated in the study portrayed a balance of test prep activities and more effective instructional strategies. In contrast, almost all of the participating schools under academic watch stated that test prep activities occurred at least four days a week from the beginning of the course.
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A Dissertation
Submitted to the Graduate School
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CHAPTER I
INTRODUCTION

Background

The typical educator is likely to refer to problems with student achievement and accountability requirements when asked about prevalent issues among public schools in the United States (Levy, 2008). Modern school administrators are bombarded with state and federal guidelines and under pressure to produce high levels of academic performance from all students, regardless of backgrounds or levels of intelligence (Linn, 2008; Levy, 2008). Although stressors common to the educational community in 2012 may seem unique, in reality, educational pioneers probably experienced many similar quandaries (Ornstein & Levine, 2008). This research traced educational trends from the early years to modern reforms and attempted to uncover common characteristics in contemporary schools that may influence student achievement. Specifically under investigation were how daily classroom practices and instructional materials influenced standardized test scores used to compute accountability levels.

Accountability

No Child Left Behind was a law that contained educational goals established by the United States federal government (No Child Left Behind Act, 2001). Among the guidelines of NCLB (2001) is the major goal that all students will perform on grade level by 2014 (Hardman & Dawson, 2008; Linn, Baker, & Betebenner, 2002). Some argue that the goals of NCLB are not realistic and in some cases may even cause public school educators in the United States to become discouraged (Kasmin & Farmer, 2006; Linn, 2003). Nevertheless, since President Bush signed NCLB into law in 2002 (Balk &
Gruenert, 2009; Hursh, 2005; Linn, 2008; Sterbinsky, Ross, & Redfield., 2006) a demand for schools to perform at higher than ever achievement levels emerged. Schools that failed to show appropriate gains in student achievement were identified publicly as in “need of improvement” (Behrent, 2009; Hardman & Dawson, 2008; Hursh, 2005; Kasmin & Farmer, 2006) and school leaders were held accountable for the low performance of their students (Hardman & Dawson, 2008). The quality of student achievement within a school has increasingly become a responsibility shared equally among administrators, teachers and students (Linn, 2003).

It is the responsibility of individual state departments of education to design accountability models that will measure the standards mandated by federal guidelines (Kasmin & Farmer, 2006; Linn et. al., 2002; Orlich, 2010). Since public schools that choose to participate in federally funded programs must be in compliance with minimal standards, state departments of education have established accountability models that align with federal requirements (Abrams & Madaus, 2003; Hursh, 2005; Linn, 2003; Sterbinsky et al., 2006). State accountability models are required to measure academic achievement of all students, and standardized testing has become the major evaluation technique (Hursh, 2005; Linn et al., 2002; Linn, 2008).

Each year, public school students are tested to measure the degree of academic achievement acquired during the school year. To be in compliance with the standards of No Child Left Behind (2001), students must show academic gains in grades 3 – 12 for language arts, mathematics, and science (Abrams & Madaus, 2003; Kasmin & Farmer, 2006; Linn, et. al., 2002). Schools that achieve targeted gains are identified as having adequate yearly progress (AYP) and avoid being placed under school improvement
sanctions (Abrams & Madaus, 2003; Kasmin & Farmer, 2006). Although standardized testing has been a part of public education for years, the pressure to perform has been inflated by the state and federal guidelines and the use of high stakes testing directed by No Child Left Behind (Hardman & Dawson, 2008; Hursh, 2005; Linn, 2003). Scores from annual standardized tests are publicized via internet, newspapers, and used as a means to rank schools and school districts across the United States (Behrent, 2009; Hursh, 2005).

In the past, schools may have avoided low ratings by excluding scores of the students who were predicted to perform poorly on standardized tests (Hardman & Dawson, 2008). The No Child Left Behind Act (2001) includes a clause that protects those children by requiring all students to achieve at a proficient level on academic measures for their appropriate grade levels (Hardman & Dawson, 2008; IDEA, 2004; Kasmin & Farmer, 2006). School officials have been placed under pressure to ensure that all students learn at appropriate levels regardless of intelligence, cultural backgrounds, and life experiences (Abrams & Madaus, 2003; Linn et al., 2002). As a result, teachers, students, and administrators are sharing the responsibility for academic achievement (Hardman & Dawson, 2008; Hursh, 2005; Viola, 2008).

The pressure to meet federal guidelines has caused school administrators to place an emphasis on instruction as an attempt to improve achievement for all students, regardless of individual backgrounds (Matsumura, Garnier, Slater, & Boston, 2008; Viola, 2008). Even students who have been ruled as having a learning disability are not exempt from state accountability models (Hardman & Dawson, 2008). In order to meet federal guidelines, schools must test at least 95% of their eligible students; not only as a
whole, but also within each subgroup, which includes any category that contains 40 students or more (Hursh, 2005; Linn, 2009). In the past, students with a learning disability were tested on individual instructional levels and not much emphasis was placed on quality instruction for these students (Hardman & Dawson, 2008). Since the implementation of No Child Left Behind, schools have been required to measure academic performance for all students; therefore, all subgroups must be assessed annually and demonstrate academic improvement (Borkowski & Sneed, 2006). Quality instruction that ensures learning for all students may be the best option to satisfy an increased demand for academic performance (Anderson, 2009; Beecher & Sweeny, 2008; Wiggins, 2010).

Theoretical Framework

Since ancient philosophers mankind has been searching for effective methods of instruction (Frederick, 1934). Aristotle (384-322 BC) introduced Realism, which placed an emphasis on experiences of the senses and learning through direct experiences (Butler, 1957; Ornstein & Levine, 2008). Realists believed that there were natural realities and that students best learned about the world’s truth through discovery techniques such as the scientific method (Ornstein & Levine, 2008; Wilds & Lottich, 1970). Pragmatism, founded by John Dewey in the twentieth century, was another educational philosophy that supported experimentation and the scientific method as effective learning experiences (Butler, 1957; Frederick, 1934). Pragmatists believed that students learn best when they are involved in problem solving and discovery (Butler, 1957).

Constructivism is a modern learning theory that has pragmatic characteristics (Fosnot, 2005). A constructivist teacher provides student-centered instruction by
allowing social interactions and active engagement among students (Shapiro, 2003). In a constructivist classroom individual learning styles and students’ interests are important during the learning process and new knowledge is built from prior knowledge of the learner (Brooks & Brooks, 1993). Educational theorists whose ideas contributed to the constructivist theory of learning include John Dewey, Jean Piaget, and Heinrich Pestalozzi (Fosnot, 2005; Shapiro, 2003).

**Instruction**

Extensive educational research, prompted largely by the cognitive learning theory of Jean Piaget and the direction of John Dewey, identified research-based instructional strategies used in modern classrooms (Brooks & Brooks, 1999; Hickman Neubert, & Reich, 2009: Shapiro, 2003). More recently, educational contributor, Robert Marzano, (1998) reported on a meta-analysis that included results compiled from numerous studies related to instructional strategies. The study was conducted by the staff of Mid-Continent Research for Education and Learning, McREL. The meta-analysis, resulted in the following nine instructional strategies that emerged as the most effective: 1) identifying similarities and differences; 2) summarizing and note taking; 3) reinforcing effort and providing recognition; 4) homework and practice; 5) nonlinguistic representation; 6) cooperative learning; 7) setting objectives and providing feedback; 8) generating and testing hypotheses and cues; 9) questions, and advance organizers (Marzano, Pickering, & Pollock, 2001). Guides and professional development sessions based on McREL’s study have been developed and are available for educators (Dean, Doty, & Quackenboss, 2005; Marzano et al., 2001).
A second renowned educator is Carol Ann Tomlinson, who has largely contributed to the expansion of differentiating instruction among students. According to Tomlinson (2010) students make greater strides in achievement when instruction is individualized. A standard classroom includes students with various learning preferences from a variety of backgrounds (Tomlinson & Imbeau, 2010). Students who are taught by strategies that match the way they learn generally achieve better than they would in a generic classroom (Turville, 2008). Teachers who take the time to know their students’ interests and learning preferences are more likely to produce activities that enhance academic performance (Tomlinson, 2008; Turville, 2008). In a differentiated classroom students are challenged, but material is introduced according to prerequisite skills already obtained by learners (Tomlinson & Allan, 2000). Students in such a classroom may feel secure but challenged to achieve to the best of their abilities (Tomlinson & McTighe, 2006).

Problem Statement

The current federal requirements for public education contain rigid guidelines that have resulted in intense pressure for schools to demonstrate adequate achievement among all groups of students (NCLB, 2001). Although school administrators should strive to create a positive climate conducive to learning, in order to ensure maximum student achievement (Marzano, Waters, & McNulty, 2005), the pressure to produce high test scores and accountability levels has influenced many school administrators to place higher demands on teachers (Viola, 2008). In response to such strict demands, teachers may spend more instructional time practicing for standardized tests than they spend engaging students in quality learning activities (Abrams & Madaus, 2003; Matsumera et
al., 2008). Studies indicate that high-stakes testing does not improve achievement and in some cases even hampers student learning (Neill, 2003). Wiggins (2010) stated that the problem is not with the tests per se, but with the instructional strategies being used in schools.

This study examined the accountability system for Mississippi and its relationship with school demographics and classroom practices prevalent in Mississippi’s public schools. The dependent variable for this study was the numerical quantity titled Quality of Distribution Index (QDI) that is calculated from standardized test scores for all public schools in Mississippi. The independent variables included the following: types of instructional strategies prevalent in a school, the point of a course when test prep activities began, days per week spent on test prep activities, instructional materials, test prep materials, and percentage of students in poverty. There was also an open-ended question that allowed teachers to elaborate on any questionnaire item or related topic.

Purpose of the Study

Because such a great emphasis has been placed on student achievement and school accountability, administrators are searching for strategies that will likely boost standardized test scores (Hardman & Dawson, 2008; Viola, 2008). The purpose of this study is to identify classroom practices in Mississippi Public Schools that influence scores on mandatory state tests. Many prior studies focused on the relationship of school demographics, and student achievement. This study, however, placed an emphasis on classroom practices common among teachers of a particular school. According to Wiggins (2010) teachers who implement quality instruction instead of merely practicing for standardized tests will produce higher achievement levels among students. In
contrast, many schools have narrowed the curriculum and placed an emphasis on test preparation (Anderson, 2009; Viola, 2008). Data gathered from this study will reflect the relationship between classroom practices and student achievement. Results of this study revealed if the accountability system used by the Mississippi Department of Education was influenced by classroom practices.

Hypothesis

Public schools in Mississippi that implement quality, research-based instructional strategies as defined by Marzano (1998) and Tomlinson (1999) will be awarded a higher QDI than schools emphasizing standardized test practice.

Research Questions

1. Do instructional strategies influence the Quality of Distribution Index assigned to public schools in Mississippi?

2. Does the amount of instructional time spent on test prep activities influence Quality of Distribution Index for public schools in Mississippi?

3. Do instructional materials influence the Quality of Distribution Index assigned to public schools in Mississippi?

Definitions

- **Academic Achievement** – For the purpose of this study, academic achievement is the mastery of specific skills outlined in the *Mississippi Curriculum Frameworks* for language arts, mathematics, and science as measured by the Mississippi State Testing Program (MDE, 2009a).

- **Academic Growth** – For the purpose of this study, academic growth is the measure of change in academic achievement from one year to the next,
calculated from scores on annual assessment data. Growth is determined from a formula approved by the Mississippi Department of Education (MDE, 2009a & MDE, 2010a).

- **Academic Measure** – For the purpose of this study, academic measure is the evaluation method used to calculate scholastic mastery. Academic measures include, but are not limited to, standardized assessments used to determine the level of student achievement for a school.

- **Academic Performance** – For the purpose of this study, academic performance is the level of content mastery exhibited by a student. Academic performance is measured by standardized assessments based on specific standards established by the Mississippi Department of Education (MDE, 2009a).

- **Accountable** – For the purpose of this study accountable refers to students, teachers, and school administrators being held responsible for gains made on mastery of scholastic content based on specific skills set by the Mississippi Department of Education (Zhao, 2009a).

- **Accountability Level** – For the purpose of this study, accountability level is the classification assigned to a school based on the academic achievement and growth of students within the school. Accountability Levels are calculated by a mathematical formula from student scores on standardized state assessments, academic growth, and high school completion. Schools will be awarded the following levels: failing, at risk of failing, low performing, academic watch, successful, high performing, or star school (MDE, 2009a & MDE, 2010a).
• **Accountability Model** – For the purpose of this study, accountability model is the formula used to determine the accountability level that is assigned to schools in Mississippi. The accountability model used by the Mississippi Department of Education includes formulas that measure achievement, academic growth, and high school completion (MDE, 2009a & MDE, 2010a).

• **Accountability System** – For the purpose of this study, the process that holds schools responsible for academic achievement. The system includes statewide assessment, student accountability standards, formula for assigning accountability levels, and plan for low achieving schools to improve (MDE, 2009a & MDE, 2010a).

• **Accountability standards** – For the purpose of this study, the guidelines required for public school districts and individual schools to meet performance standards of growth and achievement (MDE, 2009a).

• **Achievement Levels** – For the purpose of this study, achievement levels are labels awarded to individual students based on performance of standardized state assessments. Students may earn advanced, proficient, basic, or minimal according to specific cut marks on mandatory state tests (MDE, 2010a).

• **Adequate Achievement** – For the purpose of this study, adequate achievement is a set cut score demonstrated by performance on skills assigned by the Mississippi Curriculum Frameworks. Adequate achievement is defined as proficient (MDE, 2009a).

• **Adequate yearly progress (AYP)** – No Child Left Behind (2001) requires state departments of education to have a model or system for determining whether
schools and school districts have met annual achievement criteria. AYP is the measure of academic growth evident in schools based on standardized test scores (MDE, 2009a).

- **Advanced** – For the purpose of this study, advanced is the label awarded to individual students who perform above grade level on mandatory state tests. Advanced scores indicate that students performed clearly beyond what is required in the grade or content area (MDE, 2010a).

- **Assessment** – For the purpose of this study assessment is the instrument or method used to gather data and analyze the level of knowledge retained for a specific set of skills (Tomlinson & Imbeau, 2010).

- **Basic** – For the purpose of this study, basic is the label assigned to individual students who perform slightly below grade level on a mandatory state test. Basic scores indicate that students performed some standards at a low level of difficulty (MDE, 2010a).

- **Classroom Practices** – For the purpose of this study, classroom instruction includes all activities, materials, resources and evaluation techniques used for the purpose of teaching specific skills to a group of students in a school room (MDE, 2009a).

- **Curriculum** – For the purpose of this study, curriculum is the content intentionally taught to students in a district, school or classroom (Glickman, Gordon, & Ross-Gordon, 2004, p. 406).

- **Differentiated instruction** – To differentiate is to plan and implement instruction based on individual characteristics of students; including, but not
limited to, learning preferences, ability level, background knowledge (Voltz, Sims, & Nelson, 2010).

- **Effective Instruction** – Instruction is effective when teaching practices and behaviors establish and implement conditions that promote student learning (MDE, 2009a, p.75).

- **Eligible Student** – For the purpose of this study, an eligible student is one who is required to participate in mandatory state testing. A student may be eligible based on enrollment in a tested grade level or subject area (MDE, 2009a).

- **Growth Expectation** – For the purpose of this study, growth expectation is the goal set for individual schools to reach on mandatory test scores among the same group of students based on improvement in scores from the previous year (MDE, 2009a).

- **High Stakes Testing** – For the purpose of this study, mandatory statewide assessments used to evaluate student progress and measure the academic performance of a school in order to assign the schools a grade (Voltz et al., 2010).

- **Individualized Instruction** – For the purpose of this study, the delivery of content is planned and executed based on learning preferences, interest, ability level, and prior knowledge of the skills being taught (Tomlinson & Imbeau, 2010).

- **Instructional Leader** – For the purpose of this study, the individual responsible for leading decisions about curriculum and instructional delivery among teachers in a school (Tucker & Codding, 1998).
• **Instructional Strategy** – For the purpose of this study, the method of organizing and delivering skills to students is an instructional strategy (Voltz et al., 2010).

• **Instructional Time** – This is the amount of time which is dedicated to teaching and learning (Wong & Wong, 1998).

• **Learning Preference** – For the purpose of this study, how students respond to instruction. It includes “learning styles, intelligence, and other factors that influence how students respond to learning experiences” (Turville, 2008).

• **No Child Left Behind (NCLB)** – An act that was signed into law in 2002 under the direction of President George W. Bush. NCLB contains rigid guidelines that guide educational agencies to ensure quality education for all students. Accountability for academic achievement and high stakes testing are key components of NCLB (Zhao, 2009a).

• **Mandatory State Test** – This is the label awarded to the required achievement test that measures academic achievement of individual students, schools, and school districts. Used to assess basic skills in grade levels and subject areas selected by statewide assessment systems (MDE, 2009a).

• **Meta-Analysis** – This is the name assigned to a research project when multiple studies of the same subject are grouped together statistically to evaluate the results of the group as a whole (Cone & Foster, 2006).

• **Minimal** – This is the label given to students who score far below grade level. Minimal scores indicate that students need remedial instruction in grade level content (MDE, 2010a).
• *Performance Based Assessment* – The name awarded to evaluations in the form of constructed responses, such as portfolios and projects that allow teachers to determine at a glance how well the student understands what has been taught. Performance assessments are usually scored by a rubric (Voltz et al., 2010).

• *Prerequisite Skill* – The name of skills and knowledge present in students prior to learning; based on background knowledge and life experiences (Block & Parris, 2008).

• *Proficient* – For the purpose of this study, proficient is the label assigned to students who score grade level on mandatory state tests. Proficient scores indicate that the student performed at the level of difficulty specified by the grade-level content standards (MDE, 2010a).

• *Quality of Distribution Index (QDI)* – This term is a measure of the distribution of student performance on state assessments around the cut points for Basic, Proficient, and Advanced performance (MDE, 2009a, p. 34)

• *Research-Based Instruction*– For the purpose of this study, this term was used to represent instructional strategies supported by dependable educational studies which indicate positive effects (Marzano et al., 2001).

• *Response to Intervention (RTI)* – This is the method of ensuring success for struggling students through a structures plan of identification, implementation of intervention, and evaluation of student progress (Quinn, 2009).

• *School Improvement* – The label assigned to federally funded schools that fail to meet AYP in a single subject area by a single subgroup for two consecutive
years when at least 95% of each subgroup is tested (Borkowski & Sneed, 2006).

Delimitations

This study was delimited in the following ways:

1. Participants were delimited to teachers of courses that are assessed by mandatory state tests in Mississippi Public Schools.
2. Participants were delimited to teachers who were employed by a Mississippi public school district during the 2010 – 2011 school year.
3. Participating schools were delimited to those consisting of at least one grade level or subject area that participates in Mississippi’s State Assessment Program.
4. Test scores and school demographics were delimited to data provided by the Mississippi Department of Education via website for the 2010 -2011 school year.
5. Data collection was delimited to survey methodology and statistical data posted on the Mississippi Department of Education’s website.
6. Variables for the study were delimited to the Quality of Distribution Index (QDI) for the participating schools as the dependent variable and the following independent variables:
   a. Types of instructional strategies prevalent in a particular school
   b. Point of course when test prep activities began
   c. Days per week that included test prep activities
   d. Instructional materials
e. Test prep materials

f. Percentage of students in the poverty level

Assumptions

1. School characteristics and classroom practices were sufficient indicators to test the hypotheses of this study.

2. All schools followed proper procedures during standardized testing.

3. Data provided by the Mississippi Department of Education were accurate and complete.

4. Participants answered questionnaire items honestly and completely.

Justification

This study was important because the quality of education provided for students in Mississippi public schools is dependent upon the quality of instruction provided for them. Numerous educators have expressed concerns that high-stakes testing may hinder a quality education (Behrent, 2009; Brookhart, 2009; Chester, 2005). Wiggins (2010) stated that quality instruction will result in higher scores on standardized tests than will spending instructional time practicing for those tests. The results of this study might lead to a greater understanding of relationships between accountability levels and classroom activities. Such knowledge might be beneficial to school leaders in the era of increased accountability and possibly guide them to modify the educational practices in their schools.

Summary

Due to state and federal guidelines, educational leaders are under pressure to produce high test scores and accountability levels (Levy, 2008; Linn, 2008). The
demands of NCLB (2001) and the influence of high stakes testing on school accountability influenced this study. There is abundant research on school accountability, mandatory state testing, and efficient instructional strategies (Abrams & Madaus, 2003; Anderson, 2009; Ausubel, 1968; Behrent, 2009; Brooks & Brooks, 1999; Lay & Brown, 2009; Linn, 2003; Marzano, 1998; Rock, Gregg, Ellis, & Gable, 2008; Tomlinson, 2010). The purpose of this study is to connect accountability and standardized testing with classroom practices. Hopefully, educational leaders will gain valuable information from this study that can be used for strategic planning or future research.
CHAPTER II

REVIEW OF THE LITERATURE

School Accountability

Introduction

Classroom teachers assign grades to individual students to measure content mastery. Federal and state governments, likewise, assign grades to public schools and districts to hold them accountable for providing a quality education for students across the United States. Although it may seem as if school accountability is a new concept, this review of the literature illustrated that the education of students in the United States has been under government scrutiny for many years. This review also provided information about school accountability, mandatory testing programs, and quality instruction as reported by the literature.

History

Since the early nineteenth century, during the common school era, state legislators have dictated guidelines for organizing public schools, establishing districts, and funding compulsory education for children in the United States (Ornstein & Levine, 2008). Even earlier, in 1642, parents of colonial Massachusetts were fined if they failed to teach their children to read (Rothstein, Jacobsen, & Wilder, 2009). Although the federal government has held a constant interest in education, school policies and procedures have historically been the responsibility of individual states and local school districts (Hursh, 2005). It was not until 1980 that the Federal Office of Education became the official Department of Education (Ornstein & Levine, 2008).
Infiltration of federal requirements for public schools gradually evolved based on court cases, world events, and racial tensions. For instance, when the Soviet Union launched *Sputnik* in the late 1950s, Americans were alarmed that the USSR sent the first satellite into space (Fowler, 2008). This landmark event launched an overwhelming interest in science and technology which influenced legislators to place more emphasis on educational policies, thus instigating more involvement with local and state educational responsibilities (Ornstein & Levine, 2008).

School desegregation in the 1960s and 1970s added an increased interest in the equality of public schools in the United States (Rock et al., 2008). One of the largest social science research projects of its time, commonly known as *The Coleman Report*, originated due to questions about equal funding of “black” and “white” schools (Kahlenberg, 2001). Although the Coleman Report (Coleman et al., 1966) revealed that economic status and classmates had more influence on student achievement than race; results of his study heavily influenced racial integration (Kahlenberg, 2001). The civil rights movement, magnified by Coleman’s research in conjunction with Supreme Court Cases, was a contributing factor to increased federal involvement in public schools (Hardman & Dawson, 2008). The landmark racial desegregation case, *Brown v. Board of Education* and passage of the federal law, *Individuals with Disabilities Education Act* were two significant milestones that insured all students the right to an appropriate education in the United States (McCarthy, McCabe, & Thomas, 2004).

With new laws in place, public educational agencies were required to provide services for disabled and at risk students; therefore, the federal government began to increase supplemental funding based on individual school needs (Ornstein & Levine,
Another federal law aimed at assisting at risk students was the Elementary and Secondary Education Act (ESEA), which passed in 1965 to designate funding for school districts based in part on the number of students from households below the poverty level (Odden & Picus, 2004). Since its passing, ESEA Title I funds have been distributed under various guidelines and labels, with the monetary awards constantly increasing (Odden & Picus, 2004). For instance, federal funding for education, including higher education, increased from $9.2 billion in 1970 to $141.7 billion in 2005 with the greatest increase of approximately $39 million between 2002 and 2005 (Ornstein & Levein, 2008). Although increased spending for education became the trend, research soon indicated that money did not necessarily increase achievement unless successful research-based improvement practices were also implemented (Odden, 2007). However, it was not until 1983, during Ronald Reagan’s presidency, that the federal government began to seriously question academic achievement (Wong & Sunderman, 2007). President George H. W. Bush directed education reform toward six national goals titled *America 2000: An Education Strategy* (Donohue, 1994). Under the next presidential administration, Bill Clinton signed *Goals 2000: Educate America Act* into law and kept the reform goals established by the governors during the Bush administration (Johnson, 1994; Peters-Johnson, 1994). President Clinton was very committed to school desegregation and worked to redistribute federal funds to school districts with the greatest needs (McAndrews, 2004). He also attempted to diminish the separation of at risk students by including their academic performance in accountability measures (Wong & Sunderman, 2007).
No Child Left Behind

During the presidency of George W. Bush, federal involvement in education increased in the United States (Borkowski & Sneed, 2006; Linn, 2008; Wong & Sunderman, 2007). The No Child Left Behind Act of 2001 was a reauthorization of the Elementary and Secondary Education Act of 1965 and set high standards and goals for all students including those who qualified for special services. (Hardman & Dawson, 2008; Karen, 2005; Kasmin & Farmer, 2006; Linn, 2003; Linn, 2008; Linn, Baker, & Betebenner, 2002; Sterbinsky et.al., 2006) A major goal of NCLB was that all students would be performing at grade level by the year 2014 (Hardman & Dawson, 2008; Linn et al., 2002). In order to achieve universal gains in student achievement, NCLB guidelines required states to increase rigor in their curriculum frameworks and develop an assessment that measured reading, math, and science achievement (Borkowski & Sneed, 2006; Hursh, 2005; Massey, 2009; MDE, 2010b; Tienken, 2009).

No Child Left Behind, 2001, requires schools to include at least 95 percent of students in statewide testing (Borkowski & Sneed, 2005; Hursh, 2005; Linn, 2003). Not only are schools required to assess 95 percent of the total school population eligible for testing, but also each subgroup of students that makes up the general population (Borkowski & Sneed, 2006; Kasmin & Farmer, 2006; Linn, 2008). Subgroups are categorized according to factors such as; socioeconomic status, race and those identified as having a learning disability (Wong & Sunderman, 2007). If any subgroup fails to demonstrate adequate academic gains on designated standardized tests, the school will not satisfy federal growth requirements (Karen, 2005; Linn et al., 2002). Academic growth is measured in units of adequate yearly progress (AYP), determined by
calculating the change in standardized tests scores of the same group of students from one year to the next (Hursh, 2005; Kasmin & Farmer, 2006; Linn et al., 2002; Linn, 2008). In order to meet AYP all subgroups within a school must show academic growth (Borkowski & Sneed, 2006; Linn et al., 2002). Schools that fail to meet AYP for two consecutive years in any one subgroup will be placed on improvement status and required to submit a plan of research-based improvement practices to be implemented during the following year (Abrams & Madaus, 2003; Borkowski & Sneed, 2006; Wong & Sunderman, 2007).

Regulations of No Child Left Behind require states to annually publish average test scores for each of their public schools (U.S. Department of Education, 2001). Because test scores are published through various media sources, teachers, students, and educational leaders face tremendous pressure to demonstrate adequate academic gains (Erickson, 2008). If schools fail to show adequate growth and are labeled as under improvement parents obtain the option to transfer their children to a school within the same district, demonstrating higher academic performance (Borkowski & Sneed, 2006; Hursh, 2005; Wong & Sunderman, 2007). However, few parents each year choose this option to transfer their children from a failing school, and there has been no indication that students who did transfer were provided with increased academic opportunities (Behrent, 2009).

Mississippi School Accountability

Karen (2005) asserted that to prevent education from becoming a federal responsibility, NCLB permitted states to design their own accountability models, but annual state plans had to be reviewed and approved by the U. S. Department of
Education. Mississippi and other states, have developed and revised accountability systems since the passing of The No Child Left Behind Act in 2002 (Linn, 2008). However, Mississippi accountability standards can be traced back, to 1896, when the first program of studies for an approved high school was published by the University of Mississippi (Mississippi Department of Education, 2009a). Since that first publication, educational standards in Mississippi have evolved into a grand scheme, complete with an 84 page accountability manual. Mississippi educational standards have been revised numerous times to meet federal requirements (Mississippi Department of Education, 2009a).

At the time of this study, the accountability model created by the Mississippi Department of Education measured student performance on standardized language arts and mathematics tests for grades three through eight; and high school courses in English II, Algebra I, U. S. History, and Biology I (Mississippi Department of Education, 2010b). The model included the following major goals (Mississippi Department of Education, 2010b):

1. Goal 1: Reduce the dropout rate to 13% by 2013
2. Goal 2: To increase Mississippi’s scores on national assessments to the national average by 2013
3. Goal 3: All third graders will be reading on grade level by 2020 as demonstrated by performance on state tests.

The model also calculated high school graduation rate and academic growth (Massey, 2009) (See Table 1). The Mississippi Department of Education, in compliance with federal guidelines, requires that 95 percent of each subgroup be assessed. A
subgroup includes any group of students within a school that has at least 40 members (NCLB, 2001).

Table 1

*Mississippi Statewide Accountability System: A Conceptual Framework*

<table>
<thead>
<tr>
<th>Quality of Distribution Index (QDI)</th>
<th>Inadequate Academic Gain</th>
<th>Appropriate Academic Gain</th>
<th>High School Completion Index (HSCI) or Graduation Rate (5-Year)</th>
</tr>
</thead>
<tbody>
<tr>
<td>200-300</td>
<td>High Performing</td>
<td>Star School</td>
<td>230 HSCI or Graduation Rate ≥ 80%</td>
</tr>
<tr>
<td>166-199</td>
<td>Successful</td>
<td>High Performing</td>
<td>230 HSCI or Graduation Rate ≥ 80%</td>
</tr>
<tr>
<td></td>
<td>Successful</td>
<td>Successful</td>
<td>School Without Graduates</td>
</tr>
<tr>
<td>133-165</td>
<td>Academic Watch</td>
<td>Successful</td>
<td></td>
</tr>
<tr>
<td>100-132</td>
<td>Risk of Failing</td>
<td>Academic Watch</td>
<td></td>
</tr>
<tr>
<td>00-99</td>
<td>Failing</td>
<td>Low Performing</td>
<td></td>
</tr>
</tbody>
</table>

*Note.* Public domain document taken from the Mississippi Department of Education (2010b)

High Stakes Testing

*Introduction*

Although several components may be included when calculating school accountability, standardized testing carries the most weight in both state and federal
models (Linn, 2003). Public access to results of mandatory state tests places excessive pressure on school officials (Erikson, 2008).

Opinions among educators vary about the use of high-stakes testing (Abrams & Madaus, 2003; Anderson, 2009; Behrent, 2009; Lay & Brown, 2009; Linn, 2003; Neill, 2003; Pedulla, 2003; Viola, 2008; Wiggins, 2010). Many supporters of high stakes testing argue that striving to meet standards has increased rigor, narrowed achievement gaps among diverse groups of students, and ensured an equal education for all students (Lay & Brown, 2009). They assert that holding schools accountable for student achievement by tracking standardized test scores has forced educators to recognize the needs of all students, which may not have been the case prior to NCLB (Benigno, 2006; Skrla, Scheurich, Johnson, & Koschoreck, 2001).

Those opposed to high-stakes testing argue that labeling students according to test scores has caused them to have low self-esteem and produced potential drop outs among low scoring students (Erickson, 2008; Nichols & Berliner, 2008; Neill, 2003). Some believe too much instructional time has been spent practicing for the test, which leaves students unprepared to master grade-level content (Erickson, 2008; Matsumura et al., 2008). Others claim that teachers are impelled to spend instructional time practicing for the tests, thus leaving less time to engage students in more effective learning activities (Abrams & Madaus, 2003; Anderson, 2009; Behrent, 2009; Hamilton, 2003; Neill, 2003; Pedulla, 2003). Many believe that the pressure on teachers to produce high test scores has influenced them to teach test-taking skills, rather than guiding students to become independent life-long learners (Anderson, 2009; Behrent, 2009).
Some studies revealed minimal changes in achievement gaps among diverse groups of students, regardless of high-stakes testing (Lay & Brown, 2009) and the emphasis on standardized assessments resulted in too much instructional time spent preparing for tests (Anderson, 2009). One theory is that mandatory state testing has produced a negative effect because educators have not approached it correctly (Wiggins, 2010). Instead of increasing rigor and improving instruction, many educators try to prepare for the tests by placing too much emphasis on standardized test practice, causing students to suffer from impeded learning (Matsumura et al., 2008). As a result, scores on the standardized tests often reflect learning deficiencies (Wiggins, 2010). According to Anderson (2009) evidence that supports test preparation as a strategy to improve academic achievement or to increase test scores is non-existent. Wiggins (2010) stated that “Teaching for greater understanding would improve results, not threaten them – as both common sense and the research indicate” (p. 52). If standardized test scores were used to coach teachers based on what the scores revealed about their instruction instead of labeling them as good or bad, districts may begin to create a collaborative climate among educators that is conducive to student learning (Matsumura et al., 2008).

Additionally, some believe that high-stakes testing has caused schools to neglect the needs of gifted students, produced an environment of boredom, and suppressed creativity (Nichols & Berliner, 2008; Zhao, 2009a). With so much attention on improving low test scores, educators may tend to spend less instructional time on enrichment activities (Anderson, 2009; Erickson, 2008). Etscheidt and Knesting (2007) assert that programs such as Response to Intervention (RTI) have coerced educators to dedicate their time and energy into finding special interventions targeted toward students
who struggle with academics. Teachers are held accountable for providing extra consideration for students who need remedial instruction, but not for students who would benefit from enrichment activities (Johnson & Smith, 2008).

Multiple Measures

There are mixed opinions of high stakes testing among educators, but most individuals agree that testing should be used to measure student achievement, identify student weaknesses, and evaluate teacher effectiveness, but not for funding schools or labeling students (Etscheidt & Knesting, 2007; Lay & Brown, 2009; Tienken, 2009). Many educators agree that using multiple measures to make decisions about student achievement is better than labeling a student or a school, based on a single assessment (Brookhart, 2009; Chester, 2005; Joint Committee on Testing Practices, 2010; U. S. Department of Education, 2001). Although many educators agree that using multiple measures produces a better and more comprehensive evaluation, state and federal guidelines generally require only one type of assessment for the purpose of measuring accountability (Hebbler, 2009; Linn, 2003; No Child Left Behind, 2001). Tracking data has forced administrators to measure student and teacher performance by a single test regardless of the intellectual expansion of creativity and individualism manifested by the students (Abrams & Madaus, 2003; Anderson, 2009; Behrent, 2009).

Student Achievement

Instructional Resources

The major goal of educators is to improve achievement for all students, which generates a literature pool abundant with educational publications aimed at school improvement (Blankstein, 2004; Marzano et al., 2005; Silva & Mackin, 2002). There is
also a wealth of research-based educational practices available for schools to adopt (Fiore & Whitaker, 2005; McTighe & Wiggins, 2004; Marzano et al., 2001; Tomlinson, 2003; Tomlinson & McTighe, 2006) The Mid-continent Research for Education and Learning (McREL) staff, for example, have conducted many studies, sponsored by the U.S. Department of Education and aimed at finding effective methods to be used for school improvement (McREL, 2010). Several professional development series used in Mississippi were developed by the McREL staff (Dean et al., 2005; Parsley, Dean & Eck, 2007; Waters, McNulty, Grubb, & Cameron, 2007). Another source of educational guidance is the Association for Supervision and Curriculum Development (ASCD) and their publication, Educational Leadership (ASCD, 2010). Organizations such as ASCD and McREL offer educators research-based resources to assist with school improvement efforts.

**Viable Curriculum**

A viable curriculum is another very important element for student achievement (Jacobs, 2010). States continuously revise standards to comply with federal requirements, and develop curriculum that meets the demands necessary to produce high test scores (Erickson, 2008). This focus has sometimes influenced educators to narrow the curriculum to the minimal content that is assessed by state mandated tests (Anderson, 2009; Jacobs, 2010; Matsumura et al., 2008).

Because compliance with federal guidelines has become so important, a universal core curriculum may become the choice for many states (Cavanagh, 2009; Zhao, 2009b). Since the goal for state departments of education is to raise achievement to the national average, some stakeholders believe that states should move toward a common core of
national curriculum standards (Barton, 2010; Tienken & Zhao, 2010). Most states have shown an interest in joining the initiative to form common standards for language arts and mathematics (Cavanagh, 2009). At the time of this study only 5 states had not formally adopted the Common Core State Standards, including the state of Mississippi (Common Core State Standards Initiative, 2012). The movement toward a national core curriculum is not without controversy as in Zhao’s (2009b) statement that the formation of common core standards would “cause irreversible damage to American education, which has already suffered from No Child Left Behind” (p. 46). Mississippi formally adopted the Common Core Curriculum and plans to begin common core assessments in 2014-2015 (MDE, 2012).

The desire to raise student achievement to the national average may not be the only motivation for the adoption of a common core. Just as federal funding has pressured the incessant revisions in state accountability models, monetary awards might be the incentive for common standards. Barack Obama, in a speech to the Hispanic Chamber of commerce, expressed concern for the wide range of achievement among students from state to state (Bracey, 2009/2010). Shortly after that speech the National Governors Association and the Council of Chief State School Officers developed a set of common core standards (Bracey, 2009/2010). The Common Core State Standards Initiative formed and states began to join (National Governors Association Center for Best Practices & Council of Chief State School Officers, 2009). The newly elected president encouraged states to participate in the common core standards initiative by making the adoption a requirement for schools that want to compete for some of his federally funded programs (Zhao, 2009b).
Theoretical Framework

Introduction

Although the educational domain changes continuously with modernized terms and strategies, most of the current trends can be traced to a foundational theory recorded by educational pioneers from centuries ago. A study of educational history may reveal that learning has not changed, but the methods of instruction circulate through a constant turbulence in search of the best way to educate the human race. Epistemology is a term assigned to theories of knowledge for growth, development, and learning (Steffe & Gale, 1995). Throughout recorded history, psychologists, philosophers, and educators used epistemologies to develop individual philosophies of education (Ornstein & Levine, 2008). From educational philosophies, theories evolved that influenced methods of instruction used by educators then and now.

Educational Pioneers

Swiss educator, Johann Heinrich Pestalozzi (1746-1827), sought to develop schools that would nurture children’s development (Ornstein & Levine, 2008). Pestalozzi wanted to develop a child centered school environment with methods of instruction that allowed the learner to gain knowledge by active participation, similar to the way they mastered farming and mechanical skills through real life experiences (Green & Lond, 1969). His venture was not only to develop a school conducive to learning, but also to reform society by improving the lives of common people (Good, 1960). Pestalozzi was a philanthropist who had a deep compassion for the poor and oppressed (Anderson, 1974; Good, 1960; Green & Lond, 1969). At an early age, Pestalozzi observed differences between his wealthy city peers and the ragged country children,
whose liveliness was stifled around age six (Silber, 1960). It became his life ambition to change lives of the less advantaged population from oppression to success and happiness, through the means of a quality education (Anderson, 1974). “From Pestalozzi more than from any other man came the spirit which has enabled the great educational reforms of the nineteenth century to be carried through” (Green & Lond, 1969, p. 14-15).

The first of Pestalozzi’s publications to earn prevailing attention was *Leonard and Gertrude*, about a loving mother in an oppressed Swiss village who divulged his message that school should resemble a loving home except supply a wider variety of information (Anderson, 1974; Good, 1960; Green & Lond 1969; Krusi, 1875). In 1798 during a time of political unrest in his country, Pestalozzi accepted a position as school master for war orphans in Stanz and his lifelong dream was soon a reality (Krusi, 1875; Wilds & Lottich, 1970). The school at Stanz was brief, but “in those five months Pestalozzi had done work which can never be forgotten, for his orphan school at Stanz is the cradle of the modern elementary school” (Green & Lond, 1969, p. 44).

Pestalozzi’s educational theories evolved during a schooling trend that consisted of rote memorization of the three R’s (Anderson, 1974). Green and Lond (1969) stated the condition of schooling clearly in the following excerpt:

> Of method in teaching, as we understand it, there was not thought. A child would come to school not knowing his alphabet. The teacher would show it to him in his book, say it to him once over pointing to the letters and tell him to sit down and learn it. In an hour-and-a-half the teacher would come again to test him. This process would go on for many weeks, until finally the child could say it through and was ready to take the next step. Want of method, and ignorance on the part of
the teacher were made up for by an abundant use of the rod. The children hated the school, and learned nothing there that could possibly help them to lead self-respecting lives. (p. 14)

Pestalozzi declared that children should not be handed preconceived ideas, but instead should be guided to develop those ideas by their own constructive powers (Silber, 1960). He felt that learning should begin with concrete objects, advance to abstract concepts and always proceed gradually and cumulatively to gain a thorough understanding of what they study (Ornstein & Levine, 2008). Pestalozzi strived to be a practical educator and believed that learning must be based upon experience gained either from home or school (Good, 1960). According to Pestalozzi, his greatest contribution was the idea that “education begins with the perception of concrete objects, the performing of concrete acts, and the experiencing of actual emotional responses” (Eby, 1952, p. 462-463). Edward A. Sheldon, superintendent of Oswego Schools of New York, helped to establish the Pestalozzian principles and methods in The United States in 1860, when he hired Hermann Krusi to train teachers in the new Oswego Normal School (Wilds & Lottich, 1970).

John Dewey (1859-1952), American educator and philosopher, was born at Burlington, Vermont, and schooled in Vermont’s public system, The University of Vermont, and John Hopkins University (Eby, 1952). After teaching high school for three years, Dewey returned to study philosophy for one year at his alma mater, and then earned a Ph.D. from John Hopkins University reporting The Psychology of Kant for his dissertation (Butler, 1957). Dewey was a professor at the University of Michigan, the University of Minnesota, and head of Psychology, Philosophy, and Education at the
University of Chicago (Eby, 1952; Butler, 1957). During his position at the University of Chicago, Dewey opened the University Elementary School as a means for experimental research (Eby, 1952). From his research with what became known as the Laboratory School, Dewey solidified his philosophies and presented his ideas through the publication of two books, *The School and Society* (1899) and *Democracy and Education* (1916) (Wilds & Lottich, 1970).

John Dewey’s contributions were recognized around the world and by age forty-six, he was named one of America’s best known educators (Steffe & Gale, 1995). He was an experimental educator who revised his philosophy as educational research supported a need for modifications (Good, 1960). Throughout Dewey’s life his philosophy of education evolved into ideas that were contradictory to the traditional rote memorization of a rigid curriculum (Hickman et al., 2009). Dewey’s philosophy was pragmatic and he contributed greatly to the progressive-education movement in the United States (Butler, 1957). His supposition that past experiences, environment, and student engagement are all components of learning, characterize the constructivist learning theory (Hickman et al., 2009). Dewey also considered the scientific method an effective educational tool that causes children to think reflectively for enhanced personal and social growth (Ornstein & Levine, 2008).

Swiss biologist, philosopher, and psychologist, Jean Piaget (1896-1980), spent most of his career studying the thought processes of children from infancy to adolescence (Boden, 1979; Modgil, Modgil, & Brown, 1983; Watson, 1971). Piaget was born in Neuchatel, Switzerland on August 9, 1896 and had published his first scientific paper, about the sighting of an albino sparrow, by age eleven (Boden, 1979). His essay about
the albino sparrow, in addition to many other published articles throughout high school, began a successful career that produced over sixty books and hundreds of articles (Jean Piaget Society, 2011). Piaget continued his interest in science at the University of Neuchatel where he earned The Doctor of Natural Sciences Degree (Boden, 1979). During his studies, Piaget developed an interest in the logical structures of a child’s mind and decided to “explore children’s thinking further for the light it might throw on the nature and development of human knowledge in general: psychology, he thought, was the embryology of intelligence” (Boden, 1979, p. 4).

Piaget contributed his theory of cognitive development to educational research and declared that understanding the process of thinking is necessary to master the concept of knowledge (Modgil, Modgil, & Brown, 1983). His cognitive theory included stages of development based on age level, and Piaget declared that children will not learn until they reach the age that corresponds with the assigned task (Boden, 1979). Piaget had two fundamental propositions: That “learning is secondary to development; and that learning is most effective when the learner is actively involved” (Modgil et al., 1983, p.63). Piaget used his familiarity of adaptation, acquired from his study of biology, and applied the principal to knowledge; declaring that knowledge cannot stand as an independent truth, but must instead adapt from a prior experience (Fosnot, 2005). Jean Piaget, founder of empirical developmental psychology, contributed to the educational community by sharing the results from his study of the way children form basic concepts which prompted educators to begin the search for more effective learning strategies (Brooks & Brooks, 1999; Shapiro, 2003).
Philosophies and Theories

Realism is a philosophy that developed from the ideas of Aristotle, a philosopher during the time of ancient Greece (Ornstein & Levine, 2008). Aristotle, a naturalist, combined pre-Socratic’s and Sophists’ notion of extreme sensationalism with Plato’s position of extreme rationalism to declare that “knowledge is gained from sense experience and thinking” (Watson, 1971, p. 70). “Realism in education connotes concrete knowledge, practical and vocational skills, the learning of languages for commercial or diplomatic rather than for literary use, and the study of history, politics, law, and the sciences” (Good, 1960, p. 171). Spanish scholar, Juan Luis Vives (1492-1540), a humanist, contributed to realism with his notion that direct experience is a valuable foundation for teaching and learning; adding that all children vary in learning styles, attention spans, and reasoning skills (Good, 1960). John Lock, (1632-1704), although not a man of the study, contributed considerably to the Realist Theory (Good, 1960). Locke, who believed that education contributes more to the character of an individual than genetics, established four principles to his educational doctrine: utility, rationality, practice or conditioning, and direct experience (Eby, 1952; Good, 1960).

A major contributor to realism was Czech educator, John Amos Comenius (1592-1670), who believed that human beings are naturally capable of acquiring knowledge and that failure to do so is the fault of “conditions, society, and schools” (Good, 1960, p. 193). Comenius further asserted that education is a basic human need and that schools should be available for all, regardless of class, gender, or intelligence (Eby, 1952; Good, 1960; Wilds & Lottich, 1974). Through his publications, Comenius declared that in schools: “instructors should teach what will be useful in life; appeal to the senses and
understanding rather than to the authority of books; studies must not only be understood but must also be impressed upon the memory; studies must be carefully graded and organized; it is useful to have pupils teach other pupils for we learn nothing so well as what we teach to others” (Good, 1960, p. 194). “To attain his educational objective, Comenius asserted that three things were essential: good textbooks, good teachers, and good methods; and that the school must provide opportunity for movement, spontaneity, social relations, rivalry, good order, and, finally, pleasurable exercises in learning” (Eby, 1952, p. 183). In his book, The Great Didactic, Comenius outlined a plan for good schools and two hundred years later the United States democracy adopted his plan; opening public schools to all peoples, regardless of race, gender, or social status (Good, 1960; Wilds & Lottich, 1974). In summary, Realists view the world as literal with objects produced by God; and knowledge is the key factor that guides human behavior (Ornstein & Levine, 2008). The realists were concerned with the scientific knowledge provided by humanistics and ascertained that a passion for this realistic knowledge was the path to a more satisfying life (Eby, 1952).

A second philosophy, pragmatism, is also known as experimentalism because pragmatists believe that ideas should be tested via the scientific method before being confirmed as true (Ornstein & Levine, 2008). Although this philosophy was founded in the twentieth century, principles of pragmatism have been evident since the fifth century BC, when Heraclitus declared that all things change, and the Sophists affirmed sense perception, that nothing really exists except the way man responds to a stimulus of nature (Butler, 1957). John Dewey, a founder of pragmatism, adopted Heraclitus’ principle of change, but revised the sophists’ sense perception by adding experimentation (Butler,
Dewey believed that “truth is neither discovered nor invented, but constructed as a byproduct of the process of solving problems” (Hickman et al., 2009, p. 14). Teachers in a pragmatist classroom would teach problem solving and require students to discover information rather than simply providing subject matter for students (Orstein & Levine, 2008).

Constructivism is a psychological theory about knowledge and learning that is based on the biological foundation that knowledge and mind are one entity (Fosnot, 2005). Constructivists believe that learning involves more than merely gaining facts presented through lecture or print (Steffe & Gale, 1995). To understand new material the learner must be able to relate to it to prior knowledge (Ausubel, 1968). A key idea of constructivism was that “knowledge does not and cannot have the purpose of producing representations of an independent reality, but instead has an adaptive function” (Fosnot, 2005, p. 3). Constructivism, with roots in pragmatism, is not a teaching method, but rather a psychological theory that provides an intangible basis for motivated teachers who needed a research-based premise for what they already knew was quality instruction (Fosnot, 2005; Steffe & Gale, 1995).

John Dewey contributed to constructivism before the theory was assigned a name (Hickman et al., 2009). Dewey shared with Piaget, the notion that learners who are actively engaged will gain a deeper understanding and that past experiences have an impact on learning (Steffe & Gale, 1995). The work of Jean Piaget, especially contributions later in his career, helped to develop the psychological basis of constructivism (Fosnot, 1995). Piaget was the founder of experimental educational psychology and emphasized that a “child constructs his own reality” (Shapiro, 2003, p.
Although Piaget focused primarily on cognitive development of an individual learner, he did not neglect social influences completely, but Soviet psychologist, Lev Vygotsky, declared that social interactions were a viable learning tool (Hickman et al., 2009). Vygotsky ascertained that dialogue, either within oneself or among others, positively influenced learning and that the most effective instruction happens when a teacher leads the student to a level of learning that is mutually constructed (Fosnot, 1995). Piaget’s cognitive theories were difficult for some educators to understand and Vygotsky’s work was left incomplete due to his untimely death at age thirty-eight (Bruner, 1986), but Bruner and Haste (1990) expanded on the work of Piaget and Vygotsky to establish a foundation for constructivist views among psychologists and educators.

The key constructivist approach to education is that learners “construct mental models of their environment, and new experiences are interpreted and understood in relation to existing mental models or schemes” (Steffe & Gale, 1995, p. 386). Learners build, or construct, new concepts upon prior knowledge (Ausubel, 1968; Fosnot, 1995; Brooks & Brooks, 1999) with the focal point of instruction to achieve cognitive development and deep understanding (Fosnot, 1995). The constructivist approach to education consists of active, student-centered instruction and is, therefore, a direct contradiction to the traditional approach of direct instruction which is considered as passive and teacher centered (Shapiro, 2003). According to Brooks and Brooks (1999) there are five dominant characteristics in a constructivist classroom: Teachers encourage students to express their feelings and opinions, Instructional activities allow students to build upon life experiences, teachers take students’ learning preferences and interests into
account when planning lessons, and assessments consist of evaluation of daily classroom activities. In a constructivist classroom teaching and learning coincide as the student gains knowledge through constant guided interaction with the teacher (Fosnot, 2005).

Classroom Activities

Research-Based Instruction

Federal guidelines require all instruction to be based on methods and activities supported by research to produce positive results (Fuchs & Deshler, 2007) and there is a plethora of research on instructional strategies used in K-12 classrooms (Marzano, 1998). For example, Hattie, Briggs, & Purdie (1996) identified 21,000 studies on classroom practices that affected student achievement. Marzano (1998) reported on a meta-analysis conducted by the staff of Mid-continent Research for Education and Learning (McREL) that measured effects of instructional strategies used in K-12 classrooms. The meta-analysis resulted in the identification of nine instructional strategies that were determined to have the greatest influence on student achievement. McREL’s meta-analysis reported by Marzano (1998) identified the following nine instructional strategies: Identifying Similarities, Summarizing and Note Taking, Reinforcing Effort and Providing Recognition, Meaningful Homework and Practice, Nonlinguistic Representation, Cooperative Learning, Setting Objectives and Providing Feedback, Generating and Testing Hypotheses, and Using Cues, Questions, and Advanced Organizers. An explanation of the nine most effective instructional strategies is listed in Appendix A.

All nine strategies had an effect size of .59 or higher indicating that students increased achievement by at least a percentile gain of 22 (Dean et al., 2005). Marzano, Pickering, and Pollock (2001) elaborated on the nine instructional strategies from
McREL’s meta-analysis and produced a guide for effective classroom instruction in *Classroom Instruction that Works*. The aforementioned publication has been transformed into a professional development series for teachers and administrators (Dean et al., 2005).

**Differentiated Instruction**

Perhaps the most important goal of NCLB is that all students will receive an appropriate education and become proficient by 2014 (Borkowski & Sneed, 2006). Some argue that the NCLB goal is impossible and that it is unethical to ask students to master standards beyond their cognitive abilities (Orlich, 2010). However, teachers have a responsibility to teach all students and a solid foundation is to believe that all students can learn (Blankstein, 2004). In order to boost achievement for all students, teachers should provide concentrated instruction that is individualized for specific learning characteristics (Hardman & Dawson, 2008), meeting students where they are academically and taking them as far as they can go (Levy, 2008). Varying instruction increases the chance of success for all students within the diverse group that makes up a normal classroom (Levy, 2008; Tomlinson, 2003).

Tomlinson and others have published books and articles about differentiated instruction that offer educators explicit directions for reaching all students successfully (Benjamin, 2005; Blaz, 2008; Rock et al., 2008; Tomlinson, 2003; Tomlinson & McTigh, 2006; Turville, 2008). Differentiated instruction is a new term for the process in which teachers vary instruction to meet the needs of their students (Rock et al., 2008), and according to Tomlinson, “is just good teaching” (as cited in Wells & Shaughnessy, 2010, p. 648). Teachers want useful and scientifically established methods that can be easily implemented in the classroom (Tobin, 2008). Differentiated instruction is a simple
concept that addresses the intellectual and emotional needs of all students (Tomlinson, 2003). The theoretical framework for differentiated instruction is based on four guiding principals, seven essential beliefs, and based on five essential classroom elements (Wells & Shaughnessy, 2010).

Rock et al., (2008) reported the following four guiding principals of differentiated instruction according to Tomlinson (1999): Focus on essential ideas and skills in each content area, responsiveness to individual student differences, integration of assessment and instruction, and an ongoing adjustment of content, process, and products to meet individual students’ levels of prior knowledge, critical thinking, and expression styles. Rock et al., (2008) also described seven essential beliefs of differentiated instruction as published by Tomlinson (2000):

1. Same-age students differ markedly in their life circumstances, past experiences, and readiness to learn
2. Such differences have a significant impact on the content and pace of instruction
3. Student learning is heightened when they receive support from the teacher that challenges them to work slightly above what they can do independently
4. School is connected to their real-life experiences
5. Student learning is strengthened by authentic learning opportunities
6. Student learning is boosted when they feel they are respected and valued within the context of the school and community
7. The overarching goal of schooling is to recognize and promote the abilities of each student.
Tomlinson and Strickland (2005) identified five elements common among differentiated classrooms. Those five elements are listed below:

1. **Content** – What students will learn
2. **Process** – How students will connect personally to the learning.
3. **Products** – What evidence students will produce from their learning
4. **Affect** – The interactive nature of mind and emotions
5. **Learning Environment** – The learning climate and operational structures

Differentiating instruction for students is more than simple ability grouping (Levy, 2008; Tomlinson, 2003). Differentiated instruction is based on three primary assumptions; readiness to learn, interest, and a background for learning (Tomlinson & Allen, 2000). Brain Research (Jensen, 1998) supports the readiness theory with evidence that students learn best when they are comfortable with the task. When students are “neither over challenged nor under challenged” (Tomlinson & Allen, 2000 p. 19) learning is most likely to transpire. Students differ in numerous ways and when teachers get to know their students, attending to individual needs may be less difficult (Tomlinson & McTighe, 2006). A student interest inventory is a good way to find out valuable information that can be used when planning instruction (Turville, 2008).

A large component of differentiated instruction is assessment of various learning styles and interests, used when planning to address the needs of all students (Dunn, Honigsfeld, & Doolan, 2009). Before attempting to differentiate learning styles and interests, teachers need to understand their own styles and preferences (Benjamin, 2002). Teachers who use only one method of instruction may not be successful with all students.
in a class (Levy, 2008; Rock et al., 2008; Wells & Shaughnessy, 2010) and may even fail to meet the needs of anyone (Tomlinson, 2003). Learning activities should be designed to match the learning styles of students in the class (Levy, 2008; Tomlinson, 2003). When students are presented material in a way that captures their interests and corresponds with their learning preferences, retention is more likely to occur (Tomlinson, 1999).

There are many examples of activities that teachers can use to differentiate instruction (Benjamin, 2002; Benjamin, 2005; Hamm & Adams, 2008; Rock et al., 2008; Tobin, 2008; Tomlinson, 2003; Tomlinson & McTighe, 2006; Turville, 2008). Group work, known as cooperative learning, is one example of differentiated instruction (Tomlinson, 2003). In order for group work to be true cooperative learning, the activity must involve more than just assigning students to work in groups (Frey, Fisher, & Everlove, 2009; Tomlinson, 2003). Cooperative learning activities should be well planned with learning objectives that require students to collaborate while strengthening individual weaknesses and building on individual strengths within the group (Tomlinson, 2003). The teacher should have a specific plan for grouping students and refrain from ability grouping most of the time (Marzano et al., 2001). Cooperative learning not only increases student achievement, but also provides a valuable life skill for students (Frey et al., 2009).

Assessment

Assessment is also a key factor for successful instruction (Deuel, Nelson, Slavit, & Kennedy, 2009; Smith, 2009; Stiggins, 2003). Although traditional paper and pencil exams remain the norm for classroom assessment, research has revealed that using a
variety of assessments can be more meaningful (Brookhart, 2009; Maylone, 2009). Grading based on a set of standards can improve the quality of feedback provided for students (Clymer & Willam, 2007). A performance based assessment such as a rubric for visuals, essays, or projects provides kinesthetic learners an opportunity to demonstrate understanding that a paper and pencil test could not (Blaz, 2008). Allowing students to create test questions for their peers also provides learning opportunities (Smith, 2009). There are numerous types of assessments that can be effective if student learning is the desired outcome (Blaz, 2008). Regardless of the assessment type, the learning goals should target the desired outcome so that students are clear about what is important (Winger, 2009). In any case, if the result of assessment is constructive feedback, learning is likely to occur (Fisher & Frey, 2009).

**Teacher Quality**

Quality instruction from talented teachers is the foremost element that distinguishes a good school from a bad school (Fiore & Whitaker, 2005). Hammond (2000) found a positive correlation between teacher quality and student achievement by means of data obtained from 50 states. Benigno (2006) in *Teaching – Excellence or Survival*, included the following quote from Dr. Hiam Ginott:

> I have come to the frightening conclusion that I am the decisive element in the classroom. It is my personal approach that creates the climate. It is my daily mood that makes the weather. As a teacher, I possess tremendous power to make a child’s life miserable or joyous. I can be a tool of torture or an instrument of inspiration. I can humiliate or humor, hurt or heal. In all situations, it is my
response that decides whether a crisis will be escalated or de-escalated and a child humanized or dehumanized. (p. 123)

Teachers have the opportunity to make school pleasant and meaningful while inspiring students to achieve to the highest degree (Wolk, 2008). Believing that their students can learn is a common characteristic of educators in successful schools (Blankstein, 2004; Denton, Foorman, & Mathes, 2003; Fiore & Whitaker, 2005).

According to Blankstein (2004), “High-performing schools realize that what they do matters to the learning of each of their students, and that all children can indeed perform at high levels” (p. 101). A study of schools that consistently produced successful readers revealed a common factor, that teachers expected all students to achieve (Denton et al., 2003). Striving to reach all students is a key component of NCLB (Hardman & Dawson, 2008; Linn et al., 2002) and research has indicated that teachers make a significant difference in student achievement (Blankstein, 2004; Denton et al., 2003; Fiore & Whitaker, 2005; Hammond, 2000).

*Response to Intervention*

Response to Intervention (RTI) is a formula to meet the needs of students who would otherwise fall behind academically (Sawyer, Holland, & Detgen, 2008). RTI measures not only a student’s level of achievement, but also the value of instruction that is offered to the student (Ardion, Witt, Connell, & Koenig, 2005). The requirements of NCLB (2001) and Individuals with Disabilities Education Improvement Act (IDEA, 2004) have influenced educators to identify students who are struggling and provide appropriate interventions to help them succeed (Etscheidt & Knesting, 2007). RTI is a
way to insure that educators have given all students suitable learning opportunities before referring a student for special testing (Johnson & Smith, 2008).

Several states have adopted RTI through attempts to identify and instruct students who struggle academically (Smith, Fien, Basaraba, & Travers, 2009; Sawyer et al., 2008). In years past, students had to fail before being offered special services, but the RTI process allows students to learn at a modified pace with individualized instruction (Bradley, Danielson, & Doolittle, 2007). A three-tier model is commonly used to implement RTI (Hollenbeck, 2007). With this type of model, there are three levels of interventions (Smith et al., 2009). The first level is labeled Tier I and consists of research-based instruction aimed at meeting the needs of all students in the regular classroom (Johnson & Smith, 2008; Smith et al., 2009). Academic progress is measured in Tier I by a universal screener administered to all students three times a year, followed by more frequent tracking of progress in the second and third tiers (Hollenbeck, 2007). Students in Tier I are assessed to determine how their academic performance compares to classmates when taught objectives from the state adopted curriculum frameworks (Ardoin et al., 2005). If Tier I is implemented correctly, 85 percent of the students should be successful (Johnson & Smith, 2008). In Tier II students who struggle during the first tier participate in small group or individual instruction and concentrate on a specific skill (Johnson & Smith, 2008). Students who are not successful during the second tier are moved to Tier III, which is composed of more intense, student specific instruction (Mississippi Department of Education, 2007). Tier III is also the step prior to referral for special education evaluation (Johnson & Smith, 2008).
Many states, including Mississippi, have implemented a three-tier model to satisfy the requirements of Response to Intervention (Mississippi Department of Education, 2005). The Mississippi Board of Education (2012) adopted the following three-tier model for teachers to follow for student intervention:

1. **Tier 1**: Quality classroom instruction based on the Mississippi Curriculum Frameworks

2. **Tier 2**: Quality classroom Instruction based on the Mississippi Curriculum Frameworks.

3. **Tier 3**: Intensive interventions designed to meet the individual needs of students.

**Summary**

Research has revealed that students learn best when instruction is based on individual characteristics, backgrounds, and learning preferences (Rock et al., 2008; Tomlinson, 2010; Tomlinson & Strickland, 2005). Experimental type activities that involve direct experience by students, cooperative learning activities, instruction that includes concrete materials and the use of visual images are other instructional strategies that are supported by educational research (Ausubel, 1968; Brooks & Brooks, 1999; Eby, 1952; Fosnot, 2005; Good, 1960; Levy, 2008; Marzano, 1998; Steffe & Gale, 1995; Wells & Shaughnessy, 2010; Wilds & Lottich, 1974). Although research supports differentiated instruction and other effective instructional strategies, there is also strong evidence that teachers are abandoning what they know is quality instruction and spending most of their instructional time practicing for high stakes standardized testing (Abrams & Madaus, 2003; Anderson, 2009; Behrent, 2009; Hamilton, 2003; Neill, 2003; Pedulla,
Increased attention on school accountability has evolved as an attempt to guarantee a high quality education for all students (Sterbinsky et al., 2006), yet many schools attempting to improve test scores produce negative results due to the implementation of ineffective instructional strategies (Wiggins, 2010).

There is no doubt that principals are under pressure to produce high test scores and accountability levels (Linn, 2008; Levy, 2008). The demands of NCLB (2001) and questions about the influence of high stakes testing on quality of instruction in public schools have influenced the present study. Do schools earn a higher level of accountability when teachers practice the test in lieu of choosing more creative methods of instruction? Do accountability systems measure what the research has revealed to be the most effective practices for school improvement? Have students unintentionally become data on a spreadsheet? Students are real individuals with real life struggles, talents, and a dire need to be carefully molded into the persons they are capable of becoming (Behrent, 2009). The purpose of this study was to measure the relationship of classroom practices evident in Mississippi public schools with accountability levels assigned to those schools.
CHAPTER III

METHODOLOGY

Introduction

Many educators have expressed concerns that high-stakes testing may hinder a quality education (Behrent, 2009; Brookhart, 2009; Chester, 2005). Wiggins (2010) stated that spending instructional time on quality methods that are supported by research would result in higher scores on standardized tests than using the time to practice for tests. The present non-experimental study surveyed teachers who were employed by a public school in Mississippi to measure the type of instructional methods used, instructional time spent on test prep activities, and instructional materials that were used in the classroom. Data was collected from statistics provided by the Mississippi Department of Education to survey poverty levels, per pupil expenditures, and accountability levels for schools that participated in the study.

This study investigated relationships between classroom practices, teacher characteristics, and school demographics with accountability levels, which are determined primarily from the percent of students who scored advanced, proficient, and basic on standardized test scores. The accountability calculation is titled Quality of Distribution Index (QDI) and weighs heavily in the accountability model used by the Mississippi Department of Education (Mississippi Department of Education, 2009a).

Hypothesis

Public schools in Mississippi that implement quality, research-based instructional strategies as defined by Marzano (1998) and Tomlinson (1999) will be awarded a higher QDI than schools emphasizing standardized test practice.
Research Questions

1. Do instructional strategies influence the Quality of Distribution Index assigned to public schools in Mississippi?

2. Does the amount of instructional time spent on test prep activities influence Quality of Distribution Index for public schools in Mississippi?

3. Do instructional materials influence the Quality of Distribution Index assigned to public schools in Mississippi?

Participants

The participants of this study consisted of full-time, certified teachers employed by public schools in Mississippi that chose to participate in this study. Only schools that housed at least one grade level or subject area participating in state-mandated standardized testing qualified to participate in the study. All Mississippi public schools assessed by the Mississippi Statewide Assessment Program qualified to participate in this study and 24 district superintendents gave permission for the researcher to contact principals. Invitations were sent to 110 qualifying schools from the districts that granted permission to survey teachers. The sample included results from questionnaires returned by 17 schools which included 72 teachers to represent the general population of classroom teachers in Mississippi public schools.

Procedures

The researcher contacted all Mississippi school district superintendents by phone or email to request permission for each qualifying school to participate. The researcher provided a form letter (Appendix B) for superintendents to print on the participating school district’s letterhead granting written permission for participation in research. The
superintendents returned permission forms by fax, U. S. postal mail, or email. Once permission to conduct the study was granted by district superintendents, the researcher applied to the Institutional Review Board (IRB) for permission to conduct research.

The researcher identified public schools in each approved district that housed students above second grade. Only schools with at least one grade that participated in mandatory statewide testing were invited to participate in this study. Once identified the researcher gathered contact information for school officials from the school directory on the Mississippi Department of Education’s website.

Following Human Subjects Review Board approval, the researcher contacted principals of each qualifying school to request permission for teachers to participate in the study. The researcher mailed a packet of research materials to principals that included a letter to each principal (Appendix C), cash drawing information forms (Appendix D), cover letters to assure informed consent (Appendix E), questionnaires (Appendix F), and two self-addressed, stamped envelopes for easy return to the researcher. Two weeks following distribution of the research packet, the researcher contacted principals by phone to follow up and to confirm that they received the packets, to answer questions, and to encourage participation. Once permission was granted the researcher spoke with the principal or designee of each school to discuss distribution of questionnaires. The designated school official placed questionnaires in each teacher’s mailbox or distributed them during a faculty meeting. The designated school official collected all completed questionnaires and placed them in the provided self-addressed, stamped envelope.
Participation was strictly voluntary and participants had the option to decline at any time. The researcher offered incentives in the form of three $50 cash drawings to encourage participation in the study. Participants had an option to provide their names and email addresses to enter the cash drawing by completing a separate form (Appendix D). Cash drawing forms were collected and mailed in a separate envelope from questionnaires to maintain the anonymity of responses. Upon request, the researcher provided research results to principals who allowed their schools to participate in the study. Principals did not gain access to specific results from individual schools. Participants who wished to receive a summary of the study indicated their requests on the same form used for the cash drawing. The researcher sent a copy of study results by email to each participant who requested one.

The researcher provided all teachers a written explanation of the study in the form of a cover letter (Appendix E) attached to each questionnaire. The cover letter ensured informed consent by advising teachers that participation was completely voluntary and that they could decline to participate at any time during the process. Information in the cover letter assured participants that their participation was anonymous. Names were only submitted if they chose to participate in the cash drawing and those names were not attached to the questionnaire.

Each school principal had a choice of how questionnaires were distributed to his/her teachers. Either the school official administered questionnaires to participating teachers or placed questionnaires in teachers’ mailboxes. Participants returned completed questionnaires to the assigned school official or placed them in an envelope located in a designated place. Informed consent was assumed by the return of a completed
questionnaire. Data for statistical testing were calculated from responses on each
returned questionnaire and neither participants nor schools were identified. Drawings for
the three cash awards occurred after contact information from all participating schools
was collected. Winners of the fifty-dollar cash drawings were contacted via email and
checks were mailed to them.

Instrument

The instrument used for data collection was a questionnaire designed by the
researcher specifically for this study (Appendix F). The questionnaire included items
about classroom instruction, professional information of the participants, and professional
opinions of the participants. There were 29 items on the questionnaire; 25 items that
required one specific answer, 3 items that provided participants an opportunity to choose
more than one answer and/or elaborate on their answer, and one open-ended item.

Item 1 was a screener to eliminate participants who did not teach a course
included in the formula for Quality of Distribution Index (QDI) of the Mississippi
Accountability Model. Items 2 and 3 measured experience and educational level of
participants. Experience and educational level of participants was used to explore the
possibility that those factors may influence accountability. Item 4 was included to
determine if participants taught at least two consecutive years in the same area. This item
explored the possibility that experience in a specific area may influence accountability.

Items 5 and 6 were used to identify instructional materials and other resources
used by participants in the classroom. These items explored the possibility that specific
materials may influence accountability. Items 7 and 8 measured the frequency of test
prep activities evident during classroom instruction. These items explored the possibility
that the frequency of test prep activities may influence accountability. Items 9 and 13 measured the influence that mandatory state testing has had on instructional delivery. These items were exploratory and were used to compare teacher opinions about state testing with accountability levels. Items 14 – 28 measured the instructional strategies evident in the classroom. These items were designed to measure the evidence of learning theories identified in the theoretical framework of Chapter II, the research-based strategies reported by Marzano (1998) and differentiated instruction (Rock et al., 2008). Item 29 was an open-ended question that allowed participants to elaborate on any topic related to questionnaire items. This item was included to explore perspectives of participants and report any common themes that emerged.

The researcher conducted a pilot study prior to data collection with participants from schools not included in the study. The researcher used data from the pilot study to identify weaknesses in the questionnaire and made adjustments as needed.

Data

During the spring of 2011, Mississippi public school students in grades 3 through 13 participated in mandatory standardized state testing. Students in grades 3 through 8 were assessed in language arts and mathematics by the Mississippi Curriculum Test, 2nd Edition. Students in grades 5 and 8 took the Mississippi Science Test. Students in grades 9 – 12 were assessed by the Mississippi Subject Area Testing Program in Biology I, Algebra I, English II, and U. S. History. Average results from all mandatory state tests were published on the Mississippi Department of Education’s website for public access.

The dependent variable for this study was the Quality of Distribution Index (QDI). The QDI was calculated for each public school in Mississippi from the
percentage of students who score advanced, proficient, basic, and minimal on mandatory state tests. The QDI ranged from 0 to 300 and was calculated according to the following formula: \( QDI = (1 \times \%\text{Basic}) + (2 \times \%\text{Proficient}) + (3 \times \%\text{Advanced}) \) (MDE, 2010a). The percentage of students who scored in the minimal range did not contribute to the formula. The percentage of students who scored in the basic range contributed one point toward the total QDI. The percentage of students who scored in the proficient range contributed two times the percentage toward the total QDI. The percentage of students who scored in the advanced range contributed three times the percentage toward the total QDI.

The researcher used the school report card document from the Mississippi Department of Education’s website to gather demographic information about the schools included in this study (MDE, 2010d). Information obtained from the MDE website included percent of enrolled students identified as in the poverty range, amount of per pupil expenditure as reported by the Mississippi Department of Education for the amount of total expenditure allowed for one student, accountability levels and Quality of Distribution Index (QDI).

Remaining data were gathered via a questionnaire that was designed specifically for this study. Teachers provided information for the researcher to measure the following independent variables: type of instructional strategies prevalent in a school, amount of course that included test prep activities, days per week that included test prep activities, materials used for instructional purposes, and test prep materials used. Responses from the questionnaire also included the following descriptive information: experience of
teachers, levels of education among teachers in the school and the opinions that teachers had about mandatory state testing.

Variables

The dependent variable for this study was the QDI calculated for each public school in Mississippi from scores on mandatory state tests. The QDI was taken from results that were posted by the Mississippi Assessment and Accountability Reporting System (MAARS) on the Mississippi Department of Education’s website (MDE, 2010d).

The independent variables collected from questionnaires included the types of instructional strategies prevalent in a school, instructional and test prep materials, amount of course that included test prep activities, and number of days per week that included test prep activities. The independent variable taken from the MDE website included percent poverty level of students enrolled in each school.

Data Analysis

The researcher entered data into SPSS statistical software and calculated descriptive statistics per returned questionnaire to determine the frequency of responses for each item on the questionnaire. Item 1 identified the subject area taught by the participant. Item 2 identified the years of experience for each participant. Item 3 identified the highest degree earned by each participant. Item 4 revealed the frequency of teachers who have held the same teaching assignment for more than one year. Item 5 revealed the frequency of specific instructional materials used. Item 6 identified specific materials used for test prep. Items 7 and 8 measured the amount of time contributed to test prep activities. Items 9 – 13 measured the opinions of mandatory state tests among teachers within a school. Items 14 – 21 measured the frequency of instructional
strategies used in the classroom. Items 14 and 17 – 21 measured instructional strategies that were supported by research. Items 15 and 16 measured instructional strategies that were not supported by research. Items 22 – 28 measured the frequency of instructional strategies identified as components of differentiated instruction (Rock et al., 2008). Item 29 allowed participants to elaborate on any topic related to this study.

The researcher conducted 4 multiple regression analyses to test research questions and the hypothesis. The dependant variable or outcome was the Quality of Distribution Index (QDI) for all regressions. The percent of students in the poverty level for each school was used as an independent variable for all analyses. Additional independent variables for the first analysis included materials used by participants during classroom instruction and was taken from responses for item 5 on the questionnaire (Appendix F). Additional independent variables used for the second analysis included test prep materials used by participants during test prep activities and was taken from item 6 on the questionnaire (Appendix F). Additional independent variables for the third analysis included the amount of instructional time participants spent on test prep activities and was taken from items 7 and 8 on the questionnaire (Appendix F). Additional independent variables for the fourth analysis included evidence of research-based instruction and evidence of test practice. The research-based instruction variable was taken from items 14 and 17 – 21 on the questionnaire (Appendix F). The mean response was calculated for items 14 and 17 – 21 to form an independent variable for research-based instruction. The mean response was calculated for items 22 – 28 to form an independent variable for differentiated instruction. The independent variable for test prep activities was taken from item 8 on the questionnaire (Appendix F). Each regression model was tested for
significance and the independent variables predicted the increase or decrease of QDI for a particular school.

Item 29 on the questionnaire was open ended and allowed participants to elaborate on any questionnaire item or related topic. Evaluation for item 29 included a group of 3 educators, not included in the study, who collaborated to identify common themes among the responses. The number of common themes and frequencies were recorded for informational purposes.

Summary

This study consisted of responses collect from a random sample of public school teachers in Mississippi that represented the general population of public school teachers in Mississippi. The focal point was how instructional strategies, test prep activities, instructional materials, and teacher opinions of standardized state tests influenced accountability levels assigned to Mississippi Public Schools. An original questionnaire (Appendix F) was the primary source of data collection and accountability information was acquired from the website for the Mississippi Department of Education. The purpose of this study was to supply educators with information about the influence of classroom instruction and test prep activities on public school accountability levels. Perhaps information gained from this study will be helpful for educational leaders and researchers striving to improve student achievement.
CHAPTER IV
RESULTS

Introduction

Accountability levels, test scores, student achievement and school improvement are a few of the terms common amid public school educators (Linn, 2008; Levy, 2008). Questions about the best instructional methods for student achievement and how those methods influence scores on mandatory state tests are common among educational leaders (Wiggins, 2010). Many educators are concerned that high-stakes testing has influenced teachers to spend instructional time practicing for tests rather than providing a quality education for students (Behrent, 2009; Brookhart, 2009; Chester, 2005). The purpose of this study was to measure classroom practices among teachers employed by public schools and to investigate the relationships of those practices with accountability levels. Variables for statistical testing included poverty levels, instructional materials, test prep materials, test preparation activities and instructional methods as they related to school accountability levels. The participants were teachers employed by public schools in Mississippi.

Hypothesis

Public schools in Mississippi that implement quality, research-based instructional strategies as defined by Marzano (1998) and Tomlinson (1999) will be awarded a higher QDI than schools emphasizing standardized test practice.

Research Questions

1. Do instructional strategies influence the Quality of Distribution Index (QDI) assigned to public schools in Mississippi?
2. Does the amount of instructional time spent on test prep activities influence Quality of Distribution Index (QDI) for public schools in Mississippi?

3. Do instructional materials influence the Quality of Distribution Index (QDI) assigned to public schools in Mississippi?

Limitations

1. The number of schools that responded to the survey was extremely small, resulting in 17 schools for a total of 72 completed questionnaires.

2. The instrument contained 2 scales. One with items valued 1 – 7 and a second scale with items valued 1 – 5. Questionnaire items that were to be scored separately were combined for 1 variable, due to the small sample size; therefore, the scale valued 1 - 7 was manipulated to create a uniform scale with values 1 - 5.

3. Data collection was based on responses by teachers who volunteered to share information about their classroom practices. The interpretation of questionnaire items was random and might have varied among participants.

Instrument

The instrument was a Questionnaire designed specifically for this study. Items 8, 11, and 14 – 21 contained a scale with values as follows: 1 = Never, 2 = Daily, 3 = 1 day per week, 4 = 2 days per week, 5 = 3 days per week, 6 = 4 days per week, and 7 = 2 days per month or less. Choices 2 = Daily and 7 = 2 days per month or less, were not in ascending order and all responses for those two choices had to be adjusted as follows: Choice 2 = Daily was changed to Choice 7 and Choice 7 = 2 days per month or less was
changed to Choice 2. The values were simply swapped and all responses on the original questionnaires were adjusted to reflect the new values.

Questionnaire items 8, 11, 14 – 21 and 23 – 28 inquired about classroom instruction. The scale for items 8, 11, and 14 – 21 were valued 1 to 7 and items 23-28 were valued 1 to 5. Before statistical testing began the values were revised to reflect a uniform scale throughout. The scale used for statistical testing was as follows: 1 = Never, 2 = Rarely, 3 = Sometimes, 4 = Often, and 5 = Always. The items with 7 choices originally were combined as follows: 1 = Never, 2 = 2 days per month (Rarely), 3 = 1 day per week and 2 days per week combined (Sometimes), 4 = 3 days per week and 4 days per week combined (Often) and 5 = Daily (Always). Following revisions all items on a scale had values that ranged from one to five.

Sample

The researcher emailed superintendents from all public school districts in the state of Mississippi to ask permission for schools to participate in this study. Permission was granted by 24 district superintendents, the researcher mailed questionnaires to 110 principals to ask permission for teachers to participate in this study. The 17 schools that responded to the survey produced 72 participants. The 17 schools represented 11 districts from various geographical areas of Mississippi. Because the school sample was small, statistical tests used all questionnaires collected for each school instead of means per school. The use of all questionnaires remained representative of individual schools, but created a larger sample size.

Of the participating schools 23.5 percent earned an accountability level of Academic Watch, 29.4 percent were labeled as Successful schools, and 47 percent were
awarded a High Performing level. None of the participating schools were labeled as Failing or Star School. Descriptive statistics for the sample are listed in Table 2.

Table 2

*Descriptive Statistics for Sample (N=72)*

<table>
<thead>
<tr>
<th>Variable</th>
<th>Min</th>
<th>Max</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quality of Distribution Index</td>
<td>12</td>
<td>223</td>
<td>163.35</td>
<td>22.160</td>
</tr>
<tr>
<td>Percent Poverty for School</td>
<td>36</td>
<td>100</td>
<td>63.60</td>
<td>19.863</td>
</tr>
<tr>
<td>Expenditure for Each Student</td>
<td>$6915</td>
<td>$10883</td>
<td>$8632</td>
<td>$1172</td>
</tr>
<tr>
<td>Teacher Years of Experience</td>
<td>1</td>
<td>34</td>
<td>11.96</td>
<td>8.239</td>
</tr>
</tbody>
</table>

Levels of education for participants included 43.1 percent Bachelors Degree, 52.8 percent Masters Degree, one participant had a Specialists Degree and two of the participants had a Doctorate, and all taught a course assessed by the state.

Table 3

*Distribution of Teaching Assignments Held by Participants (N=72)*

<table>
<thead>
<tr>
<th>Assignment</th>
<th>Frequency</th>
<th>Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Algebra I</td>
<td>9</td>
<td>12.5</td>
<td>12.5</td>
</tr>
<tr>
<td>Biology I</td>
<td>4</td>
<td>5.6</td>
<td>18.1</td>
</tr>
<tr>
<td>English II</td>
<td>5</td>
<td>6.9</td>
<td>25.0</td>
</tr>
<tr>
<td>US History</td>
<td>5</td>
<td>6.9</td>
<td>31.9</td>
</tr>
<tr>
<td>MCT Language Arts</td>
<td>21</td>
<td>29.2</td>
<td>61.1</td>
</tr>
<tr>
<td>MCT Math</td>
<td>28</td>
<td>38.9</td>
<td>100.0</td>
</tr>
</tbody>
</table>
Statistics

Table 4

Distribution of Instructional Materials and Test Prep Materials used by Participants

<table>
<thead>
<tr>
<th>Instructional Material</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mississippi Curriculum Framework</td>
<td>72</td>
<td>100</td>
</tr>
<tr>
<td>Textbook</td>
<td>67</td>
<td>93.1</td>
</tr>
<tr>
<td>Free Resource material with Textbook Purchase</td>
<td>64</td>
<td>88.9</td>
</tr>
<tr>
<td>Purchased Test Prep Materials</td>
<td>70</td>
<td>97.2</td>
</tr>
<tr>
<td>Free Internet Resources</td>
<td>70</td>
<td>97.2</td>
</tr>
<tr>
<td>Practice Test Provided by Mississippi Department of Education</td>
<td>69</td>
<td>95.8</td>
</tr>
<tr>
<td>Pacing Guide Provided by the School District</td>
<td>61</td>
<td>84.7</td>
</tr>
<tr>
<td>Other Instructional Material</td>
<td>20</td>
<td>27.8</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Test Prep Material</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>None Used</td>
<td>2</td>
<td>2.8</td>
</tr>
<tr>
<td>Buckle Down Publishers</td>
<td>40</td>
<td>55.6</td>
</tr>
<tr>
<td>Coach Products</td>
<td>41</td>
<td>56.9</td>
</tr>
<tr>
<td>Other Test Prep Resources</td>
<td>42</td>
<td>58.3</td>
</tr>
</tbody>
</table>

Note. N=72. Participants had the option to choose any, all, or none of the materials listed. Questionnaire items 5 and 6 asked the participants to check all instructional materials and test prep materials that they used during classroom instruction. The distribution of materials checked is displayed in Table 5. The participants had a choice to list materials that were not offered as choices. The additional materials listed by
participants are displayed in Appendix G. Item 7 inquired about the point during a course when test prep activities began and responses are displayed in Table 5.

Table 5

<table>
<thead>
<tr>
<th>Point of Course When Test Practice Activities Began</th>
</tr>
</thead>
<tbody>
<tr>
<td>Variable</td>
</tr>
<tr>
<td>Never</td>
</tr>
<tr>
<td>Beginning of Course</td>
</tr>
<tr>
<td>Middle of Course</td>
</tr>
<tr>
<td>End of Course</td>
</tr>
</tbody>
</table>

*Note. Responses to item 7 on the questionnaire.*

Of the teachers who participated in this study, 56.9% stated that their instructional delivery improved because of mandatory state tests, 11.1% reported that state tests had a negative impact on their instructional delivery, 16.7% stated that mandatory state tests had no influence on their instructional delivery, and 15.3% had other comments about the influence on mandatory state tests on instructional delivery. Teacher opinions about the influence state tests have had on the quality of education among public schools in Mississippi were as follows: 45.8% stated that mandatory state testing improved the quality of education, 25% stated that mandatory state tests lowered quality of education, 19.4% stated that the quality of education was not influenced by mandatory state tests, 1.4% felt that only students with learning disabilities benefited from high stakes testing, and 6.9% stated that the quality of education improved only for students without learning disabilities.
Of the teachers surveyed 58.3% gave students a learning style inventory and 38.9% did not give students a learning style inventory. Other classroom activities were measured by a scale as occurring never, rarely, sometimes, often or always. Descriptive statistics for classroom instruction are displayed in Table 6.

Similar items on the questionnaire were compiled to form additional independent variables. The first variable, identified as research-based instruction, included the mean responses of items 14, 17, and 18 – 21. This variable characterized nine most effective instructional strategies uncovered in a meta-analysis sponsored by McREL (Marzano et al., 2001). A second independent variable was created from questionnaire items 23 – 28 and identified as differentiated instruction. The variable for differentiated instruction was based on the work of Carol Ann Tomlinson as reported by Rock et al., (2008). The third independent variable combined research-based instruction and differentiated instruction and was the variable used for statistical testing. This variable, labeled total research-based instruction was a combination of all 12 items used for research-based instruction and differentiated instruction. The literature supports all elements included in the research-based variable (Butler, 1957; Frederick, 1934; Wilds & Lottich, 1970).

A reliability analysis for combined items produced a Cronbach’s Alpha equaled to .575 for the research-based variable, a Cronbach’s alpha equaled to .686 for the differentiated variable, and a Cronbach’s alpha equaled to .755 for the total research-based variable. Statistical testing included only the total research-based variable formed from all 12 items because, according to Peterson (1994), an alpha of .70 or greater supports reliability. Descriptive statistics for the combined items are listed in Table 7.
Table 6

*Distribution of classroom Activities Evident in Mississippi Classrooms*

<table>
<thead>
<tr>
<th>Item #</th>
<th>Classroom Activity</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>8</td>
<td>Test Practice</td>
<td>0</td>
<td>5.6</td>
<td>26.4</td>
<td>13.9</td>
<td>54.2</td>
</tr>
<tr>
<td>11</td>
<td>Taught Non-Assessed Content</td>
<td>23.6</td>
<td>31.9</td>
<td>19.4</td>
<td>11.1</td>
<td>11.1</td>
</tr>
<tr>
<td>14</td>
<td>Group Activities</td>
<td>1.4</td>
<td>23.6</td>
<td>56.9</td>
<td>13.9</td>
<td>4.2</td>
</tr>
<tr>
<td>15</td>
<td>Individual Seat Work, Worksheets, etc</td>
<td>0</td>
<td>1.4</td>
<td>27.8</td>
<td>47.2</td>
<td>23.6</td>
</tr>
<tr>
<td>16</td>
<td>Verbatim Notes</td>
<td>6.9</td>
<td>11.1</td>
<td>41.7</td>
<td>19.4</td>
<td>20.8</td>
</tr>
<tr>
<td>17</td>
<td>Concrete Manipulatives/Visual Images</td>
<td>1.4</td>
<td>8.3</td>
<td>38.9</td>
<td>31.9</td>
<td>19.4</td>
</tr>
<tr>
<td>18</td>
<td>Identify Similarities/Differences</td>
<td>0</td>
<td>16.7</td>
<td>4.7</td>
<td>26.4</td>
<td>5.3</td>
</tr>
<tr>
<td>19</td>
<td>Summarize Main Ideal/Details</td>
<td>8.3</td>
<td>6.9</td>
<td>37.5</td>
<td>30.6</td>
<td>15.3</td>
</tr>
<tr>
<td>20</td>
<td>Student Centered Activities</td>
<td>6.9</td>
<td>0</td>
<td>38.9</td>
<td>44.4</td>
<td>9.7</td>
</tr>
<tr>
<td>21</td>
<td>Peers Teach Material to Class</td>
<td>29.2</td>
<td>34.7</td>
<td>25</td>
<td>4.2</td>
<td>6.9</td>
</tr>
<tr>
<td>23</td>
<td>Students Write Learning Goals</td>
<td>19.4</td>
<td>33.3</td>
<td>31.9</td>
<td>8.3</td>
<td>6.9</td>
</tr>
<tr>
<td>24</td>
<td>Plan Activities to Match Learning Styles</td>
<td>0</td>
<td>1.4</td>
<td>18.1</td>
<td>61.1</td>
<td>19.4</td>
</tr>
<tr>
<td>25</td>
<td>Assess Prior Knowledge</td>
<td>1.4</td>
<td>11.1</td>
<td>30.6</td>
<td>36.1</td>
<td>20.8</td>
</tr>
<tr>
<td>26</td>
<td>Adjust Instruction for Student Needs</td>
<td>0</td>
<td>1.4</td>
<td>16.7</td>
<td>47.2</td>
<td>34.7</td>
</tr>
<tr>
<td>27</td>
<td>Plan Activities to Match Ability Levels</td>
<td>0</td>
<td>6.9</td>
<td>26.4</td>
<td>54.2</td>
<td>12.5</td>
</tr>
<tr>
<td>28</td>
<td>Relate Content to Real-Life Experiences</td>
<td>0</td>
<td>0</td>
<td>5.6</td>
<td>52.8</td>
<td>41.7</td>
</tr>
</tbody>
</table>

*Note. 1 = Never   2 = Rarely   3 = Sometimes   4 = Often   5 = Always*
Table 7

Descriptive Statistics for Instructional Strategies

<table>
<thead>
<tr>
<th>Variable</th>
<th>Min</th>
<th>Max</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Research-Based Instruction¹</td>
<td>2.17</td>
<td>4.67</td>
<td>3.174</td>
<td>.551</td>
</tr>
<tr>
<td>Differentiated Instruction²</td>
<td>2.5</td>
<td>4.83</td>
<td>3.727</td>
<td>.504</td>
</tr>
<tr>
<td>Total RB and DI³</td>
<td>2.42</td>
<td>4.75</td>
<td>3.45</td>
<td>.442</td>
</tr>
</tbody>
</table>

Note. Taken from Questionnaire in Appendix F. ¹Mean of items 14 and 17-21 on questionnaire. ²Mean of items 23-28 on the questionnaire. ³Mean of items 14, 17-21 and 23-28 on the questionnaire.

Items on the questionnaire that represented test practice, research-based instruction, and differentiated instruction were further manipulated to form the following: research-based instruction evident at least sometimes, research-based instruction evident often or always, differentiated instruction evident at least sometimes, differentiated instruction evident often or always, total research-based instruction evident at least sometimes, and total research-based instruction evident often or always. Item 8 on the questionnaire, a measure the amount of instructional time that participants used to practice for mandatory state tests was manipulated to form the following values: test practice evident at least sometimes and test practice evident often or always. Responses for the newly created values are displayed in Table 8.

Because the sample size was less than 100, statistical testing included 4 regression analyses with independent variables categorized into small groups to better validate the predictors. Categories for regression analyses included the following: Analysis I –
Table 8

*Frequency of Instructional Strategies and Test Practice Activities*

<table>
<thead>
<tr>
<th>Variable</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Research-Based Instruction¹ Sometimes</td>
<td>45</td>
<td>62.5</td>
</tr>
<tr>
<td>Research-Based Instruction¹ Often or Always</td>
<td>6</td>
<td>8.3</td>
</tr>
<tr>
<td>Differentiated Instruction² Sometimes</td>
<td>70</td>
<td>97.2</td>
</tr>
<tr>
<td>Differentiated Instruction² Often or Always</td>
<td>23</td>
<td>31.9</td>
</tr>
<tr>
<td>Total Research-Based Instruction³ Sometimes</td>
<td>65</td>
<td>90.3</td>
</tr>
<tr>
<td>Total Research-Based Instruction³ Often or Always</td>
<td>6</td>
<td>8.3</td>
</tr>
<tr>
<td>Test Practice Sometimes</td>
<td>72</td>
<td>100</td>
</tr>
<tr>
<td>Test Practice Often or Always</td>
<td>49</td>
<td>68.1</td>
</tr>
</tbody>
</table>

*Note.* ¹Mean of items 14 and 17-21 from questionnaire. ²Mean of items 23-28 from questionnaire. ³Mean of items 14, 17-21 and 23-28 from questionnaire. Test Practice variable from questionnaire item 8.

Questionnaire is in Appendix F.

Items on the questionnaire were grouped to include no more than eight independent variables in each regression. The dependent variable for all regression analyses was the Quality of Distribution Index (QDI) calculated for each school by the Mississippi Department of Education to reflect performance on standardized state assessments. The percentage of enrolled students below the poverty level was used as an independent variable in all of the analyses because past research has established strong
evidence that poverty may influence student achievement (Hopson & Lee, 2011; Kahlenberg, 2001; Sandy & Duncan, 2010)

Table 9

Summary of Regression Analyses for Variables Predicting Quality of Distribution Index.  
Analysis I – Instructional materials Used in the Classroom (N=72)

<table>
<thead>
<tr>
<th>Variable</th>
<th>β</th>
<th>SE β</th>
<th>β</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percent of Poverty Level</td>
<td>-.524</td>
<td>.121</td>
<td>-.469*</td>
</tr>
<tr>
<td>Textbook</td>
<td>-14.794</td>
<td>11.441</td>
<td>-.171</td>
</tr>
<tr>
<td>Resources Free With Textbook</td>
<td>5.039</td>
<td>9.630</td>
<td>.072</td>
</tr>
<tr>
<td>Test Prep Materials</td>
<td>-8.556</td>
<td>13.814</td>
<td>-.064</td>
</tr>
<tr>
<td>Free Instructional Materials on Internet</td>
<td>5.471</td>
<td>13.765</td>
<td>.041</td>
</tr>
<tr>
<td>Practice Test Provided by MDE</td>
<td>15.652</td>
<td>11.488</td>
<td>.142</td>
</tr>
<tr>
<td>District Pacing Guide</td>
<td>-15.195</td>
<td>6.593</td>
<td>-.248*</td>
</tr>
<tr>
<td>Other Instructional Materials</td>
<td>.913</td>
<td>5.315</td>
<td>.019</td>
</tr>
</tbody>
</table>

Note. $R^2=.366$ *p<.05 See Appendix G for other instructional materials that were listed.

The first regression analysis identified instructional materials used in the classroom as possible predictors for QDI. Analysis I resulted in an $R^2 = .366$ indicating that the amount of variability explained by the independent variables in the model was 36.6%. The model was significant at $F (8, 63) = 4.537$. The constant was $b = 173.253$, meaning that 173 was the predicted QDI with average poverty and if participants did not choose any of the instructional materials listed on the questionnaire. The percent poverty was a scale variable, all other variables were categorical. Two variables were identified
as significant predictors of QDI. For every one percent increase in student poverty level the QDI decreased by .521 points. Schools that used a district pacing guide were predicted to score 15.195 points lower on QDI than schools that did not use a pacing guide provided by the district, controlling for all other independent variables.

Table 10

Summary of Regression Analysis for Variables Predicting Quality of Distribution Index.

Analysis II – Test Prep Materials Used During Classroom Instruction (N=72)

<table>
<thead>
<tr>
<th>Variable</th>
<th>$\beta$</th>
<th>$SE$</th>
<th>$\beta$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percent of Poverty Level</td>
<td>-.618</td>
<td>.112</td>
<td>-.554*</td>
</tr>
<tr>
<td>No Test Prep Materials Used</td>
<td>-18.911</td>
<td>14.414</td>
<td>-.141</td>
</tr>
<tr>
<td>Buckle Down Publishers</td>
<td>5.683</td>
<td>4.802</td>
<td>.128</td>
</tr>
<tr>
<td>Coach Products</td>
<td>.811</td>
<td>4.778</td>
<td>.020</td>
</tr>
<tr>
<td>Other Test Prep Materials</td>
<td>10.935</td>
<td>5.058</td>
<td>.245*</td>
</tr>
</tbody>
</table>

Note. $R^2=.355$ $p<.05$ See Appendix G for other test prep material that were listed.

The second regression analysis identified test prep materials used to prepare for mandatory state tests as possible predictors of QDI. Independent variables included level of poverty, no test prep materials, Buckle Down, Coach, and other, for materials not listed as a choice. Analysis II resulted in an $R^2 = .355$ indicating that the amount of variability explained by the independent variables in the model was 35.5%. The model was significant at $F (5, 66) = 7.281$. The constant was $b = 153.833$, meaning that the predicted QDI was 156 with average poverty and if participants did not choose any of the
test prep materials. The percent poverty was a scale variable, all other variables were categorical.

Two variables were identified as significant predictors of QDI. For every one percent increase in student poverty level the QDI decreased by .618 points. Schools that listed other materials not provided on the questionnaire were predicted to score 10.935 points higher on QDI than schools that did not use other materials than those listed on the questionnaire, controlling for all other independent variables. (See Appendix G)

Table 11

| Summary of Regression Analysis for Variables Predicting Quality of Distribution Index |
| Analysis III – Frequency of Test Prep Activities (N=72) |

<table>
<thead>
<tr>
<th>Variable</th>
<th>$\beta$</th>
<th>$SE\ \beta$</th>
<th>$\beta$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percent of Poverty Level</td>
<td>-.530</td>
<td>.122</td>
<td>-.478*</td>
</tr>
<tr>
<td>Frequency of Non-Tested Content Taught</td>
<td>1.405</td>
<td>1.802</td>
<td>.082</td>
</tr>
<tr>
<td>Test Practice Began at Midterm</td>
<td>2.559</td>
<td>7.559</td>
<td>.037</td>
</tr>
<tr>
<td>Test Practice Began Near End of Course</td>
<td>15.776</td>
<td>9.574</td>
<td>.185**</td>
</tr>
</tbody>
</table>

Note. $R^2=.300\ *p<.05\ **p<.11$

The third regression analysis measured the amount of instructional time spent on test practice as a possible predictor of QDI. Independent variables included poverty level, the amount of time spent on test prep activities, the amount of content taught that is not assessed by on the mandatory state test and the point of course that test prep activities began. Analysis III resulted in an $R^2 = .300$ indicating that the amount of variability explained by the independent variables in the model was 30%. The model was
significant at $F(5, 64) = 5.497$. The constant was $b = 162.501$, meaning that 163 was the predicted QDI with average poverty, average frequency of instructional content not assessed by state tests, average frequency of test prep activities, and when participants included test practice activities from the beginning of course. The percent poverty, amount of content taught but not assessed by mandatory state tests, and amount of practice time were scale variables. Item 7 on the questionnaire in Appendix F was a categorical variable. It included the point during a course that participants began test prep activities and was categorized as never, beginning, middle and end of course. Never was deleted from the analysis because it had missing correlations and Beginning was not included in the analysis because it had a problem with collinearity.

One variable from Analysis III was identified as a significant predictor of QDI. For every one percent increase in student poverty level the QDI decreased by .530 points. One other variable was approaching significance and was included in the results for informational purposes. For every school that begins practicing for mandatory state tests near the end of the course the QDI will increase by 15.776 points controlling for all other independent variables.

The fourth regression included independent variables that represented instructional strategies. Twelve items combined to form one independent variable for research-based instruction. Means and Standard Deviations for the 12 items are displayed in Table 14. A Cronbach’s Alpha equal to .755 confirmed reliability for the new variable. The twelve items that formed a new independent variable were questionnaire items 14, 17 through 21, and 23 through 28 (see Appendix F) The independent variables were poverty level, test practice activities, and research based instruction. From the 12 combined items an
independent variable formed to represent instructional strategies that are supported by research. Item 8 on the questionnaire formed the independent variable for test practice activities.

Table 12

Summary of Regression Analysis for Variables Predicting Quality of Distribution Index.

Analysis IV – Instructional Strategies Used Often or Always (N=72)

<table>
<thead>
<tr>
<th>Variable</th>
<th>$\beta$</th>
<th>SE $\beta$</th>
<th>$\beta$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percent of Poverty Level</td>
<td>-.550</td>
<td>.131</td>
<td>-.493*</td>
</tr>
<tr>
<td>Test Prep Activities</td>
<td>-.101</td>
<td>2.373</td>
<td>-.005</td>
</tr>
<tr>
<td>Research-Based Instruction</td>
<td>-1.781</td>
<td>5.867</td>
<td>.036</td>
</tr>
</tbody>
</table>

Note. $R^2$=.526 *$p<.05$

Analysis IV resulted in an $R^2 = .260$ indicating that the amount of variability explained by the independent variables in the model was 26%. The model was significant at $F (3, 68) = 7.983$. The constant was $b = 163.34$, meaning that the predicted QDI was 163 with average poverty, average frequency of test practice activities, and average frequency of research-based instruction. One variable was identified as a significant predictor of QDI. For every one percent increase in student poverty level the QDI decreased by .55 points.

Deeper inquiry into the opinions of teachers on the subject of high stakes testing revealed that most participants responded in a positive manner. The results of crosstabulations for teacher opinions and accountability levels are displayed in Table 14.
Table 13

Means and Standard Deviations for Items Combined to Form an Independent Variable for Research-Based Instruction.

<table>
<thead>
<tr>
<th>Item #</th>
<th>Instructional Strategy</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>14</td>
<td>Group Activity</td>
<td>2.96</td>
<td>.777</td>
</tr>
<tr>
<td>17</td>
<td>Concrete Manipulatives and Visual Images</td>
<td>3.60</td>
<td>.944</td>
</tr>
<tr>
<td>18</td>
<td>Identify Similarities and Differences</td>
<td>3.40</td>
<td>.944</td>
</tr>
<tr>
<td>19</td>
<td>Summarize Main Ideas and Details</td>
<td>3.38</td>
<td>1.10</td>
</tr>
<tr>
<td>20</td>
<td>Student Centered Activities</td>
<td>3.35</td>
<td>.934</td>
</tr>
<tr>
<td>21</td>
<td>Peers Teach Material to the Class</td>
<td>2.25</td>
<td>1.14</td>
</tr>
<tr>
<td>23</td>
<td>Students Set Learning Goals</td>
<td>2.50</td>
<td>1.11</td>
</tr>
<tr>
<td>24</td>
<td>Activities Match Student Learning Styles</td>
<td>3.99</td>
<td>.661</td>
</tr>
<tr>
<td>25</td>
<td>Assess Prior Knowledge of Students</td>
<td>3.64</td>
<td>.983</td>
</tr>
<tr>
<td>26</td>
<td>Adjust Instruction for Student Needs</td>
<td>4.15</td>
<td>.744</td>
</tr>
<tr>
<td>27</td>
<td>Activities Match Student Ability Levels</td>
<td>3.72</td>
<td>.773</td>
</tr>
<tr>
<td>28</td>
<td>Instruction Related to Real-Life Experience</td>
<td>4.36</td>
<td>.589</td>
</tr>
</tbody>
</table>

Note. Items taken from Questionnaire in Appendix F

Following the regression analyses, further inquiry into the relationships between school accountability and the independent variables was desired. Cross tabulations were run between school accountability levels and the following independent variables: Poverty Level, What Part of Course Test Practice Began, Frequency of Test Practice, Evidence of a District Curriculum Pacing Guide, and Amount of Time Spent on
Table 14

*Teacher Opinions about the Influence of Mandatory State Testing on Instructional delivery and the Relationship with School Accountability.*

<table>
<thead>
<tr>
<th>Variables</th>
<th>Academic Watch</th>
<th>Successful</th>
<th>High Performing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Improved Delivery</td>
<td>58</td>
<td>65</td>
<td>48</td>
</tr>
<tr>
<td>Improved Quality of Education</td>
<td>33</td>
<td>61</td>
<td>46</td>
</tr>
<tr>
<td>Lowered Quality of Education</td>
<td>29</td>
<td>26</td>
<td>21</td>
</tr>
</tbody>
</table>

*Note.* The values are listed as percentages of participants according to school accountability levels.

Research-Based Instruction. From the cross tabulation percentages were calculated to determine the frequency of responses from each accountability level. The results are displayed in Table 15.

Item 29 on the questionnaire (Appendix F) offered participants an opportunity to elaborate on any questionnaire items or topics related to the survey. Of the 72 participants, 22 included comments. The comments varied widely, but 4 common themes developed. A theme shared by the greatest number of participants was that if teachers provide a quality education test scores would reflect learning. For example, one comment was that if skills are taught all year long with constant remediation, revisiting, and extending the concept, then students will excel. A second theme shared by participants was that mandatory state tests are inadequate measures of student achievement. Reasons varied from the tests being too difficult, too stressful, or that state assessments are limited to one assessment that measures an entire year of learning. For example, one participant commented that the English II state test is too hard, too long, too
boring, and too subjective for the tenth grade students it is supposed to assess. The third theme that evolved was that high-stakes testing places pressure on the school and

Table 15

*Percentage of Participants for Independent Variables and Accountability Levels*

<table>
<thead>
<tr>
<th>Variables</th>
<th>Academic Watch</th>
<th>Successful</th>
<th>High Performing</th>
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</thead>
<tbody>
<tr>
<td>Percent Poverty Level</td>
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<td>26 – 50</td>
<td>17</td>
<td>30</td>
<td>60</td>
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<tr>
<td>51 – 75</td>
<td>38</td>
<td>17</td>
<td>40</td>
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<tr>
<td>76 – 100</td>
<td>46</td>
<td>52</td>
<td>0</td>
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<tr>
<td>Used Pacing Guide</td>
<td>92</td>
<td>78</td>
<td>84</td>
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<tr>
<td>Test Practice Began</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Beginning of Course</td>
<td>96</td>
<td>91</td>
<td>60</td>
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<tr>
<td>Middle of Course</td>
<td>4</td>
<td>4</td>
<td>24</td>
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<tr>
<td>End of Course</td>
<td>0</td>
<td>4</td>
<td>16</td>
</tr>
<tr>
<td>Frequency of Test Practice Activities</td>
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<tr>
<td>Often or Always</td>
<td>79</td>
<td>74</td>
<td>52</td>
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<tr>
<td>Less than Often</td>
<td>21</td>
<td>26</td>
<td>48</td>
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<tr>
<td>Frequency of Research-Based Instruction</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Often or Always</td>
<td>8</td>
<td>13</td>
<td>4</td>
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<tr>
<td>Less than Often</td>
<td>92</td>
<td>87</td>
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teachers instead of students. Some participants stated that until parents and students are held accountable, test scores will not improve. The fourth theme common among participants was that practice for state tests is embedded into daily instruction and classroom assessments. One participant commented that everything they do from day one of the school year is in preparation for state testing. Comments offered by participants in response to item 29 on the questionnaire are listed in Appendix H.
CHAPTER V
DISCUSSION

Introduction

Public schools are under constant scrutiny by the general public; therefore, school accountability has developed into a major issue for elected government officials (Abrams & Madaus, 2003; Linn, 2008; Levy, 2008). Educational leaders are so bombarded by federal and state guidelines that many might find it difficult to remember what education is really about, the child. With accountability for student achievement at the forefront of educational responsibilities, the current research was an attempt to identify factors that might influence accountability levels for public schools in Mississippi. Data were collected from responses by teachers who were employed in public schools across the state of Mississippi and from statistics provided by the Mississippi Department of Education. Classroom activities, instructional materials, and school demographics were examined to identify relationships with school accountability levels. The results of this study might provide educational leaders with valuable information to assist them with strategic planning for improving student achievement.

Limitations

Before discussing the results, limitations for this study need to be identified. One limitation was the number of schools that returned questionnaires. The low response rate produced a small sample size and resulted in the use of individual responses for statistical testing instead of per school means. The small sample size might have lowered validity of results. A second limitation was the use of an instrument that lacked a uniform scale. The questionnaire was intended to produce 2 independent variables for research based
instructional strategies and differentiated instruction. The questionnaire contained different scales for the items combined to form the two original variables. Due to weak reliability, the original variables were combined to form one; therefore, one of the scales was manipulated to contain values equal to the other scale. A third limitation was that questionnaires were distributed for participants to interpret. Although written directions were included, following those directions was not guaranteed.

Findings

Hypothesis

The hypothesis prior to statistical testing was that public schools in Mississippi that implement quality, research-based instructional strategies as defined by Marzano (1998) and Tomlinson (2003) will be awarded a higher QDI than schools emphasizing standardized test practice. Statistical testing revealed that classroom activities were probably not significant predictors of QDI, but responses from some participants reflected the notion that a quality education might produce higher test scores (See Appendix H). Also, further examination of the data disclosed that results of initial testing might be subjective because very few participants demonstrated a high level of research-based instruction as defined in this study. The questionnaire responses revealed that only 8 percent of the teachers surveyed demonstrated a high level of research-based instruction often or always, while 68 percent of surveyed teachers instructed students with some type of test practice often or always. Several participants commented that test practice was embedded into daily classroom instruction (Appendix H). From this data, one might conclude that teachers in Mississippi Public Schools view performance on mandatory state tests as a primary goal of instruction.
Teacher opinions were also solicited through the survey. More than half of the participants in this study stated that their instructional delivery had improved due to mandatory state tests and slightly less than half of the participants displayed the opinion that mandatory state tests improved the quality of education for Mississippi Public Schools. If the sample in this study is a true representation of the general population of teachers employed by public schools in Mississippi, one might conclude that at least half of Mississippi teachers favor mandatory state testing. However, this statistic leaves the other half of teachers with mixed opinions about mandatory state testing. A fourth of the teachers surveyed declared that the presence of high-stakes testing lowered the quality of education for students in Mississippi Public Schools, and 20 percent of those surveyed stated no change occurred due to mandatory state testing. A common theme among participants who included comments was that mandatory state tests were inadequate measures of student achievement. Some participants commented that mandatory assessments place responsibility on schools and teachers but fail to hold students accountable. Comments offered by participants are listed in Appendix H.

There was not enough evidence to connect teacher opinions to accountability levels; however, only 33 percent of the participants employed in schools under Academic Watch stated that mandatory state tests have improved the quality of education for Mississippi Public Schools, while participants from Successful and High Performing schools produced a considerably higher percentage for the same response. From this information one might conclude that there is evidence of a relationship between teacher attitude and school accountability. Follow up investigation might reveal a stronger relationship between teacher attitude and accountability levels.
Further exploration into the descriptive data revealed that almost half of the teachers surveyed from high performing schools claimed a small frequency of test practice, while more than 75 percent of surveyed teachers from schools under academic watch practiced for state mandated tests often or always. Also, 96 percent of participants from schools under academic watch and 91 percent of participants from successful schools began practicing for the test at the beginning of the course, compared with 60 percent of participants from high performing schools. The remaining participants began practicing for state tests at the middle or near the end of a course. Statistical tests indicated that the point of a course when test practice began might be a predictor of QDI. According to the results of this study schools that waited until near the end of a course to begin test practice increased QDI by 15 points.

Other data that disclosed evidence of the influence of standardized testing on classroom instruction was that 60 percent of participants from high performing schools stated that they, at least sometimes, taught content not assessed by state tests. This is compared to 39 percent of participants from successful schools and 27 percent from schools under academic watch. Very few participants from lower performing schools stated that they offered students a variety of information. From the data one might conclude that more instructional variety and less test prep may produce a higher accountability level. Conversely, the high evidence of test practice and limited content among low scoring schools might be the result of educational leaders making an attempt to improve scores by placing more focus on standardized testing.

Statistical testing identified three variables that might be used to predict QDI. The first factor was a school’s poverty level, which supports the literature. Schools with
a high percentage of students from low socioeconomic statuses have shown evidence that in most cases student achievement is low due to the socioeconomic status of students (Hopson & Lee, 2011; Sandy & Duncan, 2010). A second possible predictor of QDI was the use of a district pacing guide. A curriculum pacing guide is a resource that some educational leaders believe will move a school district toward the direction of higher test scores (Crockett, 2007). According to this study, a school that follows a district pacing guide would produce a significantly lower QDI than schools not using a pacing guide. One explanation may be that strict pacing guide might cause teachers to pay more attention to meeting goals on time rather than attending to individual student’s needs. In contrast, lower performing schools might have recently implemented pacing guides to help improve student achievement and given more time a different result may occur. One must note that only 11 of the 72 participants did not use a pacing guide and only 16 percent of participants from high performing schools did not use a pacing guide.

The third variable determined to be a predictor of QDI scores was the use of materials purchased strictly for test prep. According to this study, the use of instructional materials, other than or in addition to Buckle Down or Coach Products, would produce a QDI 10 points higher than using the materials provided as choices on the questionnaire. A variety of materials were listed by teachers who participated in this study. Those materials are listed in Appendix G. Although opinions about mandatory testing vary, the abundance of test prep materials available on the market supports the notion that high-stakes testing has probably influenced education greatly.
Research Questions

The first research question inquired if instructional strategies influenced QDI. Although instructional strategies were not determined to be a significant predictor of QDI, data gathered from this study provided evidence that classroom activities were influenced by the pressures of mandatory state tests. Data exposed that many teachers in Mississippi Public Schools practice for state tests 3 or more days every week. Data also indicated that most teachers do not apply the combined instructional strategies defined in this study. Only 8 percent of teachers surveyed responded that at least 3 days per week instructional time consisted of the research-based instruction defined in this study. Even though the influence of instructional strategies on QDI may be inconclusive, the desire to increase test scores and achieve a high QDI is evident by the frequency of test prep activities.

The second research question inquired about the influence of test prep activities on QDI. Statistical testing indicated that a high evidence of test prep activities during classroom instruction was no significant predictor of QDI. However, half of the teachers surveyed responded that they designated at least part of their instructional time for test practice every day from the beginning of a course. Furthermore, 61 percent of the teachers surveyed responded that they used at least part of their instructional time for test practice 3 or more days per week from the beginning of the course and 81 percent stated that they practice at least 1 day per week for the entire course. If the participants within this sample were a valid representation of the general population of public school teachers in Mississippi, then practicing for mandatory state tests prevails in Mississippi classrooms over the research-based instruction defined in this study in. What was not
clear from the data is the number of minutes designated to test practice. Only the number of days was reported and might be interpreted as only a few minutes each day designated to test practice.

The third research question inquired about the instructional materials and test prep materials used in the classroom and how those materials related to QDI. Only two materials were found to be predictors of QDI. The first was a district pacing guide. According to statistical testing schools that used a pacing guide were predicted to score 15 points lower on QDI than those without a pacing guide. A second predictor that supported the third research question was a variety of test prep materials. The schools with teachers who stated that they used test prep materials other than or in addition to *Buckle Down* and *Coach Products* were predicted to score 10 points higher than those who did not list additional materials. The additional materials that were listed by participants are displayed in Appendix G.

**Support of Literature**

**Introduction**

Abundant literature provides educational leaders the insight to choose instructional methods that are supported by research as the best strategies to promote student achievement (Ausubel, 1968; Brooks & Brooks, 1999; Eby, 1952; Fosnot, 1995; Good, 1960; Hattie et al., 1996; Levy, 2008; Marzano, 1998; Steffe & Gale, 1995; Tomlinson, 2003; Wells & Shaughnessy, 2010; Wilds & Lottich, 1974). From the ancient Greek philosopher, Aristotle (384-322 BC) to more recent educators, Robert Marzano and Carol Ann Tomlinson, ideals about the best instructional methods abound. The present study was designed to explore the classroom activities prevalent in
Mississippi Public Schools and to compare the activities with those reported by research to be the most effective for student achievement. The instrument for this study was a questionnaire developed from instructional theories and educational research that was reported in the literature review.

The literature supports student centered instruction that offers opportunity for students to build new ideas on prior knowledge gained from past experiences (Ausubel, 1968; Brooks & Brooks, 1999; Fosnot, 1995; Steffe & Gale, 1995). Marzano (1998) and Marzano et al., (2001) compiled nine instructional strategies found to be most effective for student achievement. Carol Ann Tomlinson provided a description and guide for differentiated instruction in several of her publications (Rock et al., 2008). The research based instructional strategies identified by Marzano (1998) and Tomlinson (2003) coincide with theories of educational pioneers throughout the history of education (Frederick, 1934; Good, 1960). In contrast, many current educators believe that the pressures to produce high test scores may influence educational leaders to incorporate less effective methods as an attempt to prepare students for mandatory state testing (Abrams & Madaus, 2003; Anderson, 2009; Behrent, 2009; Hamilton, 2003; Neill, 2003; Pedulla, 2003). The results of this study supported the literature that high-stakes testing has influenced a shift from sound instructional strategies to test prep activities during classroom instruction. However, data also revealed that most teachers use at least some combination of the research-based instructional strategies measured in this study.

Results

Results from this study revealed that most teachers assigned to teach subjects assessed by mandatory state tests designated at least a quantity of time most days
engaging students in some form of practice for the state tests. When compared to other instructional strategies, test practice ranked as the fifth most used strategy. Although the combined score for research-based instructional strategies was low for all participants, a few of the individual strategies revealed a higher incidence. The 5 most frequently used strategies among participants included 3 strategies that were highly recommended as components of differentiated instruction. The most frequently used strategy according to responses from participants in this study was to relate new content to real life experiences. The second most frequently used strategy was to adjust instruction to match individual student needs and the third most frequently used strategy was to plan activities to match learning styles of individual students. Although the frequency of test practice is extremely high according to results of this study, there was evidence that most teachers also use at least some of the strategies that are supported by research. Of the teachers surveyed, 90 percent used research-based strategies at least sometimes and all of the participants used test practice at least some of the time. This information indicates that most teachers probably recognize effective instructional strategies and try to balance those strategies with test prep activities.

It is evidenced that most teachers probably know the best instructional methods to use, but pressure to produce high test scores or requirements from school administrators influence them to revert to less effective methods. Less pressure to perform well on standardized assessments might allow teachers to increase their implementation of research-based strategies. If 95 percent of teachers are using test prep activities at least sometimes every week, students are spending a considerable amount of instructional time engaged in activities that, according to research, will not benefit them academically.
According to the data, however, schools with a high incidence of test practice might produce high test scores on standardized tests. Data from this study revealed that 52 percent of participants from high performing schools stated that their students practiced for state tests at least 4 days every week, compared with 4 percent who responded that students were engaged in research-based activities at least 4 days every week. Regardless of what type of instruction produces the highest test scores, for every minute a student practices for a standardized test, he or she is failing to receive what the research has identified as quality instruction.

Implications for School Leaders

School leaders are under scrutiny from government officials, parents and the general public (Erickson, 2008; Linn, 2008; Levy, 2008). State departments of education are under pressure from the federal government to implement the best methods to measure student achievement (Linn, 2008). Teachers are overwhelmed from demands placed on them by building administrators who themselves fear embarrassment if students fail to perform (Anderson, 2009; Behrent, 2009). Even though all individuals involved in the educational process are affected by accountability measures, students possibly have the most to gain or lose. School accountability standards were implemented to insure a quality education for all students enrolled in public schools, and perhaps this study will enhance those efforts.

For the purpose of this study attention will focus on accountability levels, test scores and classroom activities. The data collected for the present research revealed that in many cases school has become a year-long test review. According to the results of this study 100 percent of teachers surveyed assigned some type of test practice to students at
least one day per week. Most assigned test practice at least 4 days every week for some part of the course and 61 percent of surveyed teachers assigned test practice at least 4 days every week from the beginning of the course. Students in those classrooms participated in standardized test practice at least 144 days during one school year. Practicing for standardized tests is not an instructional method that is supported by research (Anderson, 2009). Therefore, thousands of students are spending countless hours engaged in activities that, according to research, will not improve their education.

Even administrators who encourage or require teachers to use test prep activities might use the data obtained from this study to conclude that test practice might not make a difference in accountability. According to this study neither instructional strategies nor test practice predicted QDI, so adhering to strategies that are supported by research might be the best method to insure student achievement. Furthermore, 79 percent of surveyed teachers from schools under academic watch stated that they practiced for tests at least 4 days every week, compared to only 52 percent of teachers from high performing schools. In addition, 96 percent of surveyed teachers from schools under academic watch used test practice for the entire course compared with only 60 percent from high performing schools. Data from this study revealed that high performing schools actually allocated a lower frequency of days for standardized test practice than the schools with lower ratings. The information from this study might influence school leaders to modify opinions about test practice and encourage teachers to engage in more effective instructional strategies.
Recommendations for Future Studies

Revisions

The current study provided information about classroom activities prevalent among public school teachers and how those activities related to the accountability levels assigned to their schools. However, adjustments made by future researchers might develop a more convincing version. A significant limitation for this study was the number of schools that returned questionnaires. The low response rate produced a small sample size and statistical testing used individual responses to represent individual schools instead of per school means. The small sample size might have lowered validity of results. Questionnaires for the present study were distributed in May which might have attributed to the low response rate. Spring assessments were administered during the month of May and many administrators stated that they did not want to bother teachers that near to state testing. Future researchers should replicate this study several months prior to state assessment. However, surveying teachers too early might result in premature responses due to changes that teachers normally make during a school year. Future researchers should avoid data collection near test administration but should also allow teachers time to complete most of the course to validate questionnaire items appropriately.

A second limitation to the present study was an instrument that lacked a uniform scale. The questionnaire was intended to produce two independent variables for research based instructional strategies and differentiated instruction. Instead, the two variables were combined to form one independent variable for total research-based instructional strategies and the 7-value scale was changed to a 5-value scale to unify data. The
manipulation of data was time consuming and a uniform scale when data is collected might simplify statistical testing for future researchers.

A third limitation was in the data collection. Participants interpreted questionnaire items and responded accordingly. Honesty and understanding was assumed, but not guaranteed. In order to eliminate a variety of interpretations, designated individuals need to collect data through teacher interviews or observations. This type of data collection would be extremely time-consuming and the researcher would need to evaluate resources carefully before making the decision.

Follow Up Studies

The current study included teachers of courses assessed by mandatory state tests in Mississippi Public Schools. Delimiting the study to teachers of a specific course or grade level would narrow data and might result in more convincing conclusions. The current study used QDI provided by the Mississippi Department of Education for the dependent variable; therefore, all subject areas that contributed to the score were included. In future studies calculating the QDI for specific subject areas or classrooms within a school would produce more precise data. Narrowing the sample would allow researchers to compare instructional strategies of a specific teacher with test scores produced by the specific group of students under his or her instruction. Future studies might also categorize schools into similar socioeconomic groups, racial divisions, number of students enrolled, and percent of students with disabilities. Eliminating outside factors might allow the researcher to better concentrate on instructional strategies as related to student achievement. Validity might increase with any procedure that isolated the sample.
With the present study data collection from participants was random and teachers expanded on the classroom activities used in their classes. A follow-up study might require specific instructional strategies to be implemented within a classroom, followed by data collection by an outside source. This would eliminate variety in questionnaire interpretation and ensure that instructional strategies were uniform among all participants. However, to require specific instructional strategies, participants would need to be trained or at least screened for correct implementation of required strategies.

Researchers who desire more compelling data might solicit a number of schools that volunteer for teachers to be trained in specific instructional strategies. The teachers would be trained and classroom instruction monitored to ensure that specific activities are carried out. This type of research would be experimental and require a control group with which to compare data. One group would include a high level of test prep activities and a second group would include a high frequency of research-based instructional strategies without the test prep activities. This type of research might produce valid results, but the well-being of students should always be considered before engaging in experimental studies.

Summary

The literature and results of the present study indicated that high-stakes testing fueled by strict accountability standards has influenced instructional delivery among classroom teachers. A review of the literature revealed that not much has changed in the way of learning since ancient times. Terms such as differentiate and construct added to the literature and technology enhanced strategies; but the general concepts of effective instruction prevail. The human race contains the same biological formula that constituted
life and learning thousands of years ago. For centuries experts in educational and psychological fields have explained how students learn best and supplied educators with guidelines for producing the highest possible student achievement. Yet, in many public schools, one standardized test acquires more attention than an entire year of instruction. The literature includes a large extent of information about instruction as it relates to student achievement, but suggestions on how to increase standardized test scores is limited. Wiggins (2010) asserted that less emphasis on the standardized test and more on quality instruction would probably increase test scores, and the common core movement is possibly a paradigm shift toward a similar concept. Hopefully this study will support a shift to instructional awareness, in opposition to test practice, prompting educational leaders to change the emphasis from high test scores to quality classroom instruction, which, according to research, will improve student achievement.
# APPENDIX A

## NINE INSTRUCTIONAL STRATEGIES AND DEFINITIONS

<table>
<thead>
<tr>
<th>Category</th>
<th>McREL Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Identifying Similarities &amp; Differences</td>
<td>• Enhance students’ understanding of and ability to use knowledge by engaging them in mental processes that involve identifying ways items are alike and different.</td>
</tr>
<tr>
<td>Summarizing &amp; Note Taking</td>
<td>• Enhance students’ ability to synthesize information and organize it in a way that captures the main ideas and supporting details.</td>
</tr>
<tr>
<td>Reinforcing Effort &amp; Providing Recognition</td>
<td>• Enhance students’ understanding of the relationship between effort and achievement by addressing students’ attitudes and beliefs about learning.</td>
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<tr>
<td></td>
<td>• Provide students with rewards or praise for their accomplishments related to the attainment of a goal.</td>
</tr>
<tr>
<td></td>
<td>• Extend the learning opportunities for students to practice, review, and apply knowledge.</td>
</tr>
<tr>
<td></td>
<td>• Enhance students’ ability to reach the expected level of proficiency for a skill or process.</td>
</tr>
<tr>
<td>Homework &amp; Practice</td>
<td>• Enhance students’ ability to represent and elaborate on knowledge using mental images.</td>
</tr>
<tr>
<td></td>
<td>• Provide students with opportunities to interact with each other in groups in ways that enhance their learning.</td>
</tr>
<tr>
<td></td>
<td>• Provide students a direction for learning and information regarding how well they are performing relative to a particular learning goal so that they can improve their performance.</td>
</tr>
<tr>
<td></td>
<td>• Enhance students’ understanding of and ability to use knowledge by engaging them in mental processes that involve making and testing hypotheses.</td>
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<tr>
<td>Nonlinguistic Representation</td>
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<tr>
<td>Cooperative Learning</td>
<td></td>
</tr>
<tr>
<td>Setting Objectives &amp; Providing Feedback</td>
<td></td>
</tr>
<tr>
<td>Generating &amp; Testing Hypotheses</td>
<td>• Enhance students’ ability to retrieve, use, and organize what they already know about a topic.</td>
</tr>
</tbody>
</table>

Karen Bryant
PO Box 967
Taylorsville, MS 39168

Permission to Use McREL Material

March 1, 2011

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Sincerely,

Mauren McGrath
Knowledge Management Specialist
APPENDIX B
SAMPLE LETTER

(Place your school letterhead here)

(date)

Dear Human Subjects Review Board,

The purpose of this letter is to grant permission for Karen Bryant, doctoral student at The University of Southern Mississippi, to involve the schools of (insert your school district’s name) in a study that is being conducted during the 2011 Spring Semester. I understand that participation in this study is strictly voluntary and that each teacher may choose to decline.

Thank you,

Superintendent’s Name
APPENDIX C

LETTER TO PRINCIPAL

Date

Dear (Principal’s Name),

I am a doctoral student at The University of Southern Mississippi and will be conducting research during the spring of 2011. During my twenty years as a Mississippi educator, I have witnessed changes in state requirements that have prompted me to explore the accountability system of Mississippi Public Schools. I was a classroom teacher when standardized test results became public knowledge and a high school counselor as state assessments began to heavily influence educational practices. In my current position as principal I am responsible for the academic success of students in my school. The purpose of this study is to uncover school characteristics that produce the highest accountability levels.

I am writing this letter to ask that you grant permission for me to include your teachers in my study. The research will consist of a simple questionnaire to be filled out by classroom teachers. Completion of the questionnaire will take no longer than fifteen minutes and will be administered by myself or someone assisting me. Participation will be completely voluntary and names will be kept confidential. Responses from individual schools will not be released to anyone. All Mississippi Public Schools that participate in mandatory state testing will be invited to participate. Final results of this research will be provided to all schools that participate. If you are interested in helping me with this project or have questions, please contact me by phone at 601-785-2283 or email Karen.bryant@eagles.usm.edu.

Thank you,

Karen Bryant, Doctoral Student

The University of Southern Mississippi
APPENDIX D
CASH DRAWING/RESULTS

If you wish to receive the results of this study or have your name included in cash drawings for $50, please provide your contact information and check the appropriate boxes. This information will not be connected to your questionnaire.

Name ____________________________________________________________
Email ____________________________________________________________

Place a check beside the appropriate box/boxes. (Check ALL That Apply)

☐ Please send me the results of this study.

☐ Please enter my name in a drawing to receive $50 cash.

**If you do not have an email account, please provide other contact information.
APPENDIX E

COVER LETTER

To: Participants
From: Karen Bryant, Researcher

The purpose of this study is to determine the school characteristics that produce the highest Quality of Distribution Index among public schools in Mississippi. You were chosen because you teach in a Mississippi public school that participates in mandatory state assessments. Your name will not be connected to the questionnaire and information will remain confidential. Questionnaire responses for individual participants will not be shared. Your participation is voluntary and you may decline at any time.

Individuals who choose to participate will complete the questionnaire and return it to the researcher or designee on the same day. It will take approximately fifteen minutes to complete the questionnaire. Returning a completed questionnaire will indicate consent to participate in this research project. All questionnaires and data will be destroyed following the study and each participating school will be given a summary of the results. Results for individual schools will not be shared. Participants have the opportunity to enter names and email addresses for a cash drawing. Three $50 awards will be given. Names collected for the cash drawing will not be connected to the questionnaires.

Participants have the opportunity to ask questions regarding the research and procedures at any time during the presentation. Participation in the project is completely voluntary, and participants may withdraw at any time without penalty, prejudice, or loss of benefits. All personal information is strictly confidential, and no names will be disclosed. Any new information that develops during the project will be provided if that information may affect the willingness to continue participation in the project.

Any participant who has questions concerning this study or would like a copy of the results may contact the researcher at any time during or after the project. Inquiries may be directed to Karen Bryant at (601) 785-2283 or karen.bryant@eagles.usm.edu. This project and this form have been reviewed by the Human Subjects Protection Review Committee, which ensures that research projects involving human subjects follow federal regulations. Any questions or concerns about rights as a research participant should be directed to the Chair of the Institutional Review Board, The University of Southern Mississippi, 118 College Drive #5147, Hattiesburg, MS 39406-0001 or (601) 266-6820.
### Classroom Practices of Public School Teachers in Mississippi

Only teachers assigned to subjects that are assessed by the MCT or High School Subject Area Tests are eligible for this study.

1. **Circle ONE.** If you teach more than one tested area, please answer questions based on classroom practices for the ONE area circled below.

   - MCT Math
   - MCT Language Arts/Reading
   - Algebra I
   - Biology I
   - English II
   - US History

2. **How many years have you been a classroom teacher?** *(Including this year)*

3. **What is the highest degree you have earned?** *(Circle One)*
   - BS
   - Masters
   - Specialist
   - Doctorate

4. **Is your current (2010-2011) teaching assignment the same assignment and school you had last year?** *(2009-2010)*
   - YES
   - NO

Questions 5 – 11 refer to the subject that corresponds to the state test you marked in Item #1.

5. **Check each of the materials below that you use for instructional purposes in your class.** *(Check ALL That Apply)*
   - Mississippi Curriculum Framework
   - Textbook
   - Resource materials free with purchase of textbook. (e.g., kits, workbooks, manipulatives, etc.)
   - Test prep materials that must be purchased; such as practice booklets and web-based instruction.
   - Internet Resources (websites that offer free learning activities, games, etc)
   - Practice test provided by the Mississippi Department of Education
   - District Pacing Guide
   - Other Resource Materials (list): [__] ___________

6. **Which test prep materials do you use to practice for the mandatory state test that assesses the subject you teach?** *(Circle ALL that apply)*
   - None
   - Buckle Down
   - Coach
   - Others (list) [__________________________]

7. **When do your students begin activities that are directly related to practice for the state test that assesses the subject you teach?** *(Circle ONE)*
   - No Test Prep Activities Done
   - Beginning of Course
   - Middle of Course
   - End of Course (near test date)

8. **On average, how often do your students practice for the state test that assesses the subject you teach?** *(Circle One)*
   - Never
   - 2 days per month or less
   - 1 day per week
   - 2 days per week
   - 3 days per week
   - 4 days per week
   - Daily

9. **Briefly explain the process you follow to prepare students for the mandatory state test that assesses the subject you teach.**
   - I teach the framework and hope for the best.
   - Other [____________________________________________________________________________________]

10. **Choose one statement that best describes the affect that mandatory state tests have had on your instructional delivery.** *(Check One)*
    - Mandatory state tests cause me to improve my instructional delivery.
    - Mandatory state tests have a negative impact on my instructional delivery.
    - Mandatory state tests have no influence on my instructional delivery.
    - Other *(Explain)* [__________________________]

11. **How often do you teach meaningful content that is NOT directly related to an objective or competency that is assessed on the state test?**
    - Never
    - 2 days per month or less
    - 1 day per week
    - 2 days per week
    - 3 days per week
    - 4 days per week
    - Daily

---

*Please answer items 12 & 13 based on your professional opinion.*
12 Choose one statement that best describes the affect that mandatory state tests have had on public schools in Mississippi. (*Check One*)

___ Mandatory state tests have improved the quality of education for most students.
___ Mandatory state tests have lowered the quality of education for most students.
___ Mandatory state tests have not changed the quality of education for most students.
___ Mandatory state tests have improved the quality of education ONLY for students with learning disabilities.
___ Mandatory state tests have improved the quality of education ONLY for students WITHOUT learning disabilities.

13 The quality of education for intellectually gifted students in Mississippi has been ______________ by mandatory state tests. (*Circle One*)

<table>
<thead>
<tr>
<th>Lowered</th>
<th>Improved</th>
<th>Unchanged</th>
</tr>
</thead>
</table>

For items 14 – 21 a “grading period” is one recorded term. (9-week term for most schools) *Circle ONE answer for each item.*

14 During a typical grading period, how often do classroom assignments require your students to participate in group activities?

<table>
<thead>
<tr>
<th>Never</th>
<th>2 days per month or less</th>
<th>1 day per week</th>
<th>2 days per week</th>
<th>3 days per week</th>
<th>4 days per week</th>
<th>Daily</th>
</tr>
</thead>
</table>

15 During a typical grading period, how often do your students complete written assignments from worksheets, workbook pages, textbook, etc?

<table>
<thead>
<tr>
<th>Never</th>
<th>2 days per month or less</th>
<th>1 day per week</th>
<th>2 days per week</th>
<th>3 days per week</th>
<th>4 days per week</th>
<th>Daily</th>
</tr>
</thead>
</table>

16 During a typical grading period, how often do you require students to write notes that you provide for them, verbal or written, verbatim?

<table>
<thead>
<tr>
<th>Never</th>
<th>2 days per month or less</th>
<th>1 day per week</th>
<th>2 days per week</th>
<th>3 days per week</th>
<th>4 days per week</th>
<th>Daily</th>
</tr>
</thead>
</table>

17 During a typical grading period, how often do classroom assignments require your students to use concrete manipulatives and/or visual images?

<table>
<thead>
<tr>
<th>Never</th>
<th>2 days per month or less</th>
<th>1 day per week</th>
<th>2 days per week</th>
<th>3 days per week</th>
<th>4 days per week</th>
<th>Daily</th>
</tr>
</thead>
</table>

18 During a typical grading period, how often do assignments require students to examine items and identify similarities/differences?

<table>
<thead>
<tr>
<th>Never</th>
<th>2 days per month or less</th>
<th>1 day per week</th>
<th>2 days per week</th>
<th>3 days per week</th>
<th>4 days per week</th>
<th>Daily</th>
</tr>
</thead>
</table>

19 During a typical grading period, how often do assignments require students to examine information and summarize main ideas/details?

<table>
<thead>
<tr>
<th>Never</th>
<th>2 days per month or less</th>
<th>1 day per week</th>
<th>2 days per week</th>
<th>3 days per week</th>
<th>4 days per week</th>
<th>Daily</th>
</tr>
</thead>
</table>

20 During a typical grading period, how often do you spend MOST of the daily instructional time in teacher lecture vs student centered activities?

<table>
<thead>
<tr>
<th>Never</th>
<th>2 days per month or less</th>
<th>1 day per week</th>
<th>2 days per week</th>
<th>3 days per week</th>
<th>4 days per week</th>
<th>Daily</th>
</tr>
</thead>
</table>

21 During a typical grading period, how often do you require students to “teach” assigned content to the class?

<table>
<thead>
<tr>
<th>Never</th>
<th>2 days per month or less</th>
<th>1 day per week</th>
<th>2 days per week</th>
<th>3 days per week</th>
<th>4 days per week</th>
<th>Daily</th>
</tr>
</thead>
</table>

For questions 22 – 28 choose the answer that BEST describes your classroom practices. *Circle ONE answer for each item.*

22 Do you give all of your students a learning style inventory?  *YES*  *NO*

23 How often do you ask students to write down learning goals prior to learning new content?

<table>
<thead>
<tr>
<th>Never</th>
<th>Rarely</th>
<th>Sometimes</th>
<th>Often</th>
<th>Always</th>
</tr>
</thead>
</table>

24 How often do you teach the same content but use different activities in order to address the various learning styles of your students?

<table>
<thead>
<tr>
<th>Never</th>
<th>Rarely</th>
<th>Sometimes</th>
<th>Often</th>
<th>Always</th>
</tr>
</thead>
</table>

25 How often do you assess your students’ prior knowledge of content BEFORE you introduce new content?

<table>
<thead>
<tr>
<th>Never</th>
<th>Rarely</th>
<th>Sometimes</th>
<th>Often</th>
<th>Always</th>
</tr>
</thead>
</table>

26 How often do you adjust instruction to meet the needs of individual students?

<table>
<thead>
<tr>
<th>Never</th>
<th>Rarely</th>
<th>Sometimes</th>
<th>Often</th>
<th>Always</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>How often do you assign different activities to accommodate for individual ability levels of students in the same classroom?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Never</td>
<td>Rarely</td>
<td>Sometimes</td>
<td>Often</td>
</tr>
<tr>
<td>27</td>
<td>How often do you relate content being taught to real-life experiences of students?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Never</td>
<td>Rarely</td>
<td>Sometimes</td>
<td>Often</td>
</tr>
</tbody>
</table>

29. Briefly state additional comments if you would like to elaborate on any of the items on this questionnaire or topics related to the items.
APPENDIX G

INSTRUCTIONAL MATERIALS AND TEST PREP MATERIALS LISTED BY PARTICIPANTS WHO CHOSE ‘OTHER’ ON QUESTIONNAIRE ITEMS 5 AND 6

<table>
<thead>
<tr>
<th>Instructional materials</th>
<th>Test Prep Materials</th>
</tr>
</thead>
<tbody>
<tr>
<td>Practice provided by other states</td>
<td>Other state practice tests</td>
</tr>
<tr>
<td>MAP DeCartes by Northwest Evaluation Association (NWEA)</td>
<td>MDE practice tests</td>
</tr>
<tr>
<td>Resources borrowed from other school districts</td>
<td>Mastering the MCT2 by Glencoe McGraw-Hill Publishers</td>
</tr>
<tr>
<td>Various educational books with copy masters</td>
<td>Test questions on the California Department of Education Website</td>
</tr>
<tr>
<td>JBHM Educational Group</td>
<td>Apex Learning Digital Curriculum at apexlearning.com</td>
</tr>
<tr>
<td>Audiovisual material</td>
<td>Study Island at studyisland.com</td>
</tr>
<tr>
<td>Software – Classworks, Kids College</td>
<td>Student Review Guide, provided by MDE</td>
</tr>
<tr>
<td>Original material made by teacher</td>
<td>ExamView software from eInstruction</td>
</tr>
<tr>
<td>MOBI – Mobile Interactive Whiteboard and CPS Student Response System clickers.</td>
<td>Test Smart by Gary W. Abbamont</td>
</tr>
<tr>
<td></td>
<td>Spectrum Test Prep by McGraw-Hill Publishers</td>
</tr>
<tr>
<td></td>
<td>JBHM Educational Group</td>
</tr>
<tr>
<td></td>
<td>Accelerated Math</td>
</tr>
<tr>
<td></td>
<td>District Assessment</td>
</tr>
<tr>
<td></td>
<td>USA Test Prep</td>
</tr>
<tr>
<td></td>
<td>Passing the Mississippi SATP by American Book Company, Publishers</td>
</tr>
<tr>
<td></td>
<td>Mississippi SATP Student Review Guides by Enrichment Plus Publishers</td>
</tr>
<tr>
<td></td>
<td>Practice Tests provided by the Texas Department of Education</td>
</tr>
<tr>
<td></td>
<td>Discovery Education.</td>
</tr>
</tbody>
</table>
APPENDIX H

RESPONSES FROM ITEM 29 - OPEN-ENDED QUESTION

The following passages are direct quotes offered by teachers who participated in this study:

“Mandatory state tests only take a snapshot of the student’s performance. It places entirely too much pressure on the teachers and teachers have too much stress at this job anyway!

In my opinion, students’ education has become limited because teachers can only spend time teaching what is required. There are a lot of skills students could learn, but teachers cannot spend the time trying to teach those other skills, because of ‘the test’.

“For questions 14-21, I really use a mixture of these. I try not to constantly use the same method but switch it up from time to time. Students need to learn how to do each one well; however, we do need to move on to other skills as well. After an allowable amount of time for the class to adjust to the assignment we move forward. We do this by adding another step or changing the questioning style. We do this through out each nine weeks and we always return to previous types of questions to check for retention.”

“I understand that a written test is the only way we have at present to assess student learning, but it is woefully inadequate. It does not take into account the differences between students and their initial levels of ability. It also unfairly penalizes certain school districts with a higher incidence of SPED students or low-income students. Also, what about students that know the material but get extreme test anxiety?

In most school districts, the only classes that get special focus are SATP classes. Others are rarely looked at. They get few, if any, resources or attention. As a result, it sends a message to these teachers and students that those classes don’t matter. Both teachers and students eventually stop putting in the effort to do a good job.

For SATP students, anxiety is far too high. They are expected to sit in a room for a day to take ridiculously long tests. They don’t have that kind of attention span. It is unfair to ask them to spend this amount of time on one test because fatigue sets in and they give up.

Also, many students don’t even try on the first test. They use it instead to see what is on the test. Then they try to pass on one of the subsequent administrations. This makes school scores lower. It puts the pressure on the school, not the student. The student doesn’t care.”

“I feel additional computers are needed in each classroom to be used for reinforcement of skills or rewards of academic performance. I would include a weekly rotation for all students. We have a computer room for student use, but more computers in the classrooms would enhance student-to-student learning in all subject areas during the classroom periods.
“In our school, we have embedded the practice for MCT into our daily instruction. Our classroom tests are organized in MCT format.”

“Mandatory state testing has put the focus more on the results of the day(s) that the students take the test, than the student. Test scores seem to be the most important thing. I teach the students for knowledge sake. Then, I have to teach the test. I find my own resources to teach, largely online. It would be nice to have an accurate database issued by the state that has all of the practice problems we need in order for our students to take the test.”

“Technology is a great benefit in the amount of time I can get feedback on mastery of objectives. Also, the availability of students having access anywhere there is internet, seems to help include parents.”

“While state testing can have a negative impact on instruction, there does need to be a way to hold teachers accountable. It is of my opinion that state testing not be used to measure a teacher’s success. Teaching arts must be measured by administration evaluation. State assessment can be beneficial in student placement.”

“MCT is too broad and doesn’t allow teachers to teach deeper concepts, etc. needed for college or higher level courses.”

“I don’t know if state testing has improved instruction or just taught our students how to take tests better.”

“High stakes testing is not effective unless all parties involved have a vested interest. Holding teachers and schools accountable for student learning and not holding students accountable is insane.”

“Comment on using graphing calculators – debate between - Do you want students to be able to use a calculator program or do you want them to truly work the problem and understand the meaning of the answer?”

“The English II state test is too hard, too long, too boring, and too subjective for the tenth-grade students it is supposed to assess. If the test must be given, it should be broken into two distinct sections administered over two separate days. The wording of the questions is arbitrarily confusing, only using ‘buzz words’ to satisfy someone’s idea of rigor. Students will receive a more meaningful, well-rounded education if teachers do not have to spend time and energy attempting to satisfy ‘growth’ requirements in test scores.”

“Mandatory testing has led to students with disabilities being required to perform at a level that is above their academic ability in most cases. This leads to frustration for the students and teachers. If the students were tested based on academic functioning level rather than chronological grade level they could do better.”
“The mandatory state tests do not hold students or parents accountable; therefore, most do not care. There is much pressure only on the teacher and school.”

“I believe that the state test has been beneficial overall. I have been involved since the very first test. I have been in three different school districts since the start of the test. With the first group, my kids scored the highest scores in the state. The high scores were evident at the next school also. With the last school, the students changed considerably from the first two groups of students. Even though my kids here have not scored really high overall, they have had considerable success in making good average scores, passing the test with a high percent rate, and even scoring fairly high for about 20% of the group each year. I do not lecture much. I believe that students learn best when they are actively involved in the learning process.”

“My instructional practices as an educator reflects the importance of educating students whether there are state mandates or not. I try to teach students the content by providing them with the best instruction possible.”

“As a relatively ‘new’ teacher, I am constantly learning. I am interested in ideas for improving my curriculum instruction. I feel I have a good rapport with my students and maintain their attention/interest most of the time. However, I feel that I could help students more if I knew more about differentiated instructional strategies. I would appreciate professional development designed to help SATP teachers make plans to enhance instruction. I would like to have concrete information such as outlines, ideas that have been tested and proved, etc. It would also be helpful if SATP teachers had a state specific resource site where they could share information. My main goal is not to just ‘teach the test’. I want my kids to learn to love biology the way I do!”

“Some of the questions were difficult to answer. Everything we do from day one of the school year is in preparation for state testing. In early spring we do more in depth, concentrated practice, but we practice all year.

In reference to question 11, I often teach skills that are not tested on state testing such as using prior knowledge; because this skill helps them relate what they’re reading to what they already know.”

“Prior to instruction during the first part of the year, I analyze student data from previous state test to learn areas of weaknesses and strengths. Students also analyze their test data to focus and become aware of their areas of weaknesses and strengths. Pre tests are given as well. Students are given a syllabus for my class that includes expectations, requirements, pacing guides that include all objectives to be covered, materials, etc., and letter to the parent. Students are expected to know what objective is being taught at any given time – highlighting the objectives on their pacing guide.”

“I don’t know if question 15 is viewed as negative, but those tools are to be made to make teacher’s work more productive. A teacher’s time is valuable. It’s not worksheets, textbooks, etc. that produce poor results. It’s how they are used.”
“In my 50 minute class period, I usually have an opening question pertaining to a previous lesson or to see what students know about a new topic. I introduce a new topic and discuss facts and information that they know and then lead into notes or new information. I use primary sources that I have gathered to illustrate some of the information. I often use prepared power points to tell stories about our history. I travel and bring back souvenirs such as lye soap, block of tea, confederate currency, Native American baskets and dolls, models, etc. Paintings, photos and music also play a role in some lessons. I do use some worksheets to reinforce ideas and information but I put more emphasis on projects and reports when students learn information individually they share with others.”

“I feel that if skills are taught all year long with constant remediation, revisiting, and extending the concept, then students will excel. Lessons should be taught to meet the needs of all learners.”
APPENDIX I

INSTITUTIONAL REVIEW BOARD APPROVAL LETTER

THE UNIVERSITY OF SOUTHERN MISSISSIPPI

Institutional Review Board
118 College Drive #5147
Hattiesburg, MS  39406-0001
Tel: 601.266.6820
Fax: 601.266.5509
www.usm.edu/irb

HUMAN SUBJECTS PROTECTION REVIEW COMMITTEE
NOTICE OF COMMITTEE ACTION

The project has been reviewed by The University of Southern Mississippi Human Subjects Protection Review Committee in accordance with Federal Drug Administration regulations (21 CFR 21, 111), Department of Health and Human Services (45 CFR Part 46), and university guidelines to ensure adherence to the following criteria:

- The risks to subjects are minimized.
- The risks to subjects are reasonable in relation to the anticipated benefits.
- The selection of subjects is equitable.
- Informed consent is adequate and appropriately documented.
- Where appropriate, the research plan makes adequate provisions for monitoring the data collected to ensure the safety of the subjects.
- Where appropriate, there are adequate provisions to protect the privacy of subjects and to maintain the confidentiality of all data.
- Appropriate additional safeguards have been included to protect vulnerable subjects.
- Any unanticipated, serious, or continuing problems encountered regarding risks to subjects must be reported immediately, but not later than 10 days following the event. This should be reported to the IRB Office via the “Adverse Effect Report Form”.
- If approved, the maximum period of approval is limited to twelve months. Projects that exceed this period must submit an application for renewal or continuation.

PROJECT NUMBER:  11050304
PROJECT TITLE:  Accountability for Mississippi’s Public Schools
PROPOSED PROJECT DATES:  04/01/2011 to 10/31/2011
PROJECT TYPE:  Dissertation
PRINCIPAL INVESTIGATORS:  Karen C. Bryant
COLLEGE/DIVISION:  College of Education & Psychology
DEPARTMENT:  Educational Leadership
FUNDING AGENCY:  N/A
HSPRC COMMITTEE ACTION:  Exempt Approval
PERIOD OF APPROVAL:  05/09/2011 to 05/09/2012

[Signature]
Lawrence A. Hosman, Ph.D.
HSPRC Chair

5-10-2011
Date
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