TEACHER EFFICACY AND DIRECT INSTRUCTION IN READING

by

JENNIFER L. DAVENPORT

(Under Direction the of C. Thomas Holmes)

ABSTRACT

The purpose of this study was to investigate the relationship of teachers' sense of efficacy and SRA's Corrective Reading, a scripted direct instruction program, and to investigate the relationship between SRA Corrective Reading and student reading achievement as measured by the reading portion of the *Georgia Criterion Referenced Competency Test* (CRCT). The sample included 15 reading teachers in grades 6 and 8 at a small middle school in northwest Georgia. The student sample was comprised of 128 sixth grade students and 89 eighth grade students. Two instruments, the *Georgia Criterion Referenced Competency Test* (CRCT) and a modified version of the *Teacher Self and Organizational Efficacy Assessment (TSOEA)* were utilized to collect data on the subjects. Data was analyzed using the t test for dependent means and the Pearson product-moment correlation coefficient.

INDEX WORDS: Direct instruction, Teacher Efficacy, Collective Efficacy, Motivation

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DEDICATION

This work is dedicated to the giants in my life on whose shoulders I stand. My husband, Kenneth Davenport, from whom I have received unconditional love and support through out thirty years of marriage and four college degrees; my late father, Edward W. Latham, from whom I learned about the value honest work; my mother, Willa Leigh Latham, on whose lap I learned to love the printed word that opened the doors of opportunity for me; and my eighth grade mathematics teacher, Isaac Fugate, in whose classroom I found my sense of efficacy, and that has made all the difference.

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CHAPTER 1

INTRODUCTION

In his 1997 State of the Union Address, President Bill Clinton emphasized the need for national standards in education. These standards included the development of national tests with the directive for states to develop tests in reading at fourth grade and mathematics at the eighth grade by 1999. The President expressed the expectation that every eight-year-old be able to read. To meet this expectation, the America Reads initiative was launched. This initiative was designed to make sure "that every child can read independently by the end of 3rd grade" (Goals 2000, 1997, p.4). Pressure from the federal government to improve the educational status of America's children has continued into the 21st century with the recent passage the No Child Left Behind Act (NCLB) of 2001. The bill, signed into law on January 8, 2002, by President George W. Bush, impacted Title I of the Elementary and Secondary Education Act of 1965 (ESEA). The bill provided $10.4 billion for Title I grants to close the achievement gap between rich and poor students; $1 billion for Reading First and Early Reading First to help schools meet the goal of all students reading fluently by third grade; and $2.9 billion for state grants to improve teacher quality (NCLB 2001, Section 1002, P.L. 107-110). Three major principles undergird this reform: accountability for results, flexibility, and scientifically based research strategies. The dramatic increase in the amount of

mandatory testing highlights one of the most significant changes for states regarding Title I. By the 2004-2005 school year every state must test every student in grades three through eight in both mathematics and reading.

Since the implementation of President Clinton's Goals 2000, many states including Georgia have embraced the call for school improvement. Under the leadership of Governor Roy Barnes, the Georgia General Assembly passed the A Plus Education Reform Act of 2000 (H.B. 1187) enacting the bill into law with its signing effective April 25, 2000. As enacted, the A Plus Education Act required that all students be assessed on Georgia's Criterion Referenced Competency tests in the areas of reading, language arts, and mathematics for grades one through eight effective for Spring 2002. Assessments in the areas of science and social studies were also required for grades three through eight. End of course tests for high school were developed and were administered for the first time December 2003.

This state and national attention to improve reading and mathematics using methods that are scientifically research based had educators seeking instructional strategies that would give the greatest gains in terms of student achievement. Wang, Haertel, and Walberg (1993a) studied evidence from 179 handbook chapter and reviews, 91 research syntheses, and 61 educational researchers to create a knowledge base that showed consensus on the most significant influences on learning. The researchers identified educational, psychological, and social theories of learning to be included in their knowledge base for learning and from those theories derived 28 categories of influence. Wang, et al. (1993a) suggested that educational change be grounded in a knowledge base drawn from research. This research (Wang, et al., 1993a) found that

proximal or direct influences have a greater effect on learning than distal or indirect influences. Direct influences include the amount of time spent in instruction and the quality of social interactions between teacher and students. Indirect influences on learning include policies adopted by a school, district, or state. Wang, et al. (1993b) summarized their findings relating to student learning: "Unless reorganization and restructuring strongly affect the direct determinants of learning, they offer little hope of substantial improvement" (p. 79).

Debate over instructional practices in reading has been ongoing between two distinct groups: those who believe that phonics should be explicitly taught and those who believe that phonics can be taught implicitly through the use of authentic literature experiences (Routman, 1988; Snow, Burns, & Griffin, 1998; Zakaluk, 1982, 1996). Explicit instruction in the skills area is particularly important when there is a large percentage of the school's population coming from disadvantaged homes (Snow, et al., 1998). Research conducted by Chall (1967) found substantial and consistent advantages for reading programs that included a systematic approach to phonics as measured by outcomes on word recognition, spelling, vocabulary, and reading comprehension at least through third grade. These advantages were greater for children from lower socioeconomic backgrounds. Research reviews (Adams, 1990; Anderson, Hiebert, Wilkinson, & Scott, 1985; Balmuth, 1982) conducted since Chall's (1967) research has affirmed her basic finding regarding systematic phonics instruction. Likewise, research conducted by Slavin, et al. (1992) supported literacy instruction efforts that included coherent regular classroom reading instruction in the areas of word recognition and comprehension skills.

Problem Statement

"Learning to read is one of the most important things children accomplish in elementary school because it is the foundation for most of their future academic endeavors" (Stevens, Slavin, & Farnish, 1991, p.8). Snow, et al. (1998) stated that the ability to read is critical for the educational and economic survival of the citizens of an ever expanding global society. Research (Adams, 1990; Chall, 1967; Foorman, et al., 1998; Share, 1995; Share & Stanovich, 1995) suggested that reading is not a skill that is acquired through exposure to words and text. It is a skill that requires explicitly taught phonemic awareness using communication that is clear and concise (Adams, 1990; Chall, 1967; Foorman, et al., 1998; Share, 1995; Share & Stanovich, 1995). The perceptions of the teachers regarding the instructional strategy also may affect how they implement the instructional strategy and ultimately affect student achievement. The two research questions formulated for this study are:

Research Question 1: Do the efficacy perceptions of teachers participating in direct instruction reading program dissipate over time?

Research Question 2: What is the relationship between student reading achievement and direct instruction reading program?

Rationale

The theoretical basis for this study was Bandura's theory of self-efficacy (Bandura, 1977, 1978a, 1978b, 1981, 1982, 1986, 1989, 1991a, 1991b, 1993, & 1997). An individual's beliefs about his/her capabilities to accomplish a given task reinforce that individual's motivation either positively or negatively. This sense of self determines the goals set by the individual, the amount of energy the individual will expend in goal

attainment, and the response of the individual to failure should it present itself. Therefore, a teacher's instructional behaviors both affect and are affected by the individual's sense of efficacy. According to Stipek (1993), an individual's willingness to accept tasks and stay with them and to focus on strategies to solve problems, while maintaining control over the emotional aspect of the situation, contribute to achievement results related to the task.

The learning environment of the classroom is determined by the teacher's sense of efficacy (Bandura, 1993). Studies conducted by the Rand Corporation found that teachers' efficacy beliefs were related to goal attainment, the extent of teacher change, improved student performance, and continued use of materials and strategies related to instructional programs (Ashton & Webb, 1986).

With today's ever increasing emphasis on accountability in reading and mathematics, educators have been seeking solutions to the problems related to student achievement. Over recent years there have been three approaches to beginning reading instruction: whole language, embedded phonics, and direct code instruction (Snow, et al., 1998). Research in the area of reading suggests that children do not develop phonemic awareness without explicit instruction (Fletcher et al., 1994; Shaywitz, Escobar, Shaywitz, Fletcher, & Makuch, 1992: Stanovich & Siegel, 1994). Moreover, recent research in reading points to a very strong relationship between oral reading fluency and reading comprehension (Potter & Wamre, 1990; Shinn, Good, Knutson, Tilly, & Collins, 1992).

Limitations of the Study

The limitations of this study included those associated with using surveys. The intended surveys were self-report instruments and as such they were subject to the risk that subjects' responses might be unrepresentative or dishonest.

Other limitations included the size of the sample, lack of a control group, and those associated with time series designs. The absence of a control group and the ability to control history could possibly compromise the internal validity of the study. Additionally, the sample included in this study consisted of sixth and eighth graders as well as their teachers in one Georgia public school district. Of the 21 reading teachers at the school, six elected not to participate in the study. This factor limits the study in relation to adequate representation Therefore, implications of the research findings forthcoming from this study were limited to this particular school district.

Definitions of Terms

The following definitions are provided to maintain constancy in meaning during the course of the evaluation:

Efficacy--The belief held by an individual about his or her ability to achieve certain behavioral outcomes (Bandura, 1977, 1986)

Teachers' sense of efficacy--Teachers' beliefs in their individual ability to motivate and promote learning among all students (Bandura, 1997).

Middle school student--Any student, regardless of chronological age, enrolled in sixth, seventh, or eighth grades.

Criterion-referenced test—A test that determines how well students have learned knowledge and skills relative to a pre-determined performance level on a specified set of

educational goals or outcomes included in the school, district, or state curriculum. In this study, the criterion-referenced test is the *Georgia Criterion Referenced Competency Test* (CRCT) for grades 5, 6, 7 and. 8. Raw scores range from 150 to 450. Students scoring 300 are considered to have met standards.

Direct Instruction (DI) --"A comprehensive system of instruction that integrates effective teaching practices with sophisticated curriculum design, classroom organization and management, and careful monitoring of student progress as well as extensive staff development" (Stein, Carnine, & Dixon, 1998, p.227).

Significance of the Study

The review of the literature suggested that there was limited research relating to the teachers' sense of efficacy and its relationship to student achievement in Direct Instruction programs as well as in the implementation of a program involving scripted lessons for students. The literature was rich in references to teacher efficacy, student efficacy, and various instructional strategies related to beginning reading instruction. There was little literature regarding the use of strategies normally employed with beginning readers on middle level students as a means of correcting reading deficiencies.

Since reading has generally been considered as the fundamental foundation for all other learning and given that the nation as a whole perceives that students have been experiencing reading difficulty, this study could help middle level educators gain insight into the relationship between achievement and Direct Instruction strategies. These insights could provide information for school leadership as it seeks strategies to achieve the accountability goals established by school districts.

This study could assist educational leaders in evaluating the impact of programs on teachers' sense of efficacy as it relates to instructional strategies. This knowledge could assist system level personnel design professional development opportunities and teacher mentoring programs that would strengthen efficacy of those teachers involved.

CHAPTER 2

REVIEW OF THE LITERATURE

Educators throughout the United States have been responding to public demand for reform that will result in school improvement of student achievement. Efforts such as charter schools, year round schools, and block scheduling have attempted to change the school environment to impact student attendance, behavior, and achievement. Reform is not a new concept in the realm of American education (Honig, 1985; Ravitch, 1983). Efforts to reform schools in this country date back to the 1950s when the Soviet space program bested the United States by launching Sputnik I. In 1958, President Dwight Eisenhower formed the National Space and Aeronautics Administration (NASA), referring to the Soviet threat as being unique in history in its pervasiveness (Houston, 1997). Three years later in a speech before Congress, President John F. Kennedy declared the nation's goal that before the decade was out, man would land on the moon and returning safely to earth (Houston, 1997). Critics of the educational system of the 1950s and 60s argued that the curriculum of the 1930s and 1940s was no longer able to provide the country with the scientists and engineers needed to compete in the space age (Honig, 1985; Ravitch, 1983). By the mid-1970s, emphasis returned to the basics and a logical curriculum. Educational reform in the 1980s proved to be more comprehensive, intensive, and sustained than ever before (Murphy, 1990). During this era of reform the focus was on honing basic skills and knowledge to meet state and federal mandates

for excellence in education. It was during the 1980s that states began to pass legislation aimed at reform (e.g., the Quality Basic Education Act was passed in 1985 in Georgia and new legislation was passed in Kentucky in 1989).

As the nation moved to the 1990s, reform once again became vogue with measurement-driven instruction and accountability that continues as an emphasis as the nation moves into the new millennium (Goals 2000, 1996). This was evidenced through studies of schooling such as the National Assessment of Educational Progress (Jones, 1996). During the 1990s, the focus of educational reform moved to state and local education agencies. Federal involvement however was still evident. Under the leadership of President George Bush and the Governors' Conference, National Education Goals were established at the 1989 Education Summit. On March 31, 1994, President Clinton signed the Goals 2000: Educate America Act into law. Through this act the federal government pledged "to form a new and supportive partnership with states and communities in an effort to improve student academic achievement across the nation" (Goals 2000, 1996, p.1). In 1990, the Kentucky State Legislature passed the Kentucky Education Reform Act. This act featured high academic standards for all students with new state assessments tied to the standards put in place in 1992. A new financing system was created to provide greater equity across school districts as well. In Maryland, education reform followed a path similar to Kentucky with an accountability system designed to establish high standards relating to student achievement as well as statewide assessments of student progress in relation to the standards (Goals 2000, 1996).

On January 8, 2002, President George W. Bush signed into law the most recent of federal education reforms--the No Child Left Behind (NCLB, 2001, P.L. 107-110) Act of 2001. While the effects of NCLB on student achievement cannot be immediately evaluated, this education reform law is "an ambitious and highly detailed reform blueprint for education" (p. 1, January 2002, Title I Monitor). The intent of the law was "to ensure that all children have a fair, equal, and significant opportunity to obtain a high-quality education and reach, at a minimum, proficiency on challenging state academic achievement standards and state academic assessments" (NCLB, 2001, Section 1001, P.L. 107-110). Woven throughout the act are three principles: accountability for results, flexibility, and scientifically based research solutions to educational problems (p.1-20, January 2002, Title I Monitor). The No Child Left Behind Law (P.L. 107-110), which reauthorized the Elementary and Secondary Education Act (ESEA), requires that each state adopt a single statewide accountability system for all students in grades three through eight in the areas of reading, mathematics, and science by the year 2006. Additionally, each state is required to participate in the National Assessment of Educational Progress (NAEP) every other year.

In 1993, Wang, Haertel, and Walberg conducted research that was designed to identify and determine the influence of three factors on learning: educational, psychological, and social. The study used expert ratings, content analysis, and meta-analysis to determine the importance and consistency of variables that impact learning. Meta-analyses of primary research conducted in the 1970s and 1980s gave scientific support for teaching and learning (Gage, 1978; Glass, McGraw, & Smith, 1981; Walberg, 1986). The existing meta-analyses of that era provided information on the effects of

programs such as cooperative learning and mastery learning (Guskey & Gates, 1986; Johnson, Maruyama, Johnson, Nelson, & Skon, 1981) on the teaching/learning process but provided no information on the importance of the scope of variables that impact learning. From the study conducted by Wang, et al. (1993a), the researchers concluded that if teachers desired to heighten school learning, they would place emphasis on those variables that were closest to the learners: "(a) psychological variables, especially metacognition and cognition; (b) classroom instruction and management, and student and teacher social and academic interactions; and (c) the home environment" (p. 278). Ashton and Webb (1986) pointed out that reforms are dependent upon teachers for their success. They suggested that teacher motivation has declined due to a number of factors including but not limited to the lack of public confidence in teachers. These authors cited two Rand studies as being significant in understanding the underlying factor of teacher motivation: teachers' sense of efficacy.

Measurement-Driven Instruction and Accountability

In August of 1981, Secretary of Education Bell created the National Commission on Excellence in Education to "examine the quality of education in the United States" (National Commission for Excellence in Education, 1983, p.1). The result of this Commission's efforts was a 65 page document that portrayed the nation as being "at risk" educationally. The report cited thirteen indicators of risk: (National Commission for Excellence in Education, 1983)

> International comparisons of student achievement completed a decade ago, reveal that on 19 academic tests American students were never first or second, in comparison with other industrialized nations, were last seven times.
>
> Some 23 million American adults are functionally illiterate by the simplest tests of everyday reading, writing, and comprehension.
>
> About 13% of all 17-year-olds in the United States can be considered

> functionally illiterate. Functional illiteracy among minority youth run as high as 40 percent.
>
> Average achievement of high school students on most standardized tests is now lower than ... when Sputnik was launched.
>
> Over half the population of gifted students do not match their tested ability with comparable achievement in school.
>
> The College Board's Scholastic Aptitude Tests (SAT) demonstrate a virtually unbroken decline from 1963 to 1980. Average verbal scores fell over 50 points and average mathematics scores dropped nearly 40 points.
>
> College Board achievement tests also reveal consistent declines in recent years in such subjects as physics and English.
>
> Both the number and proportion of students demonstrating superior achievement on the SATs (i.e., those with scores of 650 or higher) have also dramatically declined.
>
> Many 17-year-olds do not possess the "higher order" intellectual skills we should expect of them. Nearly 40% cannot draw inferences from written material; only one-fifth can write a persuasive essay; and only one-third can solve a mathematics problem requiring several steps.
>
> There was a steady decline in science achievement scores of U.S. 17-year-olds as measured by national science assessments of science in 1969, 1973, and 1977.
>
> Between 1975 and 1980, remedial mathematics courses in public 4-year colleges increased by 72% and now constitute one-quarter of all mathematics courses taught in those institutions.
>
> Average test achievement of students graduating from college is also lower. Business and military leaders complain that they are required to spend millions of dollars on costly remedial education and training programs in such basic skills as reading, writing, spelling, and computation. The Department of the Navy, for example, reported to the Commission that one-quarter of its recent recruits cannot read at the ninth grade level, the minimum needed simply to understand written safety instructions. Without remedial work they cannot even begin, much less complete, the sophisticated training essential in much of the modern military.
>
> (National Commission for Excellence in Education, 1983, p. 8-9)

The authors made five recommendations for reform to the Secretary of Education. First, high school graduation requirements were to be strengthened to include four years of English, three years of mathematics, three years of science, three years of social studies, and one-half year of computer science. For those who were college-bound, an additional two years of foreign language was recommended. Next, it was recommended that schools, colleges, and universities have more rigor and measurable standards as well

as higher expectations for students' conduct and academic performances. Four year colleges and universities were asked to raise their admission requirements as well. More effective use of the existing school day, a longer school day, or a lengthened school year was recommended. The fourth recommendation was related to teaching and included teacher preparation, market-sensitive salaries for teachers, the adoption of an 11-month contract for teachers, implementation of career ladders, the employment of nonschool personnel resources, incentives to attract outstanding students to teaching, and the use of master teachers to design teacher preparation programs and to supervise beginning teachers. The fifth recommendation included fiscal support for education from the citizenry and accountability for elected officials in achieving educational reform (National Commission for Excellence in Education, 1983).

As a result of the release of this report, the media was able to transform existing skepticism into perceived reality in the minds of the general public (Berliner & Biddle, 1995). This "Manufactured Crisis was not an accidental event" according to Berliner and Biddle (1995, p.4). The purpose of this manufactured crisis was to further the political goals of education's critics.

Berliner and Biddle (1995) refer edto a phenomenon that they call the Socrates' Syndrome. These authors purported that this Socrates' Syndrome is at least in part the reason so many became willing followers of this crisis in education. Socrates' Syndrome occurs most often among adults in cultures where rapid change is taking place. Rapid changes in culture has created a group of young people who do not know the same things their parents know (Berliner & Biddle, 1995). In the Executive Summary of Preventing Reading Difficulties in Young Children (Snow, et al., 1998), the editors stated much the

same thing: “Current difficulties in reading largely originate from rising demands for literacy, not from declining absolute levels of literacy” (p.1). Therefore, the differences in knowledge from one generation to another are viewed by those with Socrates’ Syndrome as deficiencies in knowledge as opposed to differences in knowledge. Berliner and Biddle (1995) contended that this is justification for the measurement-driven educational reform that exists today.

Scores on the Scholastic Aptitude Test (SAT) did experience a downward trend between 1963 and 1985. This trend was attributed to a fall in the aggregate scores on both the verbal and mathematics portion of the test. According to Berliner and Biddle (1995), these small shifts were insignificant due to the method used to generate SAT scores. That method involved developing new questions for the SAT each year. These new questions were checked very carefully in order that the new edition could be presumed to be equivalent to the original standardized form of the 1941 test. In addition, the test was comprised of 138 multiple choice items that could be answered in a matter of a few hours. Berliner and Biddle’s contended that the sum total of twelve years plus of schooling could not possibly be judged by such a test.

Change and the Cycle of Reform

In discussion of change and how it relates to the educational setting, Fullan (1993) stated that what is really needed is a totally different way of thinking about the concept of educational change. Given that the existing conservative organization of schools is not conducive to change, any attempt at change will result in defensiveness, superficial changes, or small sparks of success that burn out almost as quickly as they began. Fullan professed that the “...individual educator is a critical starting point because

the leverage for change can be greater through the efforts of individuals..." (p.12). In *The New Meaning of Educational Change* (1991), Fullan and Stiegelbauer stated that change is a significantly intimate experience. Because of this, everyone who is affected by change must have the chance to work through it in a way in which the benefits at least equal the expenditures. It was Fullan's contention that there are eight fundamental lessons that come from a new way of thinking about change. This new thinking about change that Fullan (1993) espoused included recognizing that change cannot be forced nor does not follow a predictable path; problems are to be expected; mission statements and training programs do not lead to useful change; change does not occur in isolation nor does it occur when there is naïve conformity to the group; every person in an organization must be a change agent; and the organization must see how it is connected to the outside world.

According to Fullan (1993), there are two reasons why reforms are failing in education: 1) The problems in education are complex and uncontrollable making it difficult to focus on those things that can make a true difference and 2) changes in instructional practices and in the culture of teaching are the hardest to make. Fullan examined several change initiatives including the New Futures Initiative, schools in twelve states that had implemented shared decision-making, and the implementation of the Chicago Reform Act of 1989 to support his claims (as cited in Fullan, 1993). He emphasized that participation in reform efforts is not inherently wrong. What is amiss is that the reforms are "not focusing on the right things--the cultural core of curriculum and instruction" (Fullan, p.51). He went on to say that many of the top-down reforms adhere to a theory of change purported by Sarason: "Change can come about by proclaiming

new policies, or by legislation, or by new performance standards, or by creating a shape-up or ship-out ambience, or by all of the preceding" (as cited in Fullan, 1993, p.51). These top-down reform movements often centered around some form of national testing to "ensure student learning by redirecting instruction toward more challenging content" Unfortunately, according to Shepard (1991), "testing in the past decade has actually reduced the quality of instruction for many students" (p.233, 238).

Fullan and Stiegelbauer (1991) indicated that policy changes often represent the work of special-interest lobbies and that it is vital to recognize that "policy change is not practice change" (p. 29). Instead of change being mandated from some distant head of state, Fullan (1992) suggested that those interested in change look closely at four lessons learned during the 1980's. The first lesson learned was that in order for change to begin there must be a stimulus for the change. There must be both active initiation and participation to get the process of change going in the direction that is desired. Fullan (1992) stated that "successful change projects always include elements of both pressure and support" (p.25). This was the second lesson of change. Without pressure, the path to change becomes twisted and unfocused. Without support, those experiencing change along with the pressure to change become resistant and often feel alienated. A third lesson learned about change is that behavioral changes most often occur before changes in beliefs (Fullan, 1985). Changes in behavior are necessary to real changes in perceptions. The last lesson is that of ownership. Fullan (1992) suggested that ownership is critically important to change but is not something that is procured very easily. Fullan (1992) stated that ownership is stronger at both the middle and end of the change process

than it is in the beginning. He stated that "successful school improvement can best be thought of as a process of mobilization and positive contagion" (p. 26).

Fullan (1992) suggested that it is important to focus on implementation. Implementation concerns itself with "the nature and extent of actual change, as well as the factors and processes that influence how and what changes are achieved." (p. 21). Focusing on implementation helps with conceptualization and measurement of change as well as helping educators understand why so many reforms fail (Fullan, 1992). In light of this evidence, Fullan (1993) contended that to have any long lasting revitalization and change in the world of school, reform must focus "on changes in teaching and learning, and the surrounding conditions that support such developments in a sustained way" (p. 59).

While implementation has been a tremendous obstacle at the level of practice, continuation in regard to reform is problematic in and of itself (Fullan & Stiegelbauer, 1991). Huberman and Miles (1984) emphasized that the probability of change becoming ensconced in institutions is dependent upon whether or not the change is built into the organization through policy, budget, etc., has a cadre of administrators and teachers who are competent in and dedicated to the change, and has established strategies for continuing support for those teachers and administrators new to the school.

Cuban (1990) suggested that reforms continue to resurface because "reform has failed to remove the problems they were intended to solve" (p. 5). He suggested that reforms will periodically reappear because they are actually responses to value conflicts. When in the midst of these value conflicts, the American public looks to the school to solve society's problems. This posturing of looking to the schools can be attributed to the

elite in society charging the public schools who serve all socio-economic levels and ethnic groups to correct the values conflict. There is no other place in society where all groups come together as they do in schools. If schools work on these problems, the hope is that there will be improvement in the next generation (Cuban, 1990).

Americans, according to Cuban (1990), have a continuing faith in the "schools as an engine of social and individual improvement. Such faith automatically turns policy makers' attention to schools as a tool of reform when social problems emerge" (p.8). Cuban stated that reforms return over and over again. While they are never exactly in the same package or under the same conditions, reforms continue to resurface. Cuban's suggestion was that we gather data on reforms and trace their history in all the places they are found. In this way, Cuban said, we can engage in "serious thinking about rational and nonrational organizational behavior" (p.12).

Resistance to change at the individual level may well be a deciding factor in the success or failure of a reform. Covey (1989) stated that "The key to the ability to change is the changeless sense of who you are, what you are about and what you value" (p. 108). People have difficulty handling the rapid change that is occurring in today's world. Their inability to cope with the constant changing nature of life causes some people to become reactive and give up. Their best hope is that whatever happens to them will be kind. Covey suggested that a sense of mission in life provides the individual with the substance of his/her own proactivity. When an individual has a sense of dissatisfaction with the way things are, he/she will demonstrate great enthusiasm to improve. Doll (1986) discussed the resistance forces that can inhibit the motivation for change in individuals. These forces include opposition to any kind of change, desire to cleave to ideas or actions with

which a person is satisfied, and poor relationships between the person to be changed and the stimulator of change. Doll suggested that sometimes the change may be more costly to the individual than had originally been thought. This can lead to discouragement. To facilitate change in individuals, Doll suggested that person-to-person contacts are as critical as participation in group work.

Covey (1989) stated that to ultimately solve the problems we face, we must go to a new level of thinking. He supported an inside-out approach to change--a change that starts with your personal paradigms, character, and motive. It is important to be proactive and a transition person from this inside-out perspective of change. Being a transition person, according to Covey, allows the individual to rewrite the script for the next generation. Covey stated,

> Change--real change--comes from the inside out. It doesn't come from hacking at the leaves of attitude and behavior with quick fix...techniques. It comes from striking at the root--the fabric of our thought, the fundamental, essential paradigms, which give definition to our character and create the lens through which we see the world. (p. 317)

Models of Reading

In her book, Becoming Literate: The Construction of Inner Control, Clay (1991) defined reading as

> a message-getting, problem-solving activity which increases power and flexibility the more it is practiced. ... within the directional constraints of the printer's code, language and visual perception responses are purposely directed by the reader in some integrated way to the problem of extracting meaning from cues in a text, in sequence, so that the reader brings a maximum of understanding to the author's message. (p.6)

Theoretical models of reading "primarily utilize and depict interrelationships among cognitive and linguistic systems as they function in reading performance" (Singer, 1976, p. 634). Carroll's (1964) Implicit Model of Reading was characterized by the reader perceiving written text (input stimulus), internally reconstructing the written text into an oral message (oral reconstruction) to which the reader gives the same meaning response that s/he would give to the identical spoken message (meaning responses). Goodman's (1970) Implicit Model of Reading described reading as a letter-by-letter decoding operation, in which the reader processes text by proceeding mechanically from letters to sounds with meaning found at the end of the process. Goodman's model consisted of three decoding systems included the graphophonic, syntactic cues, and the semantic system. Each decoding system contributed to the reconstruction of the printed text. Once the printed message has been reconstructed, meaning is formulated and tested and modified where necessary. Ruddell's (1970) Systems of Communication Model of reading traced the act of reading from the surface structure to the deep structure. This model consisted of four levels that interact with each other: 1) auditory and visual input systems; 2) the surface structure level that contains graphemic, phonemic, morphemic systems, and their inter-relationships; 3) a structural and semantic level that incorporates a syntactical system, short term memory, transformational and rewrite rules, and a mental dictionary; and 4) a deep structure level that consists of semantic interpretation, structural and semantic markers, and long term memory. The Substrata-Factor Theory of reading, a statistically determined model of reading, suggested that four systems account for 89% of the variance in Power of Reading, and three systems account for 77% of the variance in Speed of Reading. The remaining variance can be attributed to other variables not included in the study, such as personality, attitudes and values, biological support systems, flexibility, functional oculomotor efficiency and speed of visual stimuli (Singer,

1976). This theory of reading suggested that readers continuously organize and reorganize their systems and subsystems according to the purposes and demands of the reading material.

Reading Controversy

Concern regarding beginning reading instruction has been in evidence in both the public and educational communities as early as 1955 when Flesch's book, Why Johnny Can't Read--and What You Can Do About It was published. Flesch claimed that if children were taught the 44 letter-sound correspondences instead of the prevailing whole word methodology of the 1950s, they would be able to read any word they came across in print. This, according to Flesch, would eliminate reading problems completely. As a result of growing concern over reading instruction, the Office of Education funded the Cooperative Research program in First Grade Reading (Bond & Dykstra, 1998) and Project Literacy (Levin & Williams, 1970) in the 1960s. The focus of the First Grade Studies was to determine the best approach to use when teaching beginning readers. Project Literacy's focus was to identify the basic psychological and linguistic operations involved in learning to read, not instructional methodologies. During that same time period, the Carnegie Foundation funded Chall's (1967) extensive review of beginning reading instructions, *Learning to Read: The Great Debate*.

Controversy over the issue of phonics instruction continues to persist (Grundin, 1994; Taylor, 1998; Weaver, 1998). The debate hascontinued partly because phonics instruction has become embroiled with politics and doctrine. However, philosophical differences about how children learn and misunderstandings about the implications of these clashing points of view contribute to the ongoing debate (Goodman, 1993; McKenna, Stahl, & Reinking, 1994; Stahl, 1999).

The present debate in reading centers upon where emphasis should be placed in reading instruction. Word recognition that emphasizes phonics or word recognition that emphasizes meaning thus separates reading theorists into two distinct factions (Zakaluk, 1982/96). One group of theorists contends that reading begins with the very smallest unit: letters and the sounds they make. This group's emphasis is on phonics. Zakaluk (1982/96) refered to this as a "'bottom-up' model of the reading process which portrays processing in reading as proceeding in a serial fashion, from letters to sounds, to words, to meaning" (p.3). Gough (1972), a proponent of the phonics driven model, suggested that reading begins when graphemic information is visualized and transformed from a character to a sound. That phomemic representation is then converted into a word. Words then become meaningful and are assimilated into the individual's knowledge system. Visual stimuli in the form of written discourse then are transformed from sensory information to meaning through a series of encoding without any influence of semantics or syntax (Rumelhart, 1977). Two models of reading instruction that follow these theoretical beliefs are embedded phonics instruction and direct code instruction.

Embedded phonics instruction makes use of sound-spelling patterns that are systematically embedded in connected text. This instruction was sequenced according to a list of rhyming word families. Teachers present a single word containing the spelling pattern, remove the initial consonant or consonant cluster of the word, and direct the attention of the students to the sound as well as the spelling of the remainder of the word. Through substituting different beginning sounds, students are led to generalize the learned pattern to new words. Stories or trade books that utilize these patterns are then

used to practice the pattern in the context. Repeated readings of the stories and books are complemented by writing activities using these word patterns (Snow et al., 1998).

Direct code instruction emphasizes letter-sound correspondences. These letter-sound correspondences as well as spelling rules are explicitly taught as well as practiced and extended. This form of instruction gives the learner a strategy to use when confronted by an unknown word: sound it out (Snow, et al., 1998). Engelmann and Carnine's (1991) Direct Instruction model adheres to this model.

Other experts in reading advocate meaning as the foundation of reading. According to Zakaluk (1982/96), these theorists view reading as a skill in which the reader selects cues about words to make meaning. Readers, according to these experts (Goodman, 1970), bring to the reading prior experience and knowledge that helps them make sense of what is meaningful in text. It is believed that readers not only have graphemic information available to them but they also have semantic and syntactic cues available to them for the purpose of making reading a meaningful experience. Readers use these tools to predict what upcoming words will be. If the reader fails to find meaning, s/he then rereads formulating a new hypothesis about the text. This theory placed heavy emphasis on semantics and syntax interacting with the direct flow of information with readers actively involved in a kind of psycholinguistic guessing game (Goodman, 1970). One model of reading instruction that embraced this theory is whole language instruction.

Whole language strategies encourage instruction using implicit code and give high priority to reading and writing activities that help the child construct meaning. Lessons in phonics are conducted as the opportunity arises in the context of meaningful

reading and writing and usually as part of invented spelling activities or through the use of graphophonemic prompts (Routman, 1996). Whole language methodologies regard letter-sound correspondences (graphophnemics) as just one of three cueing systems that are used to read and write text. The teacher is therefore seen as a facilitator of learning not a director of learning. Assessment is performance-based as opposed to skills based (Snow, et al., 1998).

Problem readers demonstrate difficulty in one of two areas: decoding, they cannot read the words, or comprehension, they do not read with understanding (Grossen, 1998). Research conducted over the past few decades indicates that teaching phonemic awareness directly is critical to teaching students word recognition skills (Chall, 1967, 1983). This finding has been supported in research conducted by Dieterich (1973) and Haskell, Foorman, and Swank (1992). Haskell, et al.'s research was conducted to compare the effects of explicit teaching of letter-sound correspondence strategies, whole word recognition strategies, and no strategies for word recognition. This research concluded that students who received specific instruction in letter-sound correspondence were more accurate on word recognition tests utilizing both regular and irregular words than students who were instructed to use whole word techniques or who did not receive instruction in word recognition. Dieterich's research led him to conclude that "One of the few conclusions of reading research in which we can have a high degree of confidence is that earlier and more systematic instruction in phonics is essential" (p.7). Other researchers (Vellutino & Scanlon, 1987; Wagner & Torgesen, 1987) indicated that a major obstacle for learning to read is the lack of phonemic awareness. More recent research (Fletcher, et al., 1994; Shaywitz, et al., 1992; Stanovich & Siegel, 1994) has

indicated that approximately one in five children do not develop phonemic awareness without explicit instruction. Not only do they not develop phonemic awareness but their phonemic awareness does not develop or improve over time. This causes the child to fall further behind in reading as well as all academic areas giving little opportunity for them to catch up.

Cunningham (1990) found that explicitly teaching students how segmenting spoken words into sounds and how blending spoken sounds into words are involved in the reading process was vastly superior to instruction that does not teach students how to apply phonemic awareness to reading. Two-hundred and sixty kindergarten aged children were the subjects of a study conducted by Foorman, et al. (1997). Eighty children were randomly assigned to a revised kindergarten curriculum and 160 children were randomly assigned to the standard kindergarten curriculum prescribed by the state of Texas in its essential elements for kindergarten. The revised curriculum attempted to prevent reading difficulties by teaching phoneme awareness for 15 minutes per day over the course of a year. The revised curriculum used was the Lundberg, Frost, and Petersen (1988) curriculum from Sweden and Denmark. The results of the study indicated that the greatest gains were made among learners who received explicit instruction of letter-sound relationships at the same time they received explicit instruction in phonemic awareness. In addition to the research conducted by Foorman, et al. (1997), a large body of other research indicated the importance of explicit instruction in letter-sound correspondence since phonemic awareness alone is not sufficient for numerous children (Adams, 1990; Ball & Blachman, 1991; Byrne & Fielding-Barnsley, 1990; Mann, 1993;

Rack, Snowling, & Olson, 1992; Spector, 1995, Torgesen, Wagner, Rashotte, Alexander, & Conway, 1997; Vellutino, 1991; Vellutino & Scanlon, 1987).

Whole language instruction that often relies heavily on the use of prediction and context for word recognition has proven to play a minor role as a cuing system. Stanovich and Stanovich (1995) summarized the findings of recent research on eye movement and reading. This research indicated that excellent readers do not sample the text and predict to recognize unfamiliar words; instead they see every single letter of the text. According to Stanovich and Stanovich (1995),

> The key error of the whole language movement is the assumption that contextual dependency is always associated with good reading. In fact, the word recognition skills of the good reader are so rapid, automatic, and efficient that the skilled reader need not rely on contextual information. In fact, it is the poor readers who guess from context--out of necessity because their decoding skills are so weak. (p.92)

Research has also established a strong relationship between oral reading fluency and reading comprehension (Potter & Wamre, 1990; Shinn, Good, Knutson, Tilly, & Collins, 1992). As children have more and more experience with the printed word, the demands presented by word recognition decrease (Stanovich, 1991). Feedback is essential to developing fluency. According to Heiman and Slomianko (1985), the best feedback "…provides direction and reinforcement to students; gives students ongoing, specific knowledge of their performance; quickly follows tasks completed by the student; and are simple enough to be reinforcing to teacher as well as students" (p. 35). A 1988 study by Pany and McCoy found that when corrective feedback was given after every error, learners made significantly fewer errors overall, significantly fewer meaning

change errors during the reading of a given passage, and significantly fewer errors on comprehension questions over the passage read.

Skills acquired in narrative reading do not easily transfer to expository reading (Zabrucky & Ratner, 1992). General comprehension skills such as cause and effect, making inferences, finding the main idea, sequencing events, discerning relevant information, and recalling information are skills necessary to comprehending expository text. If students are to be successful in school, they must develop the ability to comprehend and prepare expository material (Seidenberg, 1989)

Researchers generally agree that background knowledge is essential for the reader to comprehend expository text independently (Adams & Bertram, 1980; Pearson, 1979). According to Weaver and Kintsch (1991), the structure of a reader's preexisting knowledge effects how new knowledge is remembered or understood. Poor readers often lack knowledge of vocabulary and common information. This prohibits them from constructing the appropriate mental outlines needed when reading a textbook that assumes basic information or vocabulary. Evidence gathered from correlational studies, readability research, and experimental studies indicates strong, reliable relationships between the difficulty of words in a text and text comprehension (Anderson & Freebody, 1981; Graves, 1986). While no one method for teaching vocabulary has been isolated (Beck & McKeown, 1991; Stahl & Fairbanks, 1986), direct teaching of vocabulary can have an effect on the comprehension of the text containing taught words as well as on comprehension in general and on the ability to learn new words in context.

Kameenui, Simmons, Chard, and Dickson (1997) suggested that choice of methodologies for teaching reading may be explained in part by an individual's

theoretical belief in what constitutes quality reading instruction and literacy experiences. Engelmann and Carnine (1991) theorized that "instruction begins with the assumption that the environment is the primary variable in accounting for what the learner learns" (p.3). They suggested that in order to demonstrate the relationship between the role of the environment and the learner, one must be able to solve the problem of experimental control. Control over the learner cannot be achieved because there is no known way to accomplish that. They purported that the environment can be controlled by designing faultless communication. Communication of this sort would convey only one interpretation. This communication, they state, would be "analytically or logically capable of transmitting the concept or skill to any learner who possess certain minimal attributes. The learner either responds to the faultless communication by learning the intended concept, or the learner fails to learn the intended concept" (p.3). Developing a strategy for this "faultless" communication was the basis for their theory of instruction that has come to be known as Direct Instruction. The minimal attributes needed by the learner include the "capacity to learn any quality that is exemplified through examples and the capacity to generalize to new examples on the basis of sameness of quality" (p.4). This theory led to the development of the Direct Instruction Model for Project Follow Through, one of the largest educational experiments funded by the federal government (Adams & Engelmann, 1996). While research on Direct Instruction actually began in 1966 with the publication of Bereiter and Engelmann's *Teaching Disadvantaged Children in the Preschool* (as cited in Gersten, Carnine, & Woodward, 1987). Rosenshine (1976) was responsible for introducing the term "direct instruction" into the literature of education. Rosenshine based his ideation of direct instruction on his review of effective

teaching practices. In developing this model, Rosenshine considered research findings on time, content covered, work groupings, teacher questions, student responses, and adult feedback. Rosenshine's model of direct instruction requires that all lessons and workbook activities be directly supervised by the teacher. Free time was nonexistent. The teacher took a dominate role in leading instructional activities. Questions were narrow with the expectation that students should know not guess the answer. Feedback was immediate and reinforced whether the answer is right or wrong.

Problems that emerged from the Direct Instruction model related to misunderstanding over the use of scripts. The script "is simply a tool that facilitates clear communication between teachers and students" (Stein, Carnine, & Dixon, 1998, p. 228). From Engelmann and Carnine's Theory of Instruction (1991), the authors of the Direct Instruction model viewed faultless communication between teacher and student to be the one controllable variable in the learning experiment. It followed that for communication to be faultless it must be planned, hence scripting.

Criticisms of Direct Instruction programs and philosophy have existed since the inception of the Follow Through project. Abt Associates' authors noted the criticism in their report:

> Critics of the model have predicted that the emphasis of the model on tightly controlled instruction might discourage children from freely expressing themselves and thus inhibit the development of self-esteem and other affective skills (as cited in Adams & Engelmann, 1996, p .73).

The myths surrounding Direct Instruction have continued to exist. They range from "the programs are rigid and unenlightened" to "It is possible to use effective-school practices to achieve results as good as those achieved by Direct Instruction" (Adams & Engelmann, 1996, pp. 25-32). For each of the myths, there was a logical research based

rebuttal. According to Adams and Engelmann (1996), success of the students depended by and large on teaching that was both appropriate and responsive.

Implementation Philosophies

In "Instructional Policy Into Practice: 'The Power of the Bottom Over the Top,'" Darling-Hammond (1990) cautioned reformers in regard to the importance of considering teachers when instituting policies for them to carry out. Writing a policy that is then enacted into law complete with regulations and guidelines does not guarantee the policy's success (Darling-Hammond, 1990; Fullan, 1990; Wang et al., 1993a). The policy must be transmitted to teachers who will then implement it based on their knowledge or lack of knowledge concerning the contents of the policy as well as their knowledge of what the policy means in terms of teaching (Darling-Hammond, 1990). Darling-Hammond (1990) contended that teachers interpret the insufficient policy guidance they receive, then fill in the disparities in their understanding of the policy with what is familiar to them, thereby creating a medley of practices that contribute to either the success or failure of the policy. Teachers in this scenario were not actively involved in the implications of the policy because they did not have enough information to do so and there were few occasions to discuss their ideas with peers. Limited guidance in policy implementation may assist teachers in exploring new topics with students but will have little impact on the classroom environment or the interactions that occur between teacher and learner (Darling-Hammond). According to Darling-Hammond there are four essentials to be considered when looking at policy. First, edicts for action are insufficient to bring about policy implementation. There must be investment in professional development at all levels as well as worthwhile discussion that leads to better understanding of the policy.

Second, consideration must be given to the constraints of preexisting policies. Policy makers must be held accountable for the total effects of their decisions. Third, there must be a substantial investment in teacher knowledge. Changes in instructional practice require ongoing professional development, supervision, and evaluation given that teachers' prior learning, convictions, and attitudes are the essence of the teaching process. Fourth, change takes time and is arduous. Successful policy implementation requires that teachers are given the opportunity to assimilate, discuss, undertake, construct, and reconstruct new ways of thinking and teaching in a safe environment.

In "Coordinating Top-Down and Bottom-Up Strategies for Educational Reform," Fullan (1990) asserted that neither top-down nor bottom-up strategies of change work. He suggested that this is because educational change is multifaceted and unpredictable. Top-down strategies imply control from a power up above. Fullan (1994) said these strategies do not work because they imply control, and there was simply too much to control. Bottom-up strategies appeared to be problematic as well. Change in an organization is not likely to be initiated unless there is some external catalyst present. Bottom-up strategies often lead to structural changes only and limited quality control. Even when innovation did occur, it was difficult to maintain due to the action or inaction of the district (Fullan, 1990). Fullan suggested that a combination of top-down and bottom-up strategies are necessary for a successful turn around in education. Fullan cited investigation conducted by Pascale in relation to the dramatic turn around of the Ford Motor Company in the 1980s: "Change flourishes in a 'sandwich.' When there is consensus above and pressure below, things happen" (as cited in Fullan, 1990, p.192).

Fullan (1994) viewed staff development as a strategy for implementation. He stated that the process of implementation is, in essence, an opportunity for learning. However, Fullan (1994) maintained that staff development that is intermittent and unconnected will fail to have its intended impact on schools. It was Fullan's contention that if powerful change is the goal, then powerful strategies need to be employed. Staff development must take on an integrated approach and consider both the personal and professional lives of teachers as entities in and of themselves. When this occurs, staff development considers both formal and informal learning experiences that are accumulated throughout an individual's profession.

Research completed by Hall, Loucks, Rutherford, and Newlove (1975) examined levels of use of innovations. These authors found indications that high utilization of curricular changes introduced into a system cannot be expected unless the plan is accompanied by significant measures of strongly organized and implemented staff development. In addition to strong staff development opportunities, there must be a strong organizational commitment to the innovation that extends from the community to teachers to administrators. In their Rand Corporation Study of federally funded programs designed to support educational change, Berman, McLaughlin, Bass, Pauley, and Zellman (1977) pointed to the importance of collaboration among teachers, administrators, and community members as a means to achieve school improvement and the creation of essential environments for professional growth. In *The Continuous Process of School Improvement: Lesson Learned from the Past*, Joyce (1980) suggested that not only should collaboration occur among teachers, administrators, and community members, but that this new formed coalition should engage in the study of organizational

behavior. Since curriculum change occurs within the social system of the school, Joyce believed that organizations should study themselves in order to become more effective and supportive of change. Fullan and Pomfret (1977) supported the views of Berman, et al. (1977) and those of Darling-Hammond (1990) in regard to continuous professional development for successful changes in instructional practice. These researchers found that aspects of plans that depend on instructional processes would most likely be implemented at low levels unless there was a high level of in service training, and unless the organizational climate was unusually supportive.

Capacity for Educational Change

O'Day, Goertz, and Floden (1995) conducted a three-year study of systemic reform that involved case studies of 12 schools in 6 districts that were presumed to be involved in reform. The six districts were located in California, Michigan. and Vermont with each state using different methods to realize change. In addition to the study, O'Day, et al. examined research relating to teacher and organizational capacity. Given that the current educational reform movements--i.e., the No Child Left Behind Act of 2001--strongly encourage schools to have all students meet higher standards for achievement, O'Day, et al. (1995) posed the question as to whether or not the educational system and the individuals who make up that system have the capability to meet the demands set forth by today's reforms.

According to O'Day et al. (1995),

> Capacity is the ability of the education system to help all students meet more challenging standards. If the capacity of the education system--or any system--is insufficient for accomplishing a desired goal, capacity may be increased by improving performance of workers (e.g., individual teachers); by adding such

> resources as personnel, materials, or technology; by restructuring how work is organized; and/or by restructuring how services are delivered.(p. 1)

O'Day, et al. (1995) suggested that traditional models of staff/professional development ignore both the extent of teacher capacity as well as those parts of the educational system that have an immediate effect on a teacher's instructional skill. Teacher capacity was comprised of four dimensions: knowledge, skills, dispositions, and views of self.

Research conducted by Ball and McDiarmid (as cited in O'Day, et al., 1995) suggested that teachers must have a knowledge base that is more intense than rudimentary skills strategies. Regarding skills, O'Day, et al. found that teachers acknowledged a discrepancy between their beliefs about how they should teach to meet the demands of new reforms and their capabilities to actually teach. Teacher disposition was important in relation to reform as well. In order to be successful, teachers must greet the new standards for student learning with a willingness ro make changes in their practice. That is, teachers must have dispositions favorable to change as well as strong commitments to student achievement. Finally, O'Day, et al. suggested that the way teachers view themselves, teachers' sense of efficacy, affected their ability to teach in different ways.

Efficacy Beliefs

Fullan and Stiegelbaur (1991) stated that "Educational change is technically simple and socially complex" (p.65). They listed several factors that affect the implementation of innovations designed for school improvement but suggested that, in the end, the actions of individuals are critical to success. Fullan and Stiegelbaur contended that individuals who have a strong sense of efficacy will take action and

persist in the effort required to bring about successful implementation of a new program or innovation.

Numerous theories regarding cognitive motivation have surfaced over the last fifty years. These include theories that suggest that people take action based on some kind of internal need or value such as Maslow's (1970) theory of a hierarchy of needs or McClelland's (1961, 1965, 1985) theory of achievement; theories that center on the cognitive processes involved in making decisions and choices such as Vroom's (1964) expectancy theory and Weiner's (1986) attribution theory; and theories that concentrate on self-regulation and motivational processes such as Bandura's (1986, 1991a, 1991b) self-efficacy theory and Locke and Latham's work on goal setting ((Locke, 1968; Locke & Latham, 1984, 1990; Hoy & Miskel, 1996).

Metacognitive approaches to human behavior focus on mechanisms that regulate the influence of goals on behavior. From this point of view, individuals engage in self-monitoring to understand and control their thinking. Those who subscribe to these theories submit that an individual's self-regulatory mechanism determines how motivational force is metamorphosed into behavior and performance. According to Kanfer (1990), the advantage of metacognitive approaches lies in that they connect intentions, goals, behavior, and performance.

Bandura (1977) formulated a theory of human behavior that attempted to explain behavioral changes. Bandura's theory of socialization, like others, was an attempt "to explain how control over behavior shifts from external sources to the individual" (Grusec, 1992, p.782). It was Bandura's contention that "changes achieved by different methods derive from a common cognitive mechanism" (1977, p.191). Bandura (1977)

asserted that the visible conflict between theory and practice could be settled by assuming that "cognitive processes mediate change but that cognitive events are induced and altered most readily by experience of mastery arising from effective performance" (p.191). The premise of the theory was that a person's ability to even attempt to manage any given situation has a great deal to do with how strongly the individual believes that his/her personal capability will in some way have an affect on the outcome. Bandura refered to this as "perceived self-efficacy" (1977, p.194). The influence that perceived self-efficacy has on an individual is so strong, according to this construct, that it will determine the amount of effort and persistence that will be displayed in the face of adversity (Wood & Bandura, 1989; Bandura, 1993). Bandura cautioned his readers that expectation is not the singular condition for behavior. An individual must possess the necessary skills and have the appropriate catalyst to deal with situations that are viewed as unpleasant or stressful.

In regard to notions of self-esteem, self-concept, and self-efficacy, Pajares (1996) pointed out that the dichotomy is not always clear to researchers. However, Emmer and Hickman (1991) indicated that self-efficacy is a more precise idea than self-concept or self-esteem. Emmer and Hickman (1991) stressed that self-efficacy concerns itself with judgments regarding personal competency while self-concept largely indicates an individual's belief in his/her personal efficacy, and self-esteem is a judgment of self-worth. While the basics of the distinctions between self-efficacy and self-concept made by Pajares were similar to those of Emmer and Hickman, Pajares (1996) suggested that deductions of competence are essential elements of an individual's self-concept, and, because of this, self-efficacy beliefs are frequently viewed as required deductions

necessary to the development of self-concept beliefs. Bandura (1997) suggested that people need more that high self-esteem to be successful in any endeavor. Indeed, Bandura declared that high achievers may display low levels of self-esteem because they set standards that are not easily realized, while others may have high levels of self-esteem because their personal demands are low or their esteem comes from sources other than accomplishment. According to Bandura, "self-liking does not necessarily beget performance attainments" (1997, p. 11).

Sources of Information Relating to Self-Efficacy

Bandura (1977, 1981, 1986, 1997) related that "expectations of personal efficacy in social learning theory are based on four major sources of information: performance accomplishments, vicarious experience, verbal persuasion, and physiological states" (1977, p.195). Performance accomplishments or enactive attainments are powerful because they come from experiences that have been learned. Bandura (1986, 1997) stated that "Enactive mastery experiences are the most influential source of efficacy information because they provide the most authentic evidence of whether one can master whatever it takes to succeed" (p. 80, 1997). Being successful in an experience tends to raise expectations of future success in similar situations while failure has the potential to lower expectations. Repeated success develops a strong sense of self-efficacy. Once developed, intermittent inadequacies are unlikely to have substantial consequence on the judgements of the individual's capabilities (1986). Those who have a strong sense of personal capability more often attribute failures to the situation, lack of effort, or poor strategies. When an individual looks at poor performance through this lens rather than the lens of

inability, failure can boost conviction that better strategies will bring prospects of future success (Anderson & Jennings, 1980).

Vicarious experience also contributes to an individual's sense of efficacy. Bandura (1997) suggested that for many activities there are no definitive measurements thus requiring that individuals evaluate their capabilities in connection to the accomplishments of others who are similar to themselves. "When factual evidence for personal adequacy is lacking, personal efficacy must be gauged in terms of the performances of others. Because most performances are evaluated in terms of social criteria, social comparative information figures prominently in self-efficacy appraisals" (Bandura, 1986, p. 400). Modeling then can be an effective device for fostering a sense of personal efficacy. Modeling influences may assume a variety of forms and further different purposes depending on the types of information they transmit (Bandura, 1986). The vicarious modes of influence--actual modeling, symbolic modeling (television and other visual media), abstract modeling, self-modeling, and cognitive self-modeling--strengthen efficacy expectations and ultimately improve accomplishment (Bandura, 1997).

Verbal persuasion or the act of leading people "through suggestion, into believing they can cope successfully with what has overwhelmed them in the past" is often used as a method to encourage people into performing certain behaviors (Bandura, 1977, p.198). Verbal persuasion can promote the development of skills and a sense of self-efficacy by encouraging the individual to exert the necessary effort to achieve (Bandura, 1986; Gist, 1987; Wood & Bandura, 1989). Evaluative feedback is a form of verbal persuasion. It is important to note that evaluative feedback can be conveyed in ways that either subvert a

sense of efficacy or advance it (Bandura, 1997). However, Bandura (1977, 1986, 1997) pointed out that verbal persuasion is a weak method for increasing efficacy expectations because there is no legitimate experiential base for the expectations that come out of it. Indeed, it is more difficult to produce lasting increases in perceived self-efficacy using this method than it is to thwart it. Chambliss and Murray (1979a, 1979b) maintained that verbal persuasion has its greatest influence on those individuals who have some reason to believe that they can produce effects through their actions.

Finally, Bandura (1997) purported that a fourth way to alter "efficacy beliefs is to enhance physical status, reduce stress levels and negative emotional proclivities, and correct misinterpretations of bodily states" (p. 106). Bandura (1986) suggested that humans rely, at least in part, on information from their physiological state when assessing their competence. Individuals in highly anxious states see themselves as being vulnerable to dysfunction (Bandura, 1986, 1997). While data communicated by physiological states and reactions does not, by itself, determine personal self-efficacy, this information affects one's awareness of self-efficacy through cognitive processing (Bandura, 1997).

Bandura (1978b) also examined human behavior from the role the individual plays in influencing his/her behavior. He referred to this perspective as "reciprocal determinism" (p. 344). Under this view the interaction of "behavior, internal personal factors, and environmental influences all operate as interlocking determinants of each other" (p.346). There is a reciprocal or complementary affect that occurs among the three aforementioned factors. Bandura (1978b) simplified his explanation by stating that "people's efficacy and outcome expectations influence how they behave and the environmental effects created by their actions in turn alter their expectations" (p. 346).

This view of human behavior led Bandura to conclude that because people's understandings of self, their actions, and the environments in which they function are so linked to one another that they are reciprocal determinants of each other. Individuals are not without an element of control in their lives but neither are they totally free to act in any manner they select. This construct of reciprocal determinism was important because it reasserts how inextricably connected beliefs, expectations, actions, and environments are to personal efficacy.

The importance of efficacy beliefs to academic development was a natural outgrowth of Bandura's work in self-regulatory processes. Research regarding self-efficacy in schools tends to be in one of two areas: the effects of student and teacher self-efficacy on motivational and achievement factors, and the personal and situational factors within the school that affect the self-efficacy beliefs of students and teachers. Bandura (1993) stated that there are three levels affected by perceived self-efficacy in regard to academic development: students' beliefs, teachers' beliefs, and the collective instructional efficacy of the faculty. In relation to cognitive functioning, Bandura cited two studies conducted by Bouffard-Bouchard and Bouffard-Bouchard, Parent, and Larive/e that documented the contribution made by perceived self-efficacy to academic performance (as cited in Bandura, 1993). According to this line of thinking, ability is not fixed. An individual may have the knowledge and skill necessary to be successful but fail to perform successfully due to low levels of self-efficacy. Students, regardless of ability level, who are more self-efficacious manage their time on task better, are more tenacious, and are less likely to reject correct solutions hastily (Bandura, 1997; Pajares, 1996). Research conducted by Schunk (1989) examined the contribution of efficacy beliefs to

the level of academic performances. Findings of this research were consistent: Acquiring cognitive skills influences efficacy beliefs, but efficacy beliefs are not simply a reflection of acquired skills. Individuals with the same level of cognitive proficiency differ in their scholarly performances depending on the vitality of their sense of efficacy (Schunk, 1989).

Teacher Self-Efficacy

Teachers' sense of efficacy has been defined as "the extent to which teachers believe they can affect student learning" (Ashton & Webb, 1986, p. vii; Dembo & Gibson, 1985, p 173;). Guskey and Passoro (1994) defined teacher efficacy as "teachers' belief or conviction that they can influence how well students learn, even those who may be difficult or unmotivated" (p. 4) Pajares (1996) defined self-efficacy as an "individual's perceived capabilities to attain designated types of performances and achieve specific results" (p 546). Using the definitions of teacher efficacy suggested by Pajares and Guskey and Passaro to enhance as well as qualify Dembo and Gibson and Ashton and Webb's definitions of teachers' sense of efficacy leads to a clearer understanding that self-efficacy beliefs are sensitive to situational factors such as personal motivation, thought processes, affective states and actions, and/or changing environmental circumstances (Pajares, 1996). Both Dembo and Gibson (1985) and Ashton and Webb (1986) cited two studies conducted by Rand Corporation that helped establish the construct of teacher efficacy. The Rand Corporation studies evaluated 100 Title I ESEA projects as well as the reading program utilized by the Los Angeles school system. The findings of these studies indicated that teachers' sense of efficacy was significantly related to the percentage of the goals of the project they achieved, the magnitude of

teacher change, improvement in student performance, and continued usage of methods, and materials from the project itself (Ashton & Webb, 1986; Berman, et al., 1977; Dembo & Gibson, 1985). The Rand studies are important because they implied that "teachers' sense of efficacy is a component part of teacher motivation associated with student achievement (Ashton & Webb, 1986, p. 3). Guskey (1987, 1988), whose work supported that of other researchers, suggested that teacher efficacy equates to the teacher's feelings of responsibility for student achievement. Guskey (1988) studied the relationship between teacher efficacy and responsibility for student success and student failure. This research found that teachers, from an efficacy standpoint, were more confident in their abilities to inspire positive effects than to deter negative ones. Research conducted by Ashton and Webb (1982) and Ashton, Webb, and Doda (1983) supported the finding that the characteristic of teacher efficacy exhibits a consistent, significant relationship with student achievement. Ashton (1984) stated that perspectives have an influence on performance, but that the relationship between perspectives and performance varies depending on the individual's level of awareness as well as the individual's commitment to a belief. Ashton's (1984) study suggested that teachers with high efficacy beliefs think that their work with students is important and meaningful and that s/he has a positive impact on student learning. Teachers with high efficacy beliefs expect their students to progress and find that most of the students are able to meet their expectations. These same teachers believe that they have the responsibility to ensure that their students learn, and, if the students fail, these teachers look closely at their own performance to determine where instruction could have been more conducive to student learning. Highly effacious teachers set goals for themselves as well as their students and

then plan for meeting those goals. These teachers have a positive outlook on teaching, themselves, and their students and firmly believe that they are able to influence student learning. Additionally, teachers with a high sense of efficacy recognize human for capacity for understanding and development (Ashton, 1984; Ashton, et. al., 1983).

Tschannen-Moran, Hoy, and Hoy (1998) studied teacher efficacy by examining the theoretical frameworks that spawned teacher efficacy as a construct. Two theoretical strands grew out of research by Rotter (1966) and Bandura (1977). Rotter (1966) maintained that expectancies for control of reinforcement (the outcomes of behavior) is either external or internal. Individuals with a strong sense of internal control believe that the responsibility for whether or not they get reinforced ultimately lies within themselves. Those who have a strong sense of external control believe that reinforcers in life are controlled by luck, chance, or powerful others. They see little impact of their own efforts on the amount of reinforcement they receive. From this theoretical base, Rotter (1966) developed his thoughts on teacher efficacy. Viewed from this perspective, teacher efficacy is the teacher's belief that elements under his/her control have a greater impact on the outcomes of teaching than do elements beyond his/her control.

Bandura (1977) first described his construct of self-efficacy in "Self-Efficacy: Toward a Unifying Theory of Behavioral Change." Tschannen-Moran, Hoy, and Hoy (1998) described Bandura's view of self-efficacy as a "future-oriented belief about the level of competence a person expects he or she will display in a given situation" (p.6). Bandura (1997) explained the difference between his theory of self-efficacy and Rotter's (1966) internal-external locus of control in Self-Efficacy: The Exercise of Control. He suggested that perceived self-efficacy or the beliefs an individual holds about whether

s/he can accomplish certain actions, are not the same as locus of control or beliefs about whether actions affect outcomes. Data provided by Bandura (1997) illustrated that perceived self-efficacy and locus of control have little or no observed relationship to one another. In fact, his data supported perceived self-efficacy as a strong estimate of behavior whereas locus of control is characteristically a weak estimate. Under locus of control beliefs, an individual may believe that a particular outcome is the result of the actions of the individual, but still have little faith that s/he can perform the necessary actions (Tschannen-Moran et al., 1998). From their study of both Rotter's (1966) and Bandura's (1977, 1993, 1997) theories relating to self-efficacy, Tschannen-Moran et al. (1998) proposed an integrated model of teacher efficacy that blended both theorists' conceptions of the construct. This model submitted that the consideration of the teaching task and its context as well as assessment of an individual's strengths and weaknesses in relation to the requirements of the given task was crucial in making efficacy judgments.

Motivation and Self-Efficacy

In "Self-Regulation of Motivation Through Anticipatory and Self-Reactive Mechanisms," Bandura (1991a) described motivation as a general construct that "encompasses the diverse classes of events that move one to action" (p. 69). In his discussion, Bandura examined cognitively based motivation. Motivation from this perspective comes from cognitive activity. Individuals motivate themselves and choose their course of action through deliberation. Actions are considered along with their anticipated outcomes, goals are set, and plans are formulated for accomplishing goals. Three forms of cognitive motivators exist upon which theories of motivation have been built: causal attributions/attribution theory, outcome expectancies/expectancy-value

theory, and cognized goals/goal theory. According to Bandura (1991a), perceived self-efficacy operates within all forms of cognitive motivation. The attribution theory of motivation ascribes to the belief that deliberating on the causes of an individual's performance has motivational effects. Bandura suggested that causal factors such as effort, ability, task difficulty, and chance represent only a small segment of the sources available for judging self-efficacy and have little or no independent effect on achievement motivation. He further suggested that these factors influence achievement mainly by altering the individual's belief in his/her efficacy.

Expectancy-value theory suggested that individuals motivate themselves by the outcomes they anticipate will come from certain courses of action. These anticipated outcomes are often tangible although some highly valued rewards fall in the realm of the intangible, such as satisfaction that comes from meeting personal standards of performance. When tangible and intangible sources of reward come into conflict, Bandura (1986) asserted that the intangible rewards would have an overriding influence on action. "People act on their beliefs about what they can do as well as on their beliefs about the likely effects of various actions (Bandura, 1991a, p.76). Therefore, in exercises that rely upon proficiencies, self-efficacy beliefs affect the degree to which individuals act on their outcome expectancies.

Goal theory suggested that personal challenge and evaluation of personal accomplishments provide individuals with a major source of cognitive motivation (Bandura, 1991a). In order for personal standards to motivate an individual there must be cognitive comparison occurring (Bandura). One must compare the personal standard against the knowledge of personal performance. One without the other leaves the

individual without a basis for evaluation therefore having no lasting affect on motivation (Bandura & Cervone, 1983). Bandura and Cervone asserted that "Goals enhanced performance effort only under conditions combining a personal standard with performance feedback of progress toward it. Neither goals alone nor performance feedback alone, both of which lack an essential comparative ingredient, effected change in motivational level" (p. 1025).

Research conducted by Ashton and Webb (1982) in the area of teacher motivation found that teachers' sense of efficacy was an important factor in teacher motivation. However, the authors of this research cautioned that other factors such as the personal value and promise that teaching holds for teachers motivates their effort as well as the incentives they feel they derive from the profession. Accordingly, Ashton and Webb (1982) stated that although teachers' sense of efficacy is of significance in relation to student achievement, it is only indirectly connected to teacher job satisfaction.

Dimensions of Teacher Efficacy

Bandura's (1977, 1978a) theory of self-efficacy postulated that there is a distinct difference between efficacy expectations and outcome expectations. Bandura clarified the differences between efficacy and outcomes expectations as follows: "An outcome expectation is defined as a person's estimate that a given behavior will lead to certain outcomes. An efficacy expectation is the conviction that one can successfully execute the behavior required to produce the outcomes" (Bandura, 1977, p.193.) Ashton and Webb's (1982, 1986) model of teacher efficacy conformed to Bandura's conceptualization of self-efficacy. The construct, that teacher efficacy consists of at least two dimensions corresponding to Bandura's (1977, 1978a) model of self-efficacy, was further supported

by the work of Ashton and Webb (1982, 1986) and Gibson and Dembo (1984). These researchers submitted that the construct of teachers' sense of efficacy is encompassed by two distinct components: sense of teaching efficacy and personal teaching efficacy. The first component, sense of teaching efficacy, points to the teachers' anticipation that teaching in some way affects student learning. Sense of personal efficacy, the second component of teachers' sense of efficacy, deals with the individual teacher's appraisal of his/her own competence as a teacher. Each of these components plays a vital role in overall teachers' sense of efficacy. To emphasize this point, Ashton and Webb (1986) cited research on learned helplessness conducted by Abramson, Selinger, and Teasdale (1978). These researchers suggested that teachers with a low sense of teaching efficacy do not expect that they or any other teacher can help those students who are at the bottom of the class. This sense of universal helplessness causes these teachers to give up easily on lower achieving students without experiencing any ill effects because these students do not perform. On the other hand, teachers who experience "personal helplessness" often have a sense of guilt or blame when low achieving students fail (as cited in Ashton & Webb, 1986). Research that sheds light on the relationship of learned helplessness as it relates to teacher efficacy has been conducted by Midgley, Feldlaufer, and Eccles (1989). These researchers studied the relationship between students' beliefs in mathematics and their teachers' sense of efficacy. Midgley, et al. followed 1,329 students and the teachers they had for mathematics before and after their transition to junior high school. Results of this study indicated that there was a strong relationship between teacher efficacy beliefs and changes in low-achieving students' self and task judgments in mathematics.

Additionally, the impact of teacher efficacy on low-achieving students was found to be much greater than on high-achieving students.

Research on teacher efficacy conducted by Guskey and Passaro (1994) supported the concept that teacher efficacy is a multidimensional construct. Unlike studies conducted by Ashton and Webb (1986), Gibson and Dembo (1984), and Woolfolk and Hoy (1990), Gusky and Passaro discovered that the differences were an internal versus an external distinction not personal versus teaching efficacy. The internal factor represents "perceptions of personal influence, power, and impact in teaching and learning situations" (p. 639). External factors are those that "relate to perceptions of the influence, power, and impact of elements that lie outside the classroom and, hence, may be beyond the control of the teacher" (p. 639).

More recent research conducted by Loup (1994) suggested that the construct of efficacy as it relates to schools is more complex than the two components identified by Ashton and Webb (1982, 1986) and Gibson and Dembo (1984). Loup identified three components of teacher efficacy using data collected from her Teacher Self and Organizational Efficacy Assessment (TSOEA) instrument. This measurement instrument focused on motivational elements of efficacy affecting the realization of liberally stated school goals rather than specific teaching situations. According to Loup (1994), the concept of self-efficacy operated at the level of the individual teacher (the Me level), or at the level of the teacher organization (all the other teachers in the school or the Thee level). She further reported that these two levels combine to define yet a third level of efficacy called the We level. At this third level, efficacy motivation was assessed in relation to teacher responses to repeated failures to attain the goals established by the

school. In other words, when making judgments regarding effort and persistence toward attaining the goals of the school, teachers perceive their own self-efficacy differently from that of other teachers. In spite of these obviously separate ideas of efficacy, when confronted with repeated failure in relation to the goals of the school, teachers combine their perceptions of their own self-efficacy with the efficacy of other faculty members thus creating a third perception of efficacy that comes only in response to failure (Loup, 1994).

The concept of personal teaching efficacy has had further study in the area of teacher change. Several studies examined efficacy and teacher improvement in the implementation of new teaching strategies, classroom management and discipline strategies, efficacy and teacher change through staff development, and efficacy and preservice teachers (Emmer & Hickman, 1991; Fullan, 1994; Lanier & Little, 1986; Smylie, 1988; Stein & Wang, 1988). Benz, Bradley, Alderman, and Flowers (1992) carried out a study designed to determine the comparative personal teaching efficacy of six groups of teachers with various levels of experience. The participants were administered the Personal Teaching Efficacy Scale developed by Ashton, Olejnik, Crocker, and McAuliffe in 1982 (as cited in Benz et al., 1992). Results of the study revealed that in areas such as motivation and socialization, experienced teachers felt less effective than preservice teachers. In the areas of planning and evaluation, the experienced teachers demonstrated higher levels of efficacy.

Hoy and Woolfolk (1993) examined the relationship of teachers' sense of efficacy and the organizational health of the school. Results of the study indicated two features of organizational life that were predictors of personal teaching efficacy. These included

principal influence and academic emphasis where principal influence is the principal's ability to influence the action of superior administrators. These researchers found that principals who create a school climate that emphasizes academics and who advocate on behalf of teachers' instructional efforts with district level administration intensify their teachers' sense of instructional efficacy (Hoy & Woolfolk, 1993). Hipp and Bredeson (1995) examined the relationship of principal's leadership behavior and teacher sense of efficacy. Of the five leadership factors studied by Hipp and Bredeson, three were of significance in relation to teacher sense of efficacy: modeling behavior, providing contingent rewards, and inspiring a sense of group purpose.

Collective Efficacy

In "Self-Efficacy Mechanism in Human Agency" Bandura (1982) carried the construct of self-efficacy one step further. In this article he discussed how self-efficacy becomes important in relationship to the efficacy of groups and organizations. Pajares (1996) suggested that the knowledge that confidence is both a personal and a social construct is perhaps one of the more useful insights provided by social cognitive theory. That is, collective systems such as classrooms, teams of teachers, schools, and school districts develop a sense of collective efficacy. Collective efficacy provides the strength that is vital to change in organizations. Collective efficacy is "a group's shared belief in its conjoint capabilities to organize and execute the courses of action required to produce given levels of attainment" (Bandura, 1997, p. 477). Pajares (1996) pointed to the importance of this construct in the environment of schools. According to this author, students, teachers, and administrators function collectively rather than in isolation, Pajares (1996) stated that schools develop collective convictions about the capabilities of

their students to learn, of their teachers to teach as well as augment the lives of those they teach, and of their administrators to create environments favorable to those tasks. Coladarci, (1992) found that schools possessing a high level of efficacy have principals who are educational leaders in constant search of ways to improve instruction. The actions of principals serving as instructional leaders build teachers' sense of instructional efficacy (Coladarci, 1992). In Self -Efficacy: The Exercise of Control (1997), Bandura stated: "With staff who firmly believe that by their determined efforts, students are motivatable and teachable whatever their background, schools heavily populated with poor and minority students achieve at the highest percentile ranks based on national norms of language and mathematical competencies" (pp. 250-251). Bandura (1997) affirmed that in relation to implementation of educational innovations teachers' sense of efficacy is one of the best predictors of their willingness to adopt new practices and persevere once change is in place. As with Darling-Hammond (1990) and Fullan (1994), Bandura contended that staff development is vital to ensure that the required structures and practices of innovation are implemented successfully. He suggested that it is especially important to provide efficacy-building social supports during the early stages of implementation to avoid the disillusionment that comes when problems arise (Bandura, 1997). Additionally, developing a sense of ownership for the program with staff would promote harder work toward implementation and contribute to a greater sense of efficacy and satisfaction for the accomplishment (Berman et al., 1977).

Based on the research currently available, self-efficacy is a powerful motivational factor that impacts both behavior and performance. Self-efficacy is learned through a myriad of experiences and changes with the acquisition of new information and

experiences. In general, those individuals who have strong beliefs about their abilities will be more successful and will stay with difficult or stressful tasks longer than those with weak belief systems.

Learning Environments

As early as the 1930s, research and theory development was beginning to be seriously influenced by progressive ideas regarding the relationship between the characteristics of human behavior and environmental factors (Ellett, 1989). Lewin (1936) theorized that the behavior of an individual is dependent upon "his individual characteristics and upon the momentary structure of the existing situation" (p. 71). Lewin maintained that the whole psychological field or "life-space" within which people act had to be viewed in order to understand behavior (1936). According to Ellett (1989), the early research on school and classroom learning environment was carried out by researchers from the field of social psychology who were interested in understanding the relationships between students and teachers as well as among students. Ellett (1989) summarized the findings of learning environment studies conducted from the 1950s through the 1980s. Among those was the finding that the traits of classroom climate and educational learning environments could be measured with a high degree of validity and reliability. A second finding indicated that significant amounts of learning difference beyond any variance accounted for by pretest achievement, ability indices, and social class could be accounted for by measures of learning environment characteristics.

In "Self-Efficacy Theory and Learning Environment Research," Lorsbach and Jinks stated that self-efficacy was an important element of Moos' dimensions of classifying human environments (Lorsbach & Jinks, 1999). Moos' three dimensions were

Relationship Dimensions, Personal Development Dimensions, and System Maintenance and System Change Dimensions. In the Relationship Dimension self-efficacy appraisals are made by comparing personal knowledge and skills to that of others. In relation to Moos' Personal Development Dimension, self-efficacy is basically concerned with an individual's personal evaluation of aptitude and progress. System Maintenance and System Change Dimensions deal with the learning environment and how perceptions of that environment affect self-efficacy. Lorsbach and Jinks (1999) suggested that order and clearly stated expectations within the classroom environment allow for more accurate judgements of ability. They further suggested that academic self-efficacy is clearly connected to the learning environment. In fact, Lorsbach and Jinks (1999) stated that self-efficacy beliefs can govern whether or not learning environments are viewed constructively or fatalistically. They based their assertion on Bandura's (1986) argument that self-referent thought arbitrates knowledge and action and is congruent with Pajares' (1996) affirmation that beliefs are the "filter through which new phenomena are interpreted and subsequent behavior mediated" (p. 544).

Lorsbach and Jinks' (1999) contention that teachers' instructional self-efficacy can account for attitudes related to the learning environment was supported by the work of Albert Bandura. In Self-Efficacy: the Exercise of Control, Bandura (1997) stated:

> Teachers who have a high sense of instructional self-efficacy devote more time to academic activities, provide students who encounter difficulties with the guidance they need to succeed, and praise their academic accomplishments. In contrast, teachers of low perceived efficacy spend more time on nonacademic pastimes, readily give up on students if they do not get quick results, and criticize them for their failures. Thus teachers who believe strongly in their ability to promote learning create mastery experiences for their students, but those beset by self-doubts about their instructional efficacy construct classroom environments that are likely to undermine students' judgments of their abilities and their cognitive development. (p. 241)

Finally, Lorsbach and Jinks (1999) professed that

> self-efficacy is probably an important factor in shaping perceptions because along with learning experience, there come concomitant judgements about those experiences. Self-efficacy is a personal appraisal of those judgements brought to bear on new learning situations. Consequently, learning environment research must take self-efficacy beliefs into consideration and one of the things we find most intriguing about joining learning environment research with self-efficacy theory is the clear implication for encouraging proactive student behavior, which can be among the most powerful outcomes of a high quality education. (p. 6)

These researchers (Lorsbach and Jinks, 1999) advocated the belief that teachers should facilitate a learning environment where students are able to acquire the intellectual tools, efficacy beliefs, and inherent interests they need to become life long learners. It was their contention that "growth in student autonomy is at the intersection of learning environment and self-efficacy research and could hold some promise for transforming student perceptions of classroom learning environments" (p.5).

Summary

Calls for reform that will significantly improve student performance on both norm-referenced and criterion-referenced tests continue to abound throughout our nation. Politicians at all levels of government are pushing efforts through their respective legislatures to hold educators accountable for the achievement of their students (Goals 2000, 1996; No Child Left Behind Act, 2001). Reading is fundamental to any substantial improvement in student performance as all content areas rely on the ability to read fluently as well as the ability to comprehend what has been read to gain and extend the knowledge base of the learner (Durkin, 1993; Snow et al. 1998; Stevens, Slavin, & Farnish, 1991).

Critical to developing fluent readers who comprehend both narrative and expository text, are well-defined strategies for reading instruction (Snow et al., 1998). Research indicates that explicit instruction in phonemic awareness is critical to building both fluency and comprehension in young readers. Research on Direct Instruction focuses on teacher behavior in reading instruction and the use of scripts to insure "faultless communication" in order to control at least in part the variables associated with the learner (Engelmann & Carnine, 1991).

Several factors in addition to that of fluency and comprehension in reading contribute to the overall picture of student of student performance. These factors include the beliefs that teachers hold concerning their ability to positively affect the learning of their students as well as their ability to effectively implement instructional strategies designed to provide students with the requisite skills for effective reading practice. Present research indicates that teachers' beliefs about their abilities to impact the achievement of their students are reflected to some degree in student achievement. Efficacy beliefs also relate to the organizational health of the school especially in the presence of influential instructional leadership. Perception of behavior of the individuals within the organization seems to be the single most important aspect of efficacy, not the actual behavior. For change to be affected within organizations, it is important for leaders in the organization to address the beliefs of the various stakeholders as well as those of leadership itself.

CHAPTER 3

RESEARCH DESIGN, METHODOLOGY, AND PROCEDURES

This study investigated the relationships of teachers' sense of efficacy and SRA's Corrective Reading, a scripted direct instruction program that emphasizes decoding and comprehension, and the relationship between SRA Corrective Reading and student reading achievement as measured by the reading portion of the *Georgia Criterion Referenced Competency Test* (CRCT). Chapter three contains a discussion of the research design, instrumentation, data collection, and analyses procedures used to address the research questions in the study.

Research Design

The design for this study was two-fold: 1) a quasi-experimental time-series design which involved periodic measurement on one group and the introduction of an experimental treatment into a time series of measurements; 2) descriptive in that a survey was used to determine the attitudes of the teachers participating in the study (Campbell & Stanley, 1963).

Research Hypotheses

1. There was a statistically significant negative correlation between the length of time a teacher teaches using Direct Instruction techniques and the teacher's sense of efficacy.

2. There was a statistically significant difference between increase in the mean CRCT scores for sixth grade students after one year's participation in SRA's Corrective Reading.

Independent Variables

The independent variables in this study were 1) direct instruction techniques, and 2) teachers' sense of personal teaching self-efficacy. Personal teaching efficacy as de fined by Bandura (1986, 1993, 1997) is a teacher's judgment of his or her own ability and to establish and affect courses of action which influence classroom and organizational goals.

All teachers in the study were trained in the utilization of the direct instruction materials and techniques prior to implementation. An additional three members of the faculty at the school received training in coaching techniques for direct instruction. The team was comprised of three classroom teachers. Teachers were assigned to their respective reading levels by indicating their teaching preferences prior to assignment.

Dependent Variables

The dependent variables in this study were student scores on the reading portion of the *Georgia Criterion Referenced Competency Test*. The reading portion of the *Georgia Criterion Referenced Competency* (CRCT*)* has been administered to students in grades 4, 6, and 8 since the spring of 2000. The CRCT was designed to determine how well students have learned knowledge and skills relative to a pre-determined performance level on a specified set of educational goals included on Georgia's Quality Core Curriculum.

Population and Sample

The sample for this study was drawn from a middle school in northwest Georgia. The school lies in the heart of the small rural community and is seated in the middle of a triad of larger cities; Cartersville, Calhoun, and Rome. Approximately 2,700 people reside in the school's community. There were 606 sixth, seventh, and eighth grade students enrolled in the school with approximately 45% of the students receiving free and/or reduced lunch during the 2003 – 2004 school year.

Students in grades six and eight from the 2002 – 2003 school year were involved in the study as well as all teachers teaching in SRA's Corrective Reading program. Seventh grade students were eliminated from the study due to lack of available CRCT test data. Students were assigned to SRA's Corrective Reading levels via the program's placement tests. Students initially placed into the decoding levels of the program were given the placement test a second time upon completion of the decoding portion of the program to determine their appropriate placement in the comprehension portion of Corrective Reading. Cross grade level grouping of students was used to maintain the homogeneity of reading groups as well as to establish class sizes within the ranges funded by the state of Georgia. Students taking Spanish and those enrolled in literature did not participate in this study. Teachers who participated in the SRA Corrective Reading program were involved in completing the survey relating to teacher efficacy.

Data Collection Procedures

A survey instrument was distributed via the school's mailbox system to reading teachers at the school to assess teachers' sense of efficacy. Surveys were returned to the

researcher through the United States Postal Service. Responses remained anonymous in that the collected data were pooled and reported as a group.

Permission was granted by Bartow County School's Executive Director for Curriculum and Instruction in October 2003 to conduct the study (see Appendix A). Permission was also granted for the researcher to access and use in the data analysis scores from individual students on various administrations of *Georgia's Criterion Referenced Competency Test* (CRCT).

Instrumentation

A modified version of the The *Teacher Self and Organizational Efficacy Assessment (TSOEA)* developed by Loup and Ellett (1993) was utilized in this study to assess teachers' sense of efficacy. The original *Teacher Self and Organizational Efficacy Assessment (TSOEA)* was designed to measure three aspects of teacher self efficacy: teacher perceptions of self efficacy, teacher perceptions of organizational efficacy, and collective perceptions of efficacy. The instrument was modified to measure only teacher perceptions of general teaching efficacy and efficacy perceptions associated with teaching SRA Corrective Reading as opposed to the teacher's primary teaching assignment.

Internal validity and reliability studies using the TSOEA (Loup, 1994) for a sample of teachers in a Southeastern United States school district include the following:

1. Factor analysis of responses (n=1041) for the 24-item TSOEA instrument revealed three independent subscales: (a) Teachers' Perceptions of Self-Efficacy (TPSE) (10 items), (b) Teachers' Perceptions of Organizational Efficacy (TPOE) (8 items), and (c) Collective Perceptions of Efficacy (CPE) (8 items). The three-factor solution results

explained 63.2% of the total variance in the data and contained all of the 24 original items (with two items cross loading on more than one factor) to operationalize the three subscales.

2. Internal consistency reliability coefficients (Cronbach Alpha) computed using complete data in the initial study (n=664) for each of the TSOEA subscales were as follows: (a) TPSE (r=.89), (b) TPOE (r=.92), and (c) CPE (r=.95).

3. Stability (test-retest) reliability coefficients for the TSOEA subscales using a sample of 48 teachers in two schools were as follows: (a) TPSE (r=.80; p<.01) (b) TPOE (r=.80; p<.01), and (c) CPE (r=.39; p<.05).

The modified version of the TSOEA (Appendix C) included a subset of the 24 items mentioned previously to measure the participant's efficacy motivation and 19 additional items developed from a review of the literature on elements of efficacy ability as it related to teachers' knowledge of SRA Corrective Reading and use of direct instruction practices (Bandura 1997; Carnine & Kameenui, 1990; Gibson & Dembo, 1984).

The *Georgia Criterion Referenced Competency Test* measures how well students in Georgia acquire the skills and knowledge outlined in Georgia's Quality Core Curriculum (QCC). Information from these tests is used to diagnose individual student strengths and weaknesses as they relate to Georgia's QCC and to gauge the quality of education in the state as required by the *No Child Left Behind Act of 2001*. Georgia implemented the CRCT testing program in spring 2000 in grades four, six, and eight in the areas of reading, English/language arts, and mathematics as required by Georgia law.

Data Analysis

Likert scale values were assigned to each of the 19 questions on the modified *Teacher Self and Organizational Efficacy Assessment (TSOEA)*. For each of the 4 parts of the 3 key questions, the ratings scales were 1 = Little or None to 4 = A Large Amount. Part 3 of the survey utilized values from 1 to 4: l = Strongly Disagree (SD), 2 = Disagree (D), 3 = Agree (A), 4 = Strongly Agree (SA)**.** The raw data for this analysis were the response values for all teachers. Pearson product-moment correlation coefficients were used to examine teacher's sense of efficacy in relation to their number of years teaching experience with the SRA Corrective Reading program for each survey item. The level of significance was set at $p < .05$.

Scores on Georgia's Criterion Reference Competency Test (CRCT) for individual students who participated in SRA Corrective Reading during their 6th grade year were collected from Spring 2001, Spring 2002, and Spring 2003 were collected and a mean score was formulated for each year tested. Data was disaggregated by gender, ethnicity, and exceptionality. A *t* test for dependent means was used to examine the data from the two testings to determine whether the difference between the two sample means was due to chance or to a true difference between the population means. Groups with membership that was less than 10 were not tested. The level of significance for the t test was set at $\alpha < .05$.

Scores on Georgia's Criterion Reference Competency Test (CRCT) for individual students from grade 8 who participated in SRA Corrective Reading for their 6th, 7th and 8th grade years were collected from Spring 2001, Spring 2002, and Spring 2003 a mean score was formulated for each year tested. The Criterion Reference Competency Test

administration began in spring 2000 when these students were in 5th grade. Grades four, six, and eight were the only grades to participate in the administration of the CRCT in the Spring of 2000. Consequently, there are no CRCT scores prior to the Spring 2001 included for this portion of the population and no further tests were conducted to determine the dependency between measures of before and after participation in SRA Corrective Reading.

Summary

This chapter presented the methods and procedures used in conducting this research. It included the hypotheses and a description of the sample, data collection, the *Georgia Criterion Referenced Competency Test* and the *Teacher Self and Organizational Efficacy Assessment (TSOEA)* instruments used in the study. An explanation of the data analysis procedures and techniques were also described.

CHAPTER 4

RESULTS

This chapter presents the results in relation to the research questions. It includes a description of the sample and the results of data analyses related to the research questions.

Description of the Sample

This study focused on the relationships of teachers' sense of efficacy and reading achievement of students who participated in SRA Corrective Reading at a middle school located in northwest Georgia. Permission from the school district as well as the principal at the school for conducting the study were obtained. The targeted sample included 20 SRA reading teachers in grades 6, 7, and 8 since teachers at all three levels teach reading in cross grade level groupings. Surveys were distributed to those teachers in early January, 2004. The total number of the returned surveys was 15 (response rate = 75%).

A description of the teacher sample is presented in Table 1 by distributing the 15 teachers on 10 demographic variables, including gender, ethnicity, age, level of professional certification, field of professional certification, years teaching experience, years teaching at the school, grade levels taught, number of years experience teaching SRA reading, and level of SRA reading taught. In terms of ethnicity all teachers in the sample were Caucasian, 13 were female and 2 were male, 11 of the teachers ranged in age from 41 to 60, 11 of the teachers held master's level certification or higher. Only two

Table 1

Demographic Data of Teacher Sample (N = 15)

Variable	n	%
Teachers' Gender		
Male	2	13.33
Female	13	86.67
Teachers' Ethnicity		
Caucasian	15	100.00
Other	0	0.00
Teachers' Age		
20 – 30	2	13.33
31 – 40	2	13.33
41 – 50	7	46.67
51 – 60	4	26.67
61+	0	0.00
Teachers' Level of Certification		
Bachelors/T-4	4	26.67
Masters/T-5	9	60.00
Specialist/T-6	2	13.33
Ph.D. or Ed.D/T-7	0	0.00
Teachers' Field of Certification		
Early Childhood Education	0	0.00
Elementary Education	0	0.00
Middle School Education	11	73.33
Secondary Education (Area)	2 (SS, LA)	13.33
Special Education	2	13.33

(table continues)

Table 1 (continued)

Demographic Data of Teacher Sample (N = 15)

Variable	N	%
Teachers' Years Experience		
0 – 5	2	13.33
6 – 10	6	40.00
11 – 15	1	6.67
16 – 20	3	20.00
21+	3	20.00
Teachers' Years at the School		
0 – 3	4	26.67
4 – 10	8	53.33
11 – 15	2	13.33
16 – 20	1	6.67
21+	0	0.00
Teachers' Primary Grade Level		
6	6	40.00
7	4	26.67
8	5	33.33
Teachers' Years in SRA		
1 – 5	11	73.33
6 – 10	4	26.67

(table continues)

Table 1 (continued)

Demographic Data of Teacher Sample (N = 15)

Variable	N	%
SRA Level		
Decode A	1	6.67
Decode B1	2	13.33
Decode B2	2	13.33
Decode C	3	20.00
Comprehension A	1	6.67
Comprehension B1	2	13.33
Comprehension B2	2	13.33
Comprehension C	2	13.33

teachers in the sample have less than five years teaching experience. Of the 15 teachers, 11 had five or more years experience teaching in the SRA Corrective Reading program while four had less than five years experience teaching in the program. Decode A represents the lowest level of decoding proficiency while Comprehension A represents the lowest level of comprehension proficiency in SRA Corrective Reading. The actual number of students who tested into Decode A and Comprehension A were small and therefore only one section of each of those levels was necessary to meet the needs of the students in this school.

A description of the student sample is presented in Table 2. The sample was comprised of 128 sixth grade students and 89 eighth grade students. Grade 7 students were not included in the study due to lack of available test data. Of the 128 sixth graders 61 were male and 67 were female. The group's ethnicity was primarily Caucasian with small percentages of African-American, Asian, and Hispanic students. Students with disabilities comprised 3.91% of the sixth grade population with 3.13% of students falling into the gifted category. 64% of sixth graders were enrolled in the comprehension piece of the SRA Corrective Reading program. The remaining 36% of the sixth grade sample was enrolled in decoding. The comprehension piece of the program helps readers who have difficulty following directions, lack vocabulary and background knowledge needed to understand what is read, and have poor critical thinking skills. Students in the decoding piece of the SRA Corrective Reading program have difficulty with word recognition, fail to understand how letter arrangement in a word relates to pronunciation, and have inadequate reading rates.

Table 2

Demographic Data of Student Sample (Grade 6 n = 128, Grade 8 n = 89; Total n = 217)

Variable	n	%
6th Grade		
Total	128	100
Male	61	47.66
Female	67	52.34
Ethnicity		
6th Grade		
African-American	10	7.81
Asian	1	0.78
Hispanic	3	2.34
Caucasian	114	89.06
Special Populations		
6th Grade		
Students with Disabilities	5	3.91
Gifted	4	3.13
SRA Reading Level 2002-2003		
6TH Grade		
Decode B1	7	5.47
Decode C	39	30.47
Comprehension A	5	3.91
Comprehension B1	15	11.72
Comprehension B2	18	14.06
Comprehension C	44	34.37
8th Grade		
Total	89	100
Male	47	52.81
Female	42	47.19
Ethnicity		
8th Grade		
African-American	9	10.11
Asian	0	0.0
Hispanic	2	2.25
Caucasian	78	87.64

(table continues)

Table 2 (continued)

Demographic Data of Student Sample (Grade 6 N = 128, Grade 8 N = 89; Total N = 217)

Variable	n	%
Special Populations		
8th Grade		
Students with Disabilities	8	8.99
Gifted	2	2.25
SRA Reading Level 2002-2003		
8TH Grade		
Decode C	17	19.10
Comprehension A	5	5.62
Comprehension B1	10	11.24
Comprehension B2	18	20.22
Comprehension C	39	43.82

The eighth grade sample population consisted of 47 males and 42 females. The group's ethnicity was primarily Caucasian with small percentages of African-American, Asian, and Hispanic students. Students with disabilities comprised 8.99% of the eighth grade population with 2.25% of students falling into the gifted category. 81% of eighth graders were enrolled in the comprehension portion of the SRA Corrective Reading program. The remaining 19% of the eighth grade sample population was enrolled in decoding.

In summary, the study involved 15 SRA Reading teachers and 217 students in grades 6 and 8 during the 2002-2003 school year. Students were initially placed into SRA reading groups on the basis of a placement test provided as a part of the SRA program. Students who initially placed in the decoding piece of SRA were given the placement test again upon their completion of the decoding portion to determine appropriate placement in the comprehension piece. Reading classes were cross grade level grouped and were homogeneous according to SRA reading level.

Hypotheses

Null Hypotheses 1

There was no a statistically significant correlation between the length of time a teacher teaches using Direct Instruction techniques and the teacher's sense of efficacy.

Pearson's product-moment correlation coefficients were calculated to determine the relationship of the teacher's number of years teaching experience to each survey question relating to teaching efficacy. Table 3 shows correlations between each survey question regarding teacher efficacy and the number of years experience in teaching the SRA Corrective Reading.

Table 3

Correlations Between Teachers' Experience with SRA Corrective Reading and Teacher Efficacy

Question	All SRA Reading Teachers (N=15)	Teachers with Less Than 5 Years Experience Teaching SRA (N=4)	Teachers with More Than 5 Years Experience Teaching SRA (N=11)
Key Question			
1A	-.51	0	-.81***
1B	-.07	0	-.11
1C	-.74***	0	-.82***
1D	.15	0	-.24
2A	-.12	0	-.81***
2B	.31	.40	-.24
2C	.20	0	-.81***
2D	.15	.42	.05
3A	-.39	-.085	.73*
3B	-.14	-.065	.05

(table continues)

Table 3 (continued)

Correlations Between Teachers' Experience with SRA Corrective Reading and Teacher Efficacy

Question	All SRA Reading Teachers (N=15)	Teachers with Less Than 5 Years Experience Teaching SRA (N=4)	Teachers with More Than 5 Years Experience Teaching SRA (N=11)
3C	-.36	.94*	.99****
3D	-.18	-.82	.39
Part 3 1	.07	0	-.14
2	-.02	.39	.07
3	-.03	.39	.03
4	.01	0	.18
5	-.09	0	-.39
6	.46	.49	.38
7	.04	0	-.22
8	-.10	0	-.22
9	-.17	0	-.22

(table continues)

Table 3 (continued)

Correlations Between Teachers' Experience with SRA Corrective Reading and Teacher Efficacy

Question	All SRA Reading Teachers (N=15)	Teachers with Less Than 5 Years Experience Teaching SRA (N=4)	Teachers with More Than 5 Years Experience Teaching SRA (N=11)
10	.18	0	-.46
11	-.11	0	0
12	.08	0	-.14
13	.04	0	.04
14	.20	0	-.22
15	.08	.70	-.45
16	.23	.70	.08
17	-.15	-.70	-.64**
18	.27	-.65	-.64**
19	-.10	0	-.22

*p < .1 **p < .05 ***p < .01 ****p < .001

The analysis of the data indicated that there was no statistically significant correlation between the length of time a teacher teachers using Direct Instruction techniques and the teacher's sense of efficacy. While there were survey items where levels of significance were exhibited within the three grouping of teachers, these represented only small percentages of the total survey.

Null Hypotheses 2

There was no statistically significant difference between CRCT Reading scores for sixth grade students prior to SRA Corrective Reading instruction and CRCT scores after one years participation in SRA Corrective Reading.

Student achievement on the reading portion of the Georgia CRCT for 6th grade students indicated a small amount of growth in mean scaled scores from spring 2002 (5th grade) testing to Spring 2003 (6th grade) testing for the total group as well as all subgroups with the exception of African-American students, Hispanic students, and students with disabilities (see Table 4). Though the Hispanic and students with disabilities subgroups experienced a decline in their mean scaled scores on the reading portion of the CRCT for spring 2003, the decline was markedly slower than these groups had experienced in previous years. In fact, the decline for the Hispanic population was almost one-half of the decline from the previous year's decline while the decline for the student's with disabilities was nearly three-fourths of what had been experienced between the spring 2001 to 2002 testing. These were the results after one year's participation in the SRA Corrective Reading Program (see Figures in Appendix D)

Table 4

Scaled Score Report of Sixth Grade Group/Subgroup Performance

on Georgia's CRCT in Reading

Group or Subgroup	n	Spring 2002 Mean	Spring 2003 Mean	Difference From 2002 to 2003
All Students	128	330.10	362.89	+32.79
African-American Students	10	301.20	294.80	-6.40
Caucasian Students	114	333.25	370.48	+37.23
Hispanic Students	3	304.67	301.33	-3.34
Asian Students	1	336.00	363.00	+27.00
Male Students	61	327.23	333.87	+6.64
Female Students	67	337.72	389.31	+51.59
Students with Disabilities	5	274.20	269.00	-5.20
Gifted Students	4	353.75	395.00	+41.25

For 8th grade subjects, data relating to reading progress prior to participation was unavailable to the researcher. However, data covering three years of participation in SRA Corrective Reading was available (see Figures in Appendix E). After one full year of participation in the SRA Corrective Reading program, all subgroups demonstrated growth in their mean scaled scores on the reading portion of the CRCT. Eighth grade students who participated in SRA Corrective Reading over a three year period exhibited gains in their mean scaled scores over the last two years of participation in the program. However, students with disabilities as well as African-American and male students' mean scaled scores declined after participation during the third year despite gains made in the second year of participation the program. However, scores from the spring 2002 testing to spring 2003 testing declined with the exception of the gifted and female populations who exhibited small gains.

A dependent means t test was conducted on the sixth grade CRCT data for groups/subgroups with 10 or more members to determine whether the difference between the two sample means were due to chance or to a true difference between the population means. Five groups/subgroups of the sixth grade sample were examined: all students (n=128), Caucasian students (n=114), female students (n=67), male students (n=61), and African-American Students (n=10). An observed t score was obtained for each group/subgroup examined and a comparison was made to the critical value of t where $\alpha < .05$ (see Table 5). The observed values of t were less than the critical values of t for all groups/subgroups indicating that there is insufficient evidence to conclude that the difference between Spring 2002 CRCT Reading and Spring 2003 CRCT Reading means represented a true difference.

Table 5

Dependent Means t Test for 6th GradeGroups/Subgroups on Georgia's CRCT in Reading

Group/SubGroup	N	df	Standard Deviation of the Difference Scores	Standard Error of the Mean Scores	$t_{observed}$	$t_{critical}$
All Students	128	127	28.97	2.56	-2.7343	1.960
Caucasian	114	113	29.77	2.78	-2.9424	1.960
Female	67	66	28.90	3.53	-2.1473	2.000
Male	61	60	28.81	3.69	-1.7995	2.00o
African-American	10	9	21.02	6.65	0.9323	2.262

Summary

In order to examine the relationship of teacher efficacy and teaching in SRA's Corrective Reading program, a teacher efficacy survey was administered to teacher participants in the study. A Pearson product-moment correlation coefficient was computed for each survey item for the total sample, for those teachers with less than five years of

teaching experience in the SRA Corrective Reading program, and for those teachers with more than five years experience the SRA Corrective Reading program. Results from that comparison indicated that there is not a statistically significant relationships between teachers' sense of efficacy and SRA Corrective Reading.

Students in 6th grade participating in SRA Corrective Reading during the 2002 – 2003 school year showed a gain in their mean scaled scores on the reading portion of the *Georgia Criterion Referenced Competency Test* of 32.79 points over their spring 2002 scores. Students in the gifted program had the greatest gains while students with disabilities and Hispanic students experienced a decrease in mean scaled scores.

Eighth grade students who participated in SRA Corrective Reading over a three year period exhibited gains in their mean scaled scores over the last two years of participation in the program. However, students with disabilities as well as African-American and male students' mean scaled scores declined after participation during the third year despite gains made in the second year of participation.

Chapter 5

SUMMARY, DISCUSSION, IMPLICATIONS, AND CONCLUSIONS

This chapter contains a summary of the study, a discussion of the major findings, implications of the findings, suggestions for further study, and conclusions drawn from the study.

Summary

The theoretical basis for this study was Bandura's theory of self-efficacy (Bandura, 1977, 1978a, 1978b, 1981, 1982, 1986, 1989, 1991a, 1991b, 1993, & 1997). An individual's beliefs about his/her capabilities to accomplish a given task reinforce that individual's motivation either positively or negatively. This sense of self determines the goals set by the individual, the amount of energy the individual will expend in goal attainment, and the response of the individual to failure should it present itself. Therefore, a teacher's instructional behaviors both affect and are affected by the individual's sense of efficacy.

The study investigated direct instruction in middle grades reading and how it relates to student achievement in reading as well as teachers' sense of efficacy. Direct instruction is "a comprehensive system of instruction that integrates effective teaching practices with sophisticated curriculum design, classroom organization and management, and careful monitoring of student progress as well as extensive staff development" (Stein, Carnine, & Dixon, 1998, p.227). Two instruments, the *Georgia Criterion Referenced Competency Test* (CRCT) and a modified version of the The *Teacher Self and*

Organizational Efficacy Assessment (TSOEA) developed by Loup and Ellett (1993) were used in this study. Fifteen reading teachers and 217 sixth and eighth grade students from a small middle school in northwest Georgia provided information for the study.

A summary of results indicated that there was no statistically significant relationship between teachers' sense of efficacy and SRA's Corrective Reading, a Direct Instruction reading program. Further, results of a dependent means t test conducted on 6th grade CRCT reading data indicated that there was insufficient evidence to conclude that the difference between Spring 2002 CRCT Reading and Spring 2003 CRCT Reading means represented a true difference

Discussion

In general, using direct instruction teaching techniques had no significant relationship to teachers' sense of efficacy in this study. This finding implies that use of direct instruction techniques and scripts in the teaching of reading at the middle school level neither improves or impedes teachers' sense of efficacy.

Student reading achievement in both 6th and 8th grade populations showed small gains in the mean scaled scores for the total populations. Students with disabilities in both groups experienced a decline in their mean scaled scores as a subgroup. This might indicate that the program is ineffective for the group or that the subgroup needs further investigation to determine if the program is more or less effective with subgroup populations. However, the results of a dependent means t test indicated that the evidence was insufficient to conclude that the difference in the means was a true difference. This finding implies that use of direct instruction techniques as a means to improve student achievement may or may not be a feasible approach to utilize.

Implications

Teachers' sense of efficacy has the potential to have an impact on student learning. Preparation of teachers for the classroom becomes an essential factor in helping them successfully improve the academic achievement of their students. Preparation might include courses in teaching analysis, dealing with student/teacher failure, practical experiences that bring theory to practice, and successful experiences in working with students (Dembo & Gibson, 1985; Hoy & Woolfolk, 1993). Dembo and Gibson (1985) found that teachers' sense of efficacy declined for those professionals further along in their careers. While this study did not necessarily observe that phenomenon, the training needs and efficacy concerns of both beginning and veteran teachers cannot be underestimated.

"Learning to read is one of the most important things children accomplish in elementary school because it is the foundation for most of their future academic endeavors" (Stevens et al., 1991, p.8). Reading achievement is equally important for middle school students as well. Direct instruction in reading at the middle school level should continue to be studied to determine its' appropriateness as an effective instructional tool to improve reading for those students.

Suggestions for Future Research

Future studies may examine the relationship between direct instruction and student achievement especially for students with disabilities and minority groups. Comparison of results from those studies to those from this and similar studies may be used to further determine the impact of direct instruction on the various subgroups of any given population, and, therefore the appropriateness of direct instruction methods for students can be more accurately assessed. Additionally, future studies should investigate the relationship of teachers' sense of efficacy and student achievement.

Future studies should considered following groups for longer periods of time to determine the affects of direct instruction on student achievement as well as implications for teachers' sense of efficacy.

Conclusions

The purpose of this study was to investigate the relationships of teachers' sense of efficacy to direct instruction in reading and of student achievement in reading to direct instruction. The study was guided by two research questions: a) do the efficacy perceptions of teachers participating in direct instruction reading program dissipate over time and b) what is the relationship between student reading achievement and direct instruction reading program?

The study found that there was no significant relationship between teachers' sense of efficacy and direct instruction techniques. The study also found that there was no significant relationship between student achievement in reading and direct instruction techniques.

Although the study failed to establish significant relationships in either of the two areas examined, it has the capacity to provide useful information to the participating school and district as they make curriculum decisions and assess the impact of those decisions on student achievement in reading and as well as other content areas. The No Child Left Behind Act of 2001 holds schools, districts, and states accountable for the education of all students and requires that each entity make adequate yearly progress on the state's challenging academic standards. Failure to make that progress carries governmental sanctions as well as serious moral and ethical implications. Schools and districts must consider all factors that have the potential to affect student achievement in order to provide all students with the knowledge and skills they need to meet the academic standards established by the state as well as to meet the requirements of No Child Left Behind.

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APPENDIX A

REQUEST FOR CONSENT OF PARTICIPANT DISTRICT

Dr. Aaron Anderson
Executive Director of Assessment and Instruction
Bartow County Schools
Cartersville, GA 30120

Dear Dr. Anderson,

I am writing to formally request permission to conduct an evaluation of the SRA Corrective Reading program at Adairsville Middle School. My methodology will include surveying teachers at AMS. Additionally, I will be collecting and analyzing student records specifically test scores and demographic information of AMS students as well as current ninth grade students at Adairsville High School who were students at Adairsville Middle during their eighth grade year.

The Human Subjects Review Committee at the University of Georgia, a fully accredited institution, will approve my methods before I collect any data. For your convenience, I have included two copies of this request on system letterhead as required by The University of Georgia, one for your records and the other for The University of Georgia. Thank you for your time and consideration.

Jennifer L. Davenport
Doctoral Student
The University of Georgia

Jennifer L. Davenport is authorized to conduct an evaluation of the SRA Corrective Reading program at Adairsville Middle School as a dissertation project for The University of Georgia.

_____

Dr. Aaron Anderson
Executive Director of Assessment and Instruction
Bartow County School System

_____

Date

APPENDIX B

COVER LETTER

January 15, 2004

Dear Colleague:

I am requesting that you participate in a research study titled "Teacher Efficacy and Direct Instruction in Reading." My research is being conducted through the University of Georgia under the direction of Dr. C. Thomas Holmes with the Department of Educational Leadership (706.542.0913). Your participation in this study is voluntary. You may stop taking part without giving any reason and without penalty.

The purpose of this study is to examine the relationship between the length of time a teacher teaches using SRA Direct Instruction techniques and the teacher's sense of efficacy; the relationship between student reading achievement and teacher's efficacy regarding classroom instruction and its affect on student achievement; and the relationship between student reading achievement and Direct Instruction in reading.

Please take a few minutes of your time to assist me by completing the attached survey. You will incur no risks by participating in this study. While the data collection methods employed cannot guarantee anonymity, all information will be strictly confidential. No identifying information will be revealed. Collected data will be pooled and analyzed as a group.

Once you have completed the survey, please place it in the self-addressed, stamped envelope provided with the survey and return it to me.

Your cooperation in helping me investigate this topic is greatly appreciated. If you have any questions or concerns regarding this survey, please call me at 770.606.5800, extension 2374.

Sincerely,

Jennifer L. Davenport
Doctoral Candidate
Department of Educational Leadership
University of Georgia
jdavenport@Bartow.K12.ga.us

Returning the completed survey to the researcher indicates your agreement to participate in the research outlined above.

For questions or problems about your rights please call or write: Chris A. Joseph, PhD. Human Subjects Office, University of Georgia. 606A Boyd Graduate Studies Research Center, Athens, Georgia 30632-7411; Telephone (706) 542-3199; E-Mail Address IRB@uga.edu.

APPENDIX C
TEACHER EFFICACY SURVEY

Teacher Questionnaire

PART ONE DIRECTIONS: Part One asks questions about you and your professional background. Please answer the following questions. (Please Circle One)

1) Gender: Male Female

2) What is your highest level of professional certification?

A) Bachelors/T -4
B) Masters/T -5
C) Specialist/T-6
D) Ph. D. or Ed. D./ T -7

3) How many years of teaching experience do you have (including this year)?

A) 0-5 B) 6-10 C) 11-15 D) 16-20 E) 21+

4) How many years have you been teaching at this school (including this year)?

A) 0-3 B) 4-10 C) 11-15 D) 16-20 E) 21+

5) Which best describes your field of professional certification?

A) Early Childhood Education
B) Elementary Education
C) Middle School Education
D) Secondary subject area (grades 7-12). Please specify.

6) In which grade level(s) do you spend the majority of your day?

A) 6th B) 7th C) 8th

7) Ethnicity:

A) African-American
B) Asian
C) Caucasian
D) Hispanic
E) Native American
F) Other

8) What is your age range?

A) 20-30 B) 31-40 C) 41-50 D) 51-60 E) 61+

9) How many years (including this year) have you taught SRA reading? _____

10) Please indicate the level of SRA reading you taught during the 2002-2003 school year.

PART TWO DIRECTIONS: Part two asks you to consider your motivation and beliefs about accomplishing school goals.

1. Read the key question, then consider each of the four goals listed, one at a time.
2. Decide how you as an individual teacher would respond to the question.
3. Use the scale provided and circle the number that corresponds to your answers to the key question for each of the four goals. Repeat this procedure for each key question.

KEY QUESTION 1: How much **energy/effort** do I put forth to accomplish each school goal?

		Little or None			**A Large Amount**
A	Goal 1: To enhance the learning of students.	1	2	3	4
B.	Goal 2: To increase the involvement of parents in their children's learning.	1	2	3	4
C.	Goal 3: To establish and communicate expectations of high academic standards.	1	2	3	4
D.	Goal 4: To establish professional relationships with administrators and other teachers.	1	2	3	4

KEY QUESTION 2: If there are difficult or uncertain obstacles to overcome in accomplishing a goal, how much **persistence/perseverance** would I put forth to accomplish a goal?

		Little or None			**A Large Amount**
A	Goal 1: To enhance the learning of students.	1	2	3	4
B.	Goal 2: To increase the involvement of parents in their children's learning.	1	2	3	4
C.	Goal 3: To establish and communicate expectations of high academic standards.	1	2	3	4
D.	Goal 4: To establish professional relationships with administrators and other teachers.	1	2	3	4

KEY QUESTION 3: To what extent would **previous failures** to accomplish each goal affect my motivation to accomplish future goals?

		Little or None			**A Large Amount**
A	Goal 1: To enhance the learning of students.	1	2	3	4
B.	Goal 2: To increase the involvement of parents in their children's learning.	1	2	3	4
C.	Goal 3: To establish and communicate expectations of high academic standards.	1	2	3	4
D.	Goal 4: To establish professional relationships with administrators and other teachers.	1	2	3	4

PART THREE DIRECTIONS: Part three asks you to consider your feelings and beliefs about teaching in the SRA Direct Instruction reading program. For each question, indicate the extent of your agreement with each statement by circling the number that best represents your response for the SRA Direct Instruction reading.

l=Strongly Disagree (SD) **2=Disagree (D)** **3=Agree (A)** **4=Strongly Agree (SA)**

		SD	**D**	**A**	**SA**
1)	I have confidence in my ability to teach the content of this subject matter.	1	2	3	4
2)	I need more training with the content covered in this subject matter.	1	2	3	4
3)	I spend little time on some areas in this subject which I do not feel comfortable teaching.	1	2	3	4
4)	I want my supervisor or other teachers to observe me teaching in this subject area.	1	2	3	4
5)	I rephrase questions when students are having difficulty giving adequate responses.	1	2	3	4
6)	I am properly trained to teach this subject.	1	2	3	4
7)	I understand the content in this subject matter area.	1	2	3	4
8)	I feel comfortable teaching the content of this subject matter.	1	2	3	4
9)	I can answer student's questions in this subject matter area.	1	2	3	4

l=Strongly Disagree (SD) 2=Disagree (D) 3=Agree (A) 4=Strongly Agree (SA)

	SD	D	A	SA
10) I am confident that I can teach this subject to various groups of students.	1	2	3	4
11) I use diverse methods of teaching the content of this subject matter.	1	2	3	4
12) Students in my class feel encouraged to ask questions.	1	2	3	4
13) Students in my class feel free to seek assistance when they need help.	1	2	3	4
14) I am continually finding different ways to help students learn in this subject matter area.	1	2	3	4
15) I use my evaluations as a reflective tool to improve student learning.	1	2	3	4
16) I allow students to evaluate my teaching as a reflective tool to improve my teaching methods.	1	2	3	4
17) I provide students with continual opportunities to be successful.	1	2	3	4
18) I provide students with opportunities to engage in active learning (cooperative learning, skits, simulations, hands-on, etc.).	1	2	3	4
19) I use hints to help students when they are unable to answer questions.	1	2	3	4

Thank you for your participation. Please return the survey in the stamped, self-addressed envelope provided.

APPENDIX D

SIXTH GRADE CRCT READING ACHIEVEMENT RESULTS

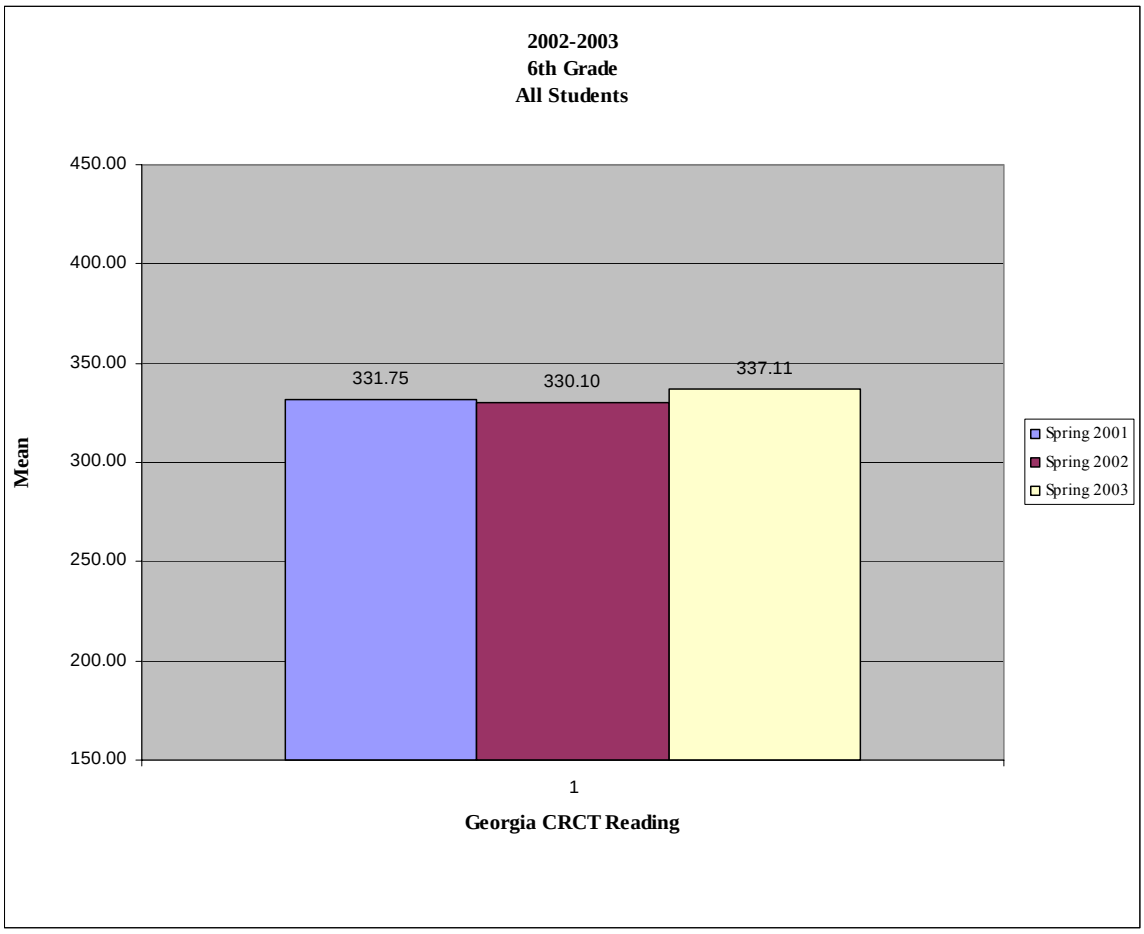

Figure D-1. Mean Scores for All 6th Grade Students on Georgia's CRCT in Reading

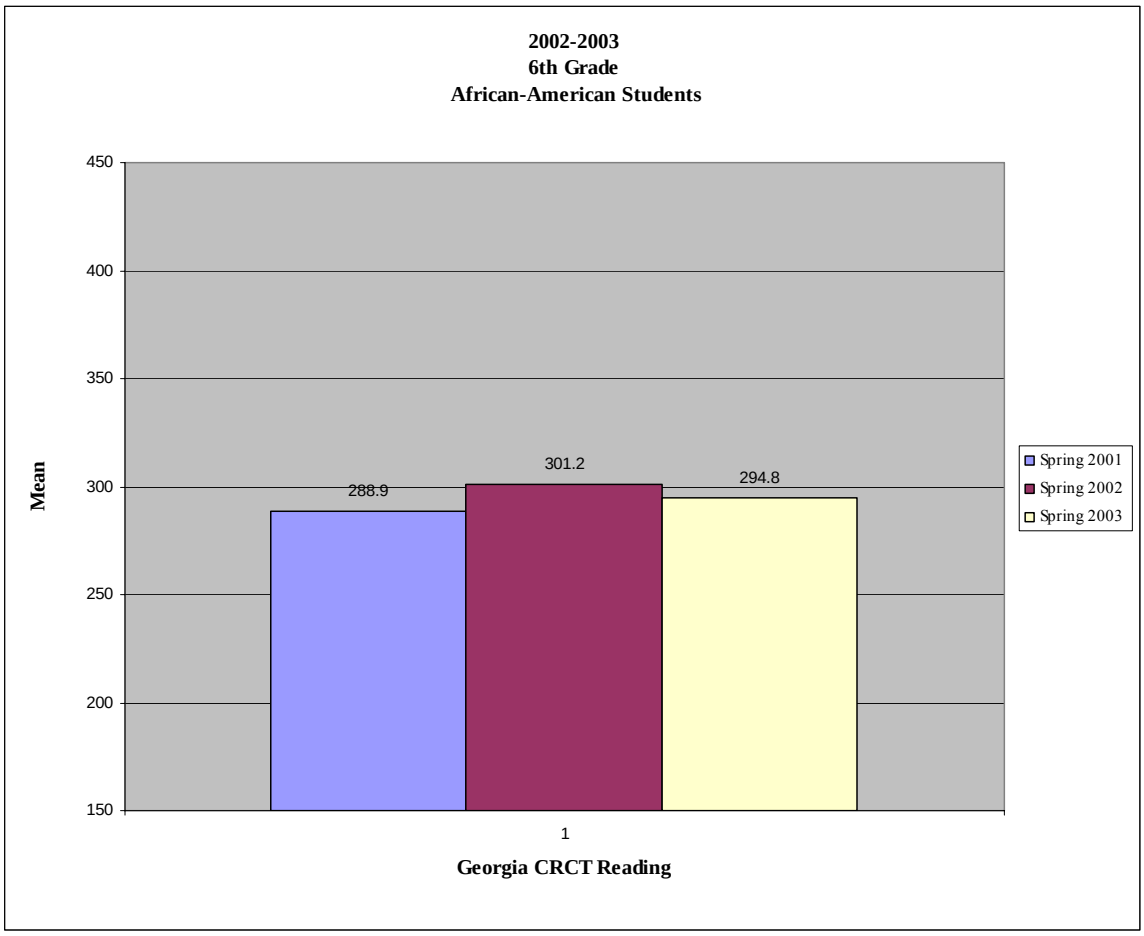

Figure D-2. Mean Scores for 6th Grade African-American Students on Georgia's CRCT in Reading

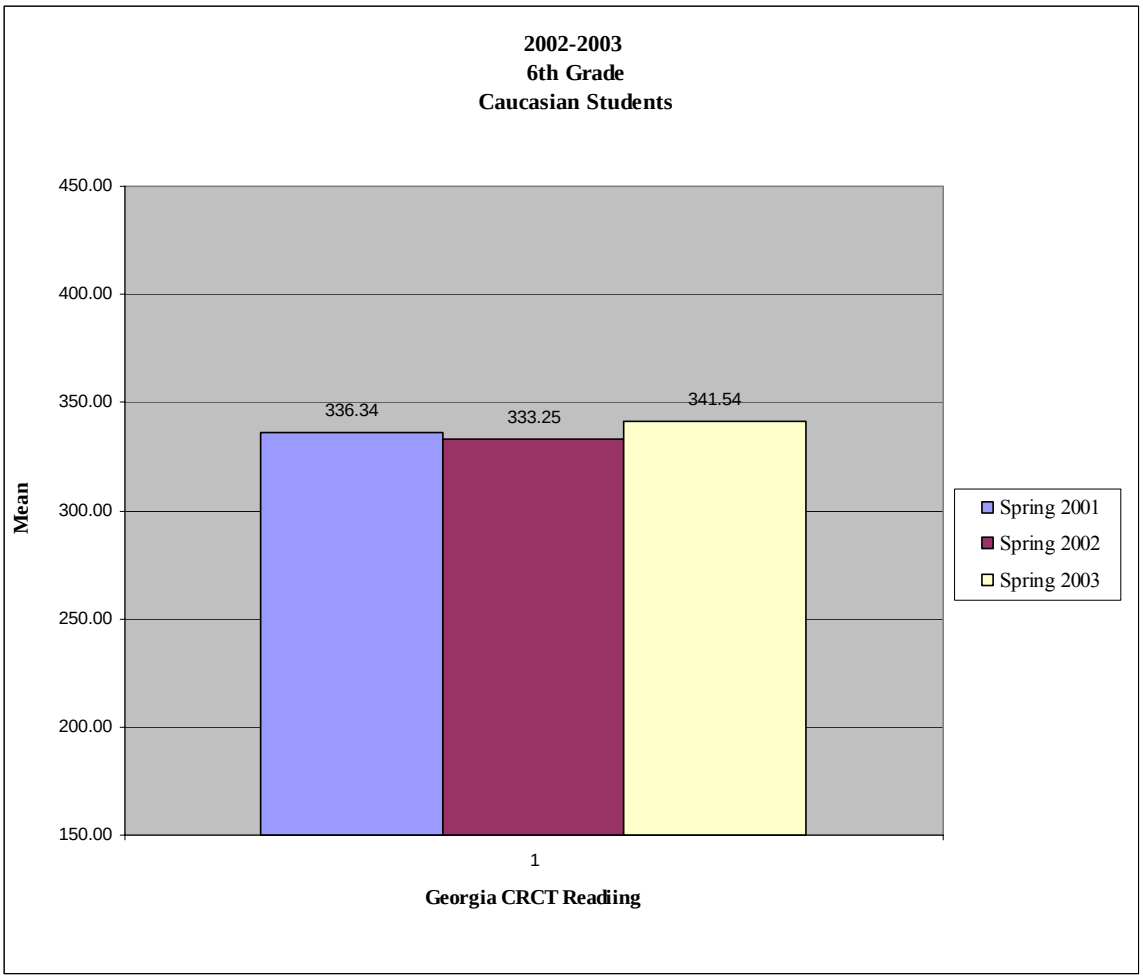

Figure D-3. Mean Scores for 6th Grade Caucasian Students on Georgia's CRCT in Reading

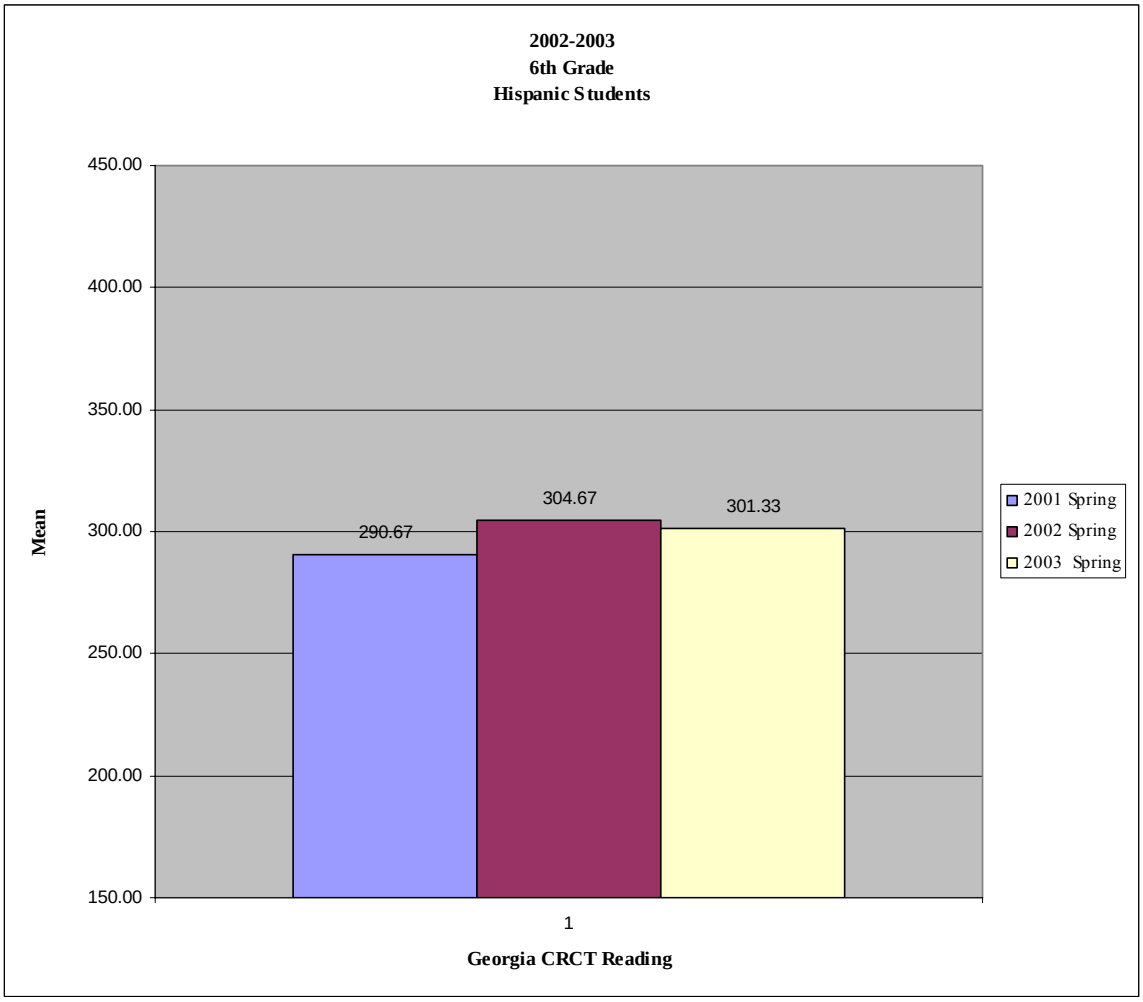

Figure D-4. Mean Scores for 6th Grade Hispanic Students on Georgia's CRCT in Reading

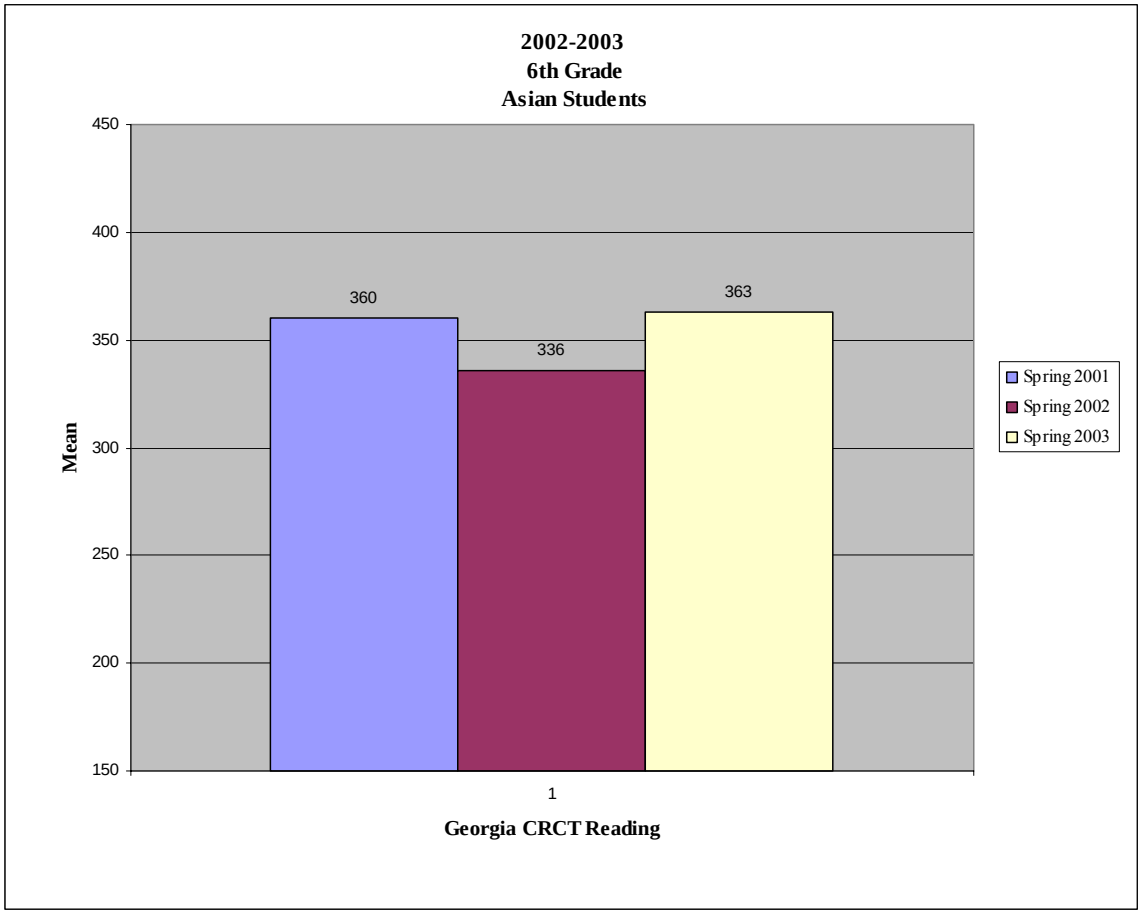

Figure D-5. Mean Scores for 6th Grade Asian Students on Georgia's CRCT in Reading

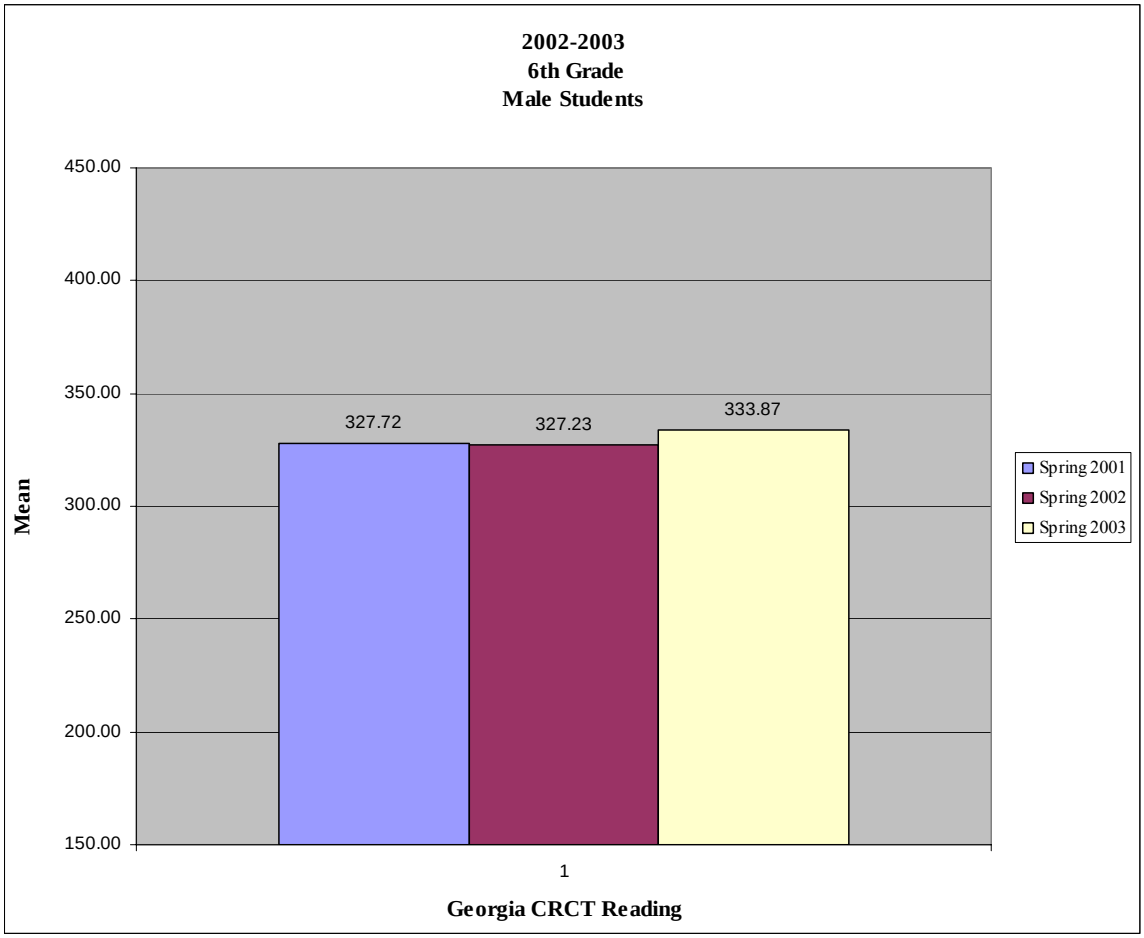

Figure D-6. Mean Scores for 6th Grade Male Students on Georgia's CRCT in Reading

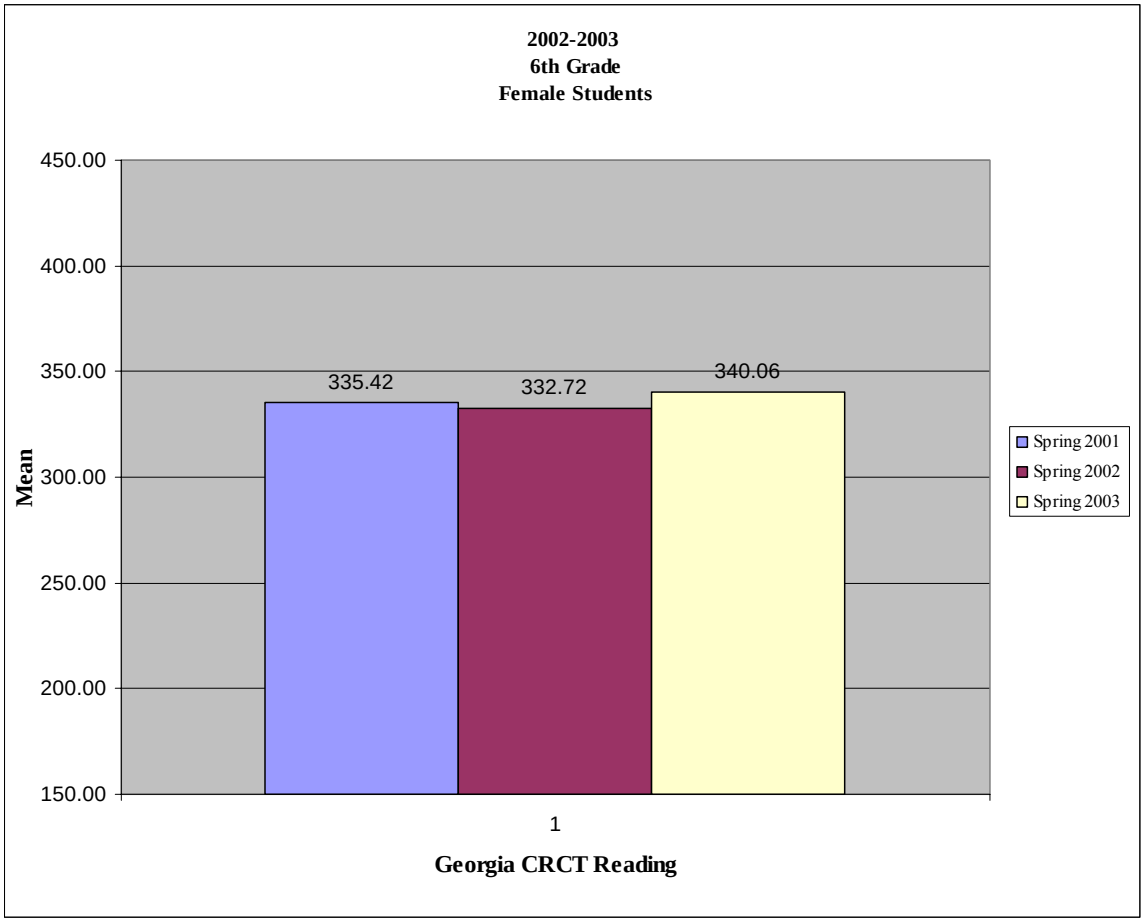

Figure D-7. Mean Scores for 6th Grade Female Students on Georgia's CRCT in Reading

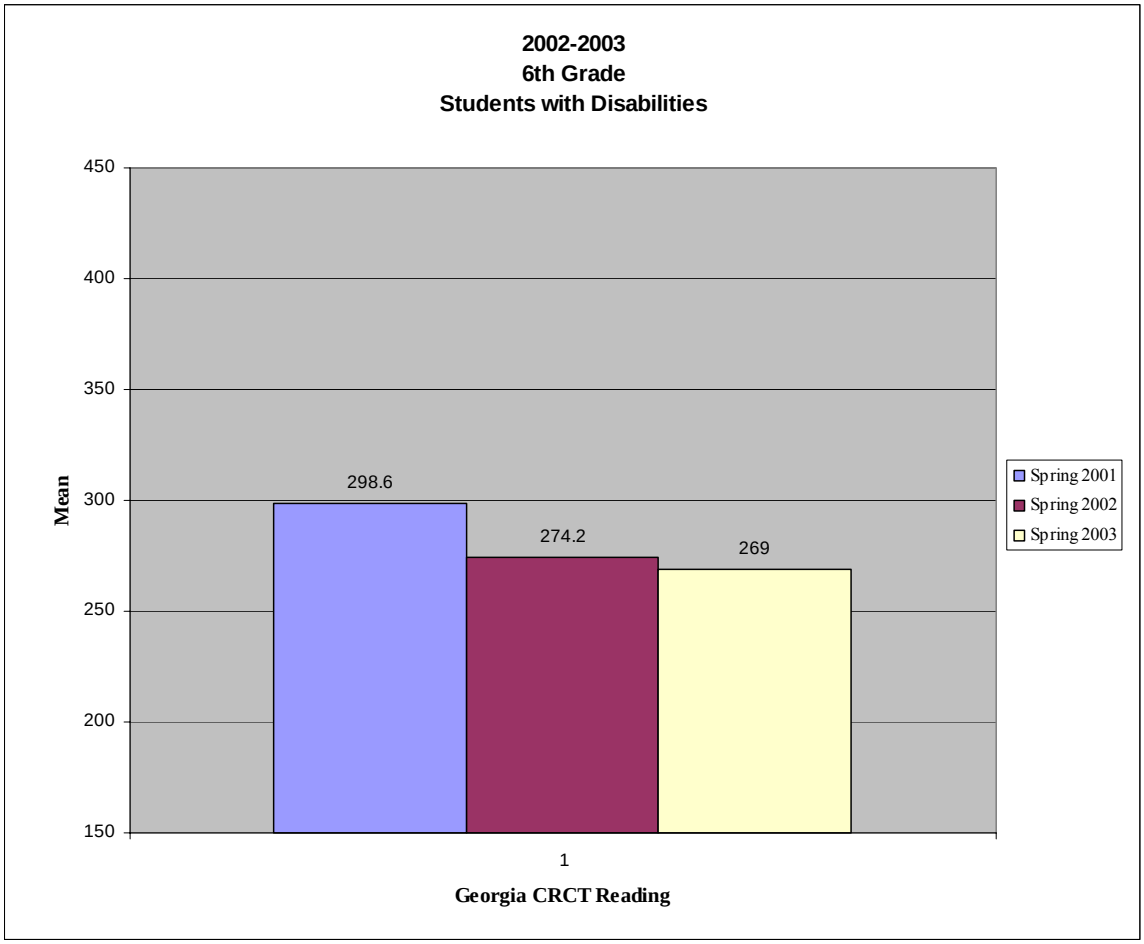

Figure D-8. Mean Scores for 6th Grade Students with Disabilities on Georgia's CRCT in Reading

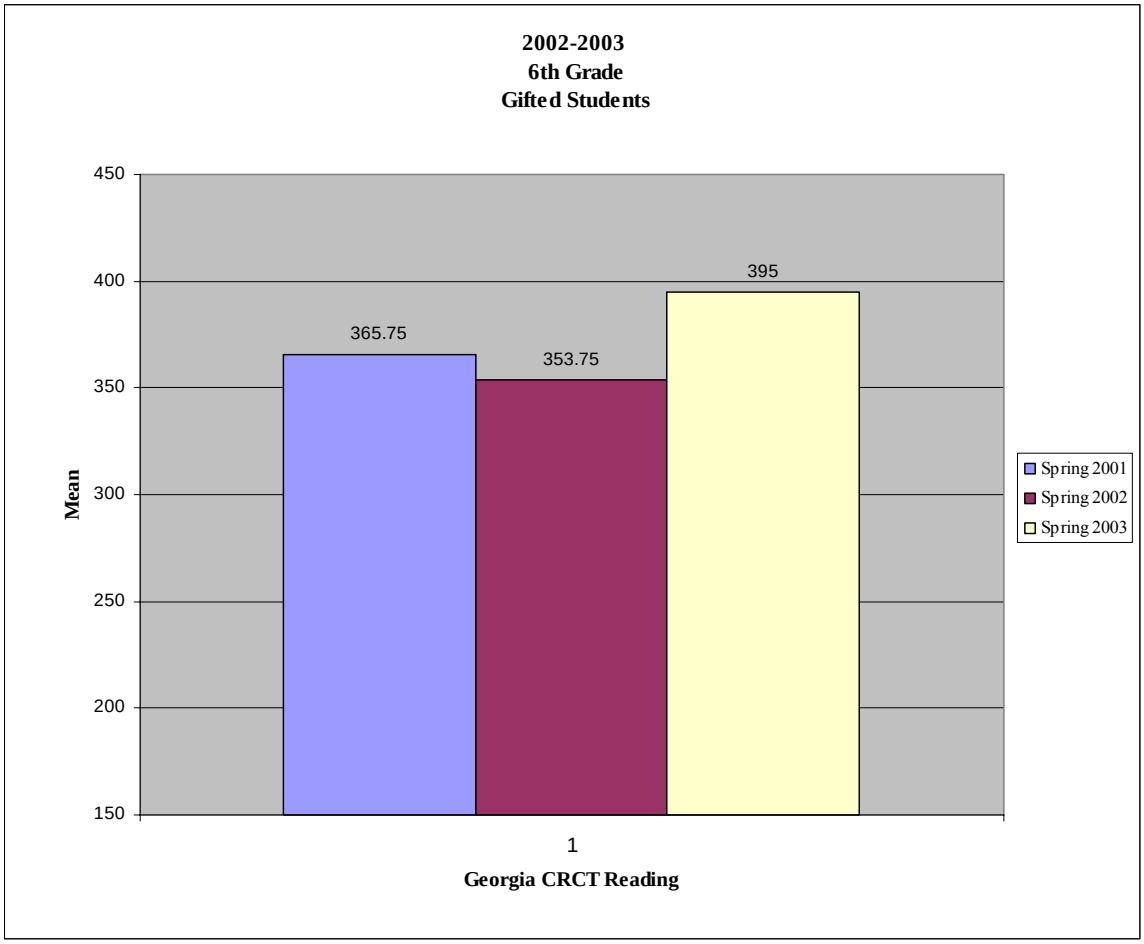

Figure D-9. Mean Scores for 6th Grade Gifted Students on Georgia's CRCT in Reading

APPENDIX E

EIGHTH GRADE CRCT READING ACHIEVEMENT RESULTS

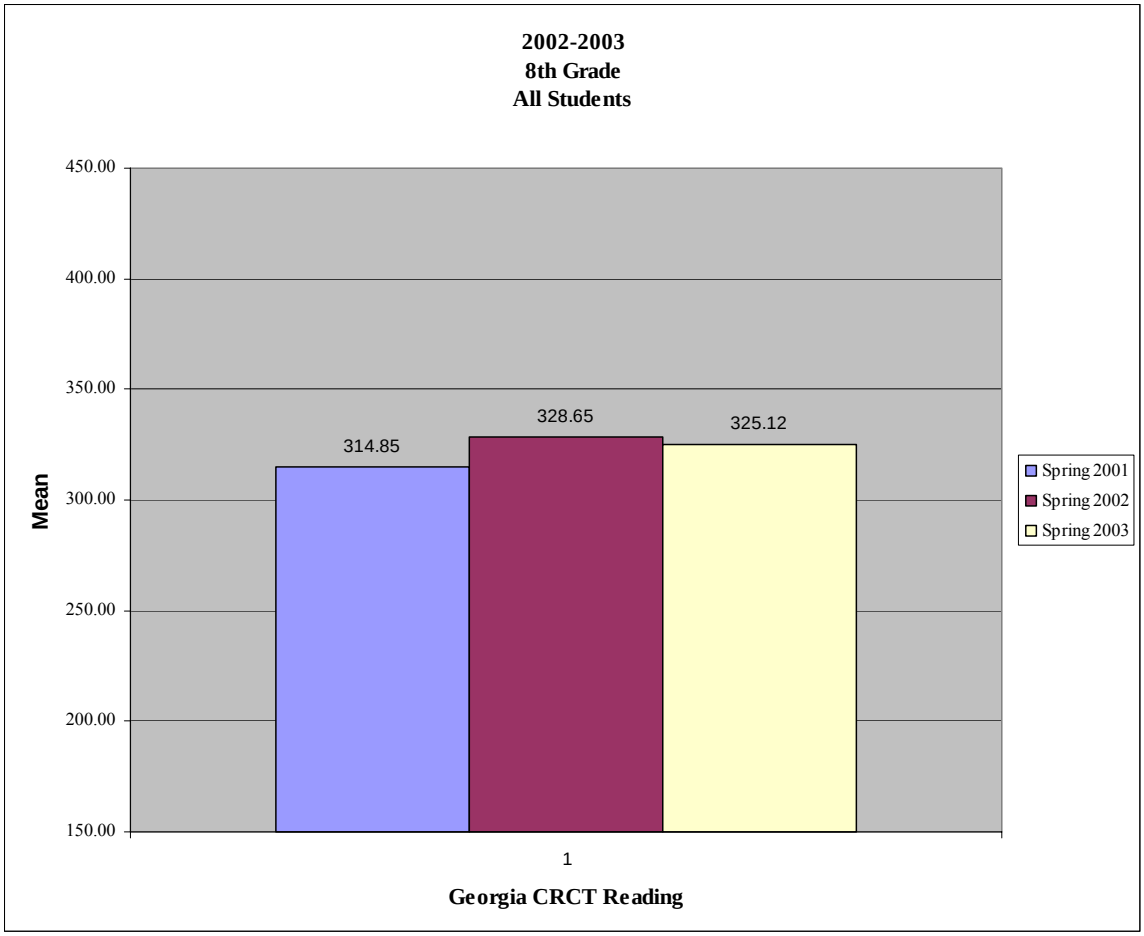

Figure E-1. Mean Scores for All 8th Grade Students on Georgia's CRCT in Reading

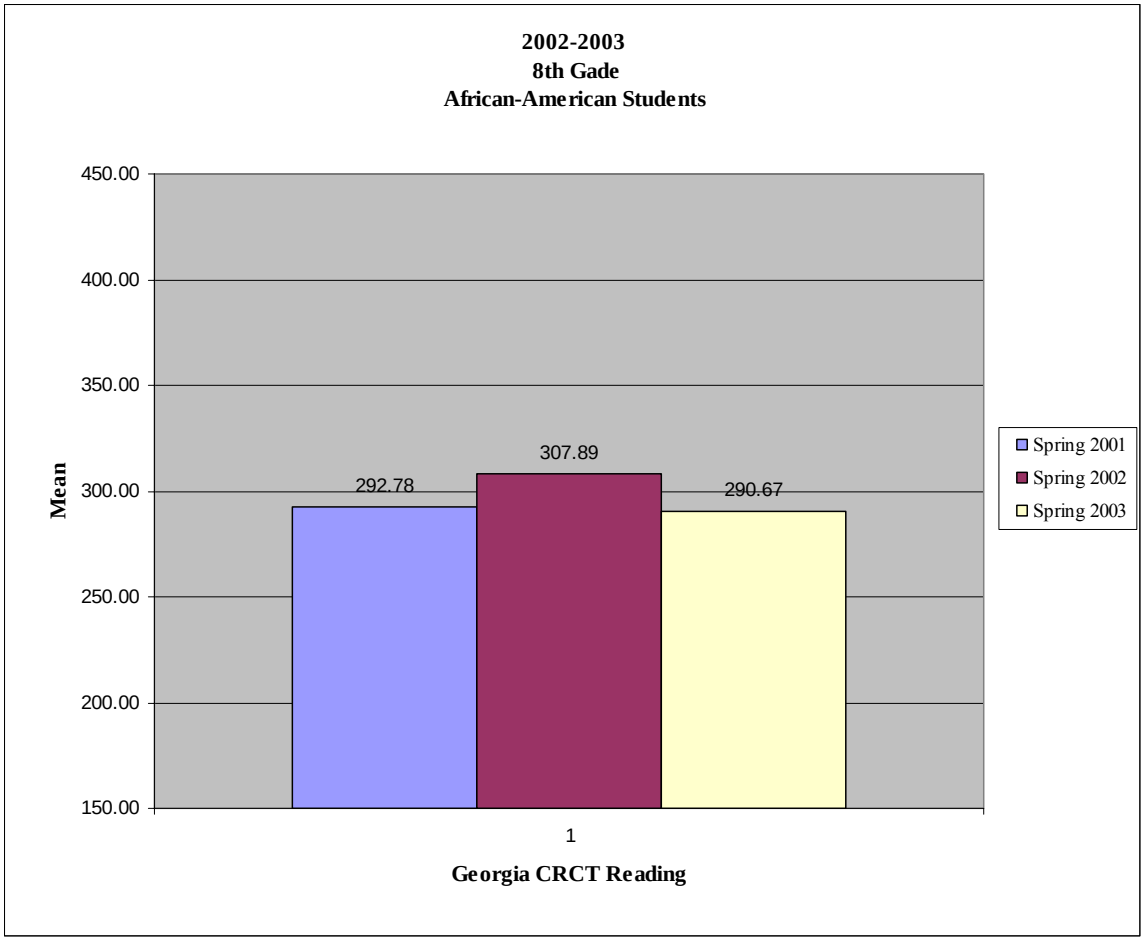

Figure E-2. Mean Scores for 8th Grade African-American Students on Georgia's CRCT in Reading

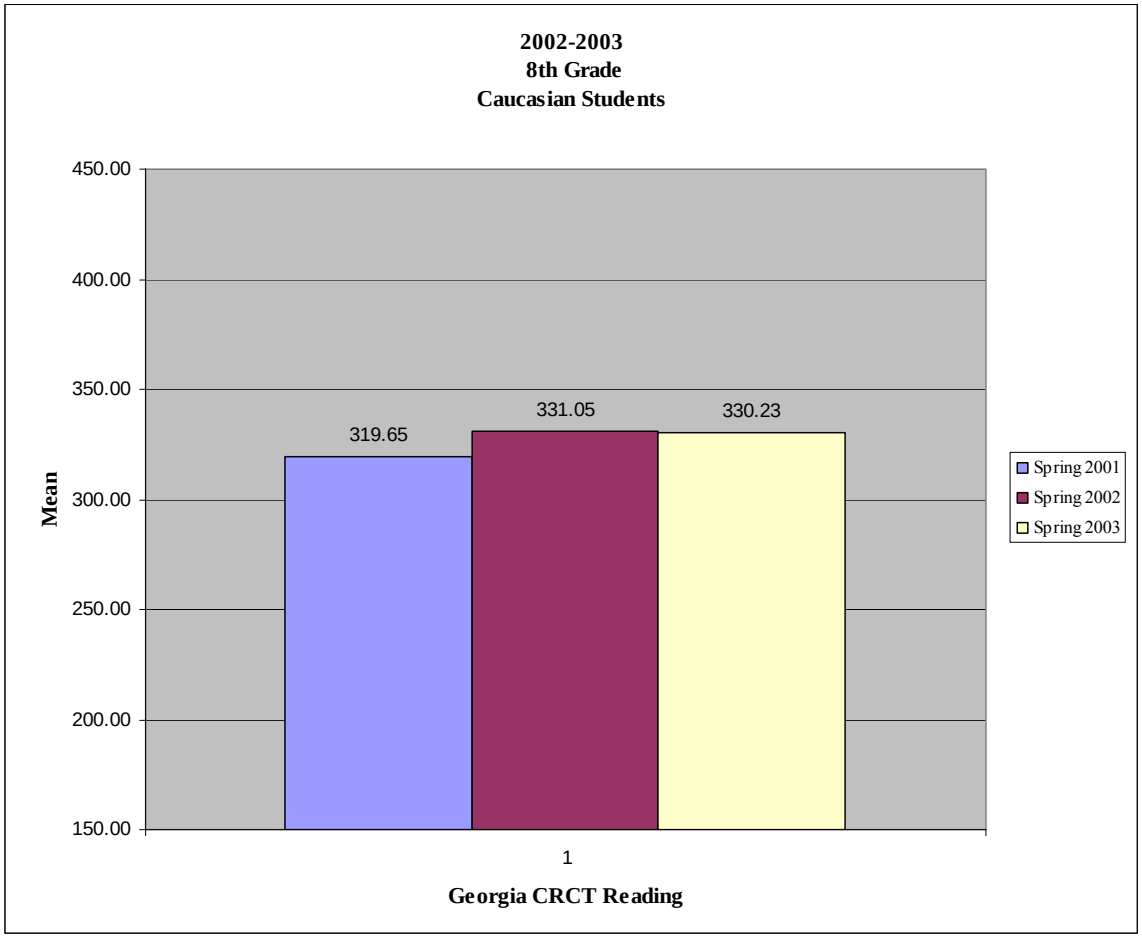

Figure E-3. Mean Scores for 8th Grade Caucasian Students on Georgia's CRCT in Reading

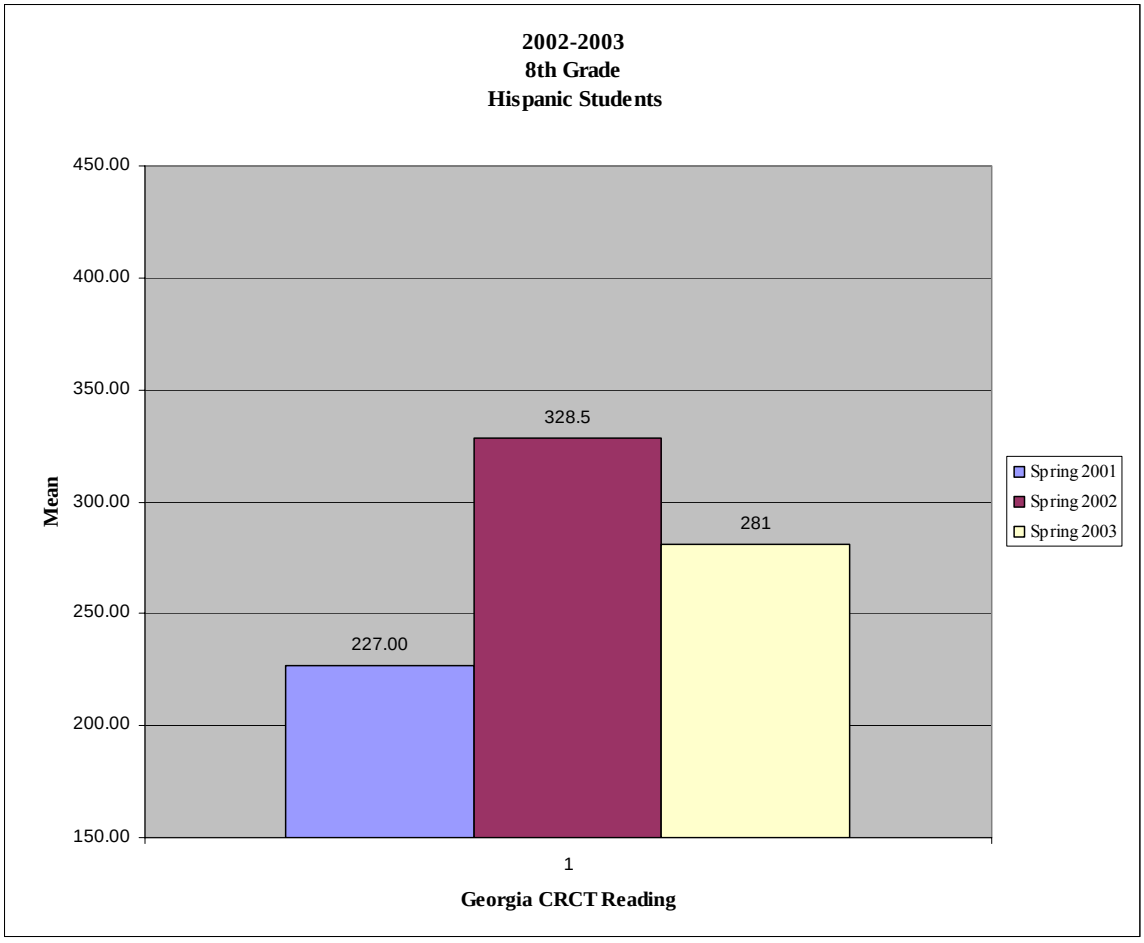

Figure E-4. Mean Scores for 8th Grade Hispanic Students on Georgia's CRCT in Reading

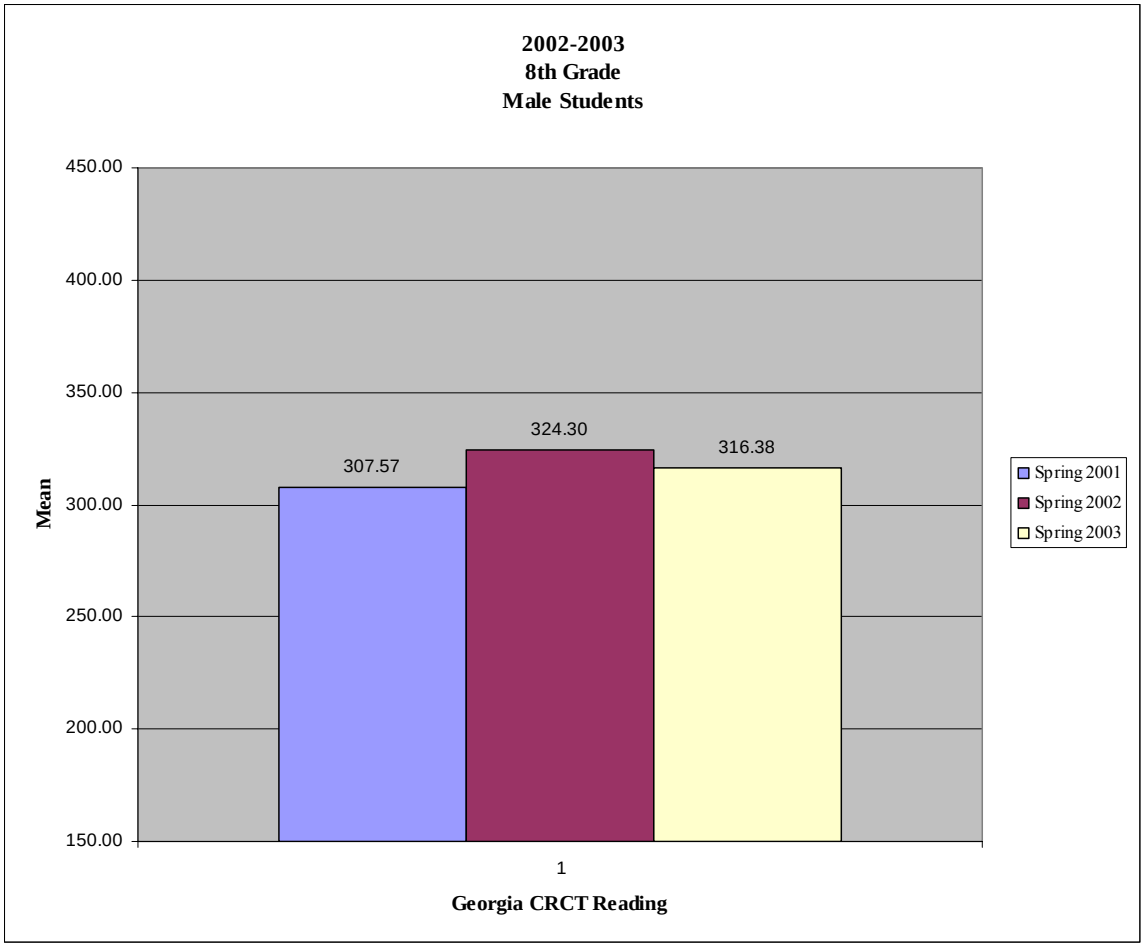

Figure E-5. Mean Scores for 8th Grade Male Students on Georgia's CRCT in Reading

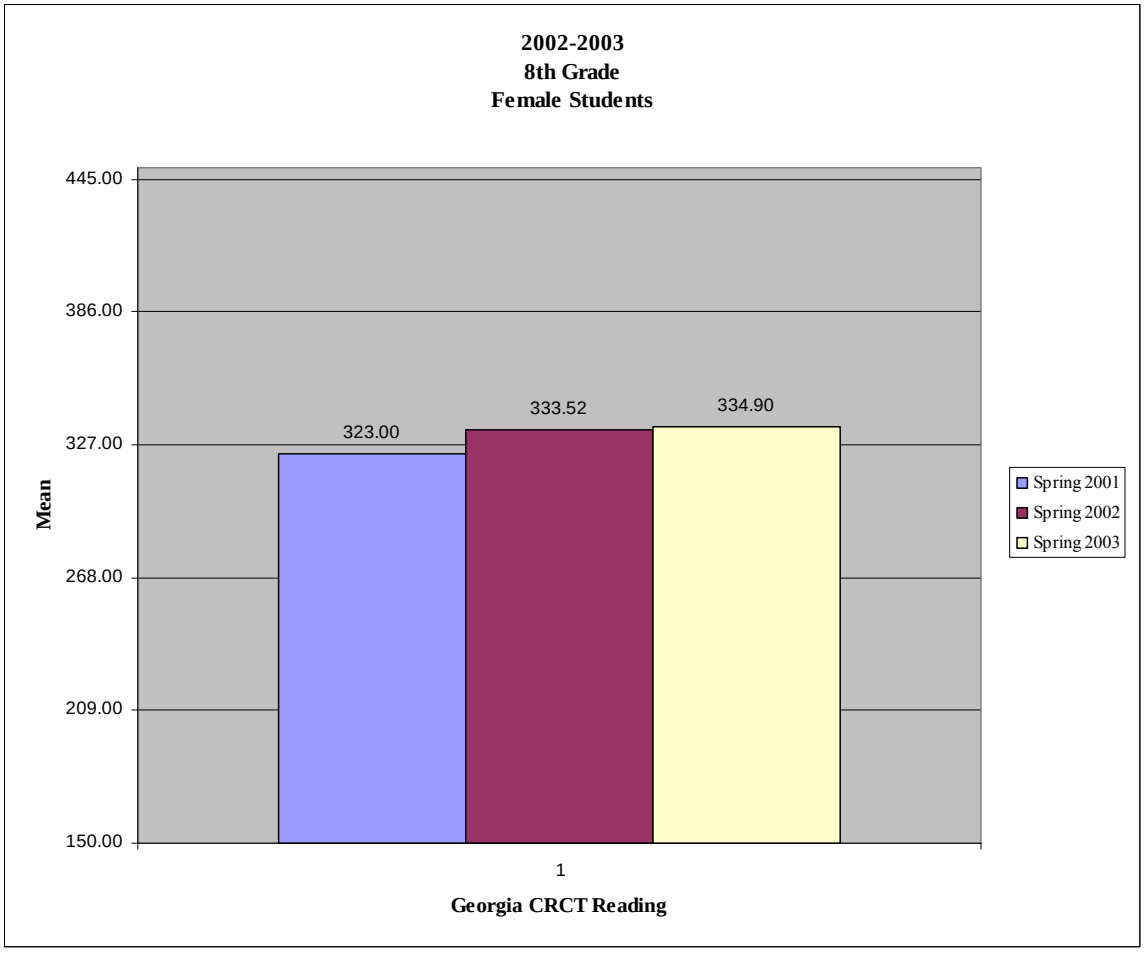

Figure E-6. Mean Scores for 8th Grade Female Students on Georgia's CRCT in Reading

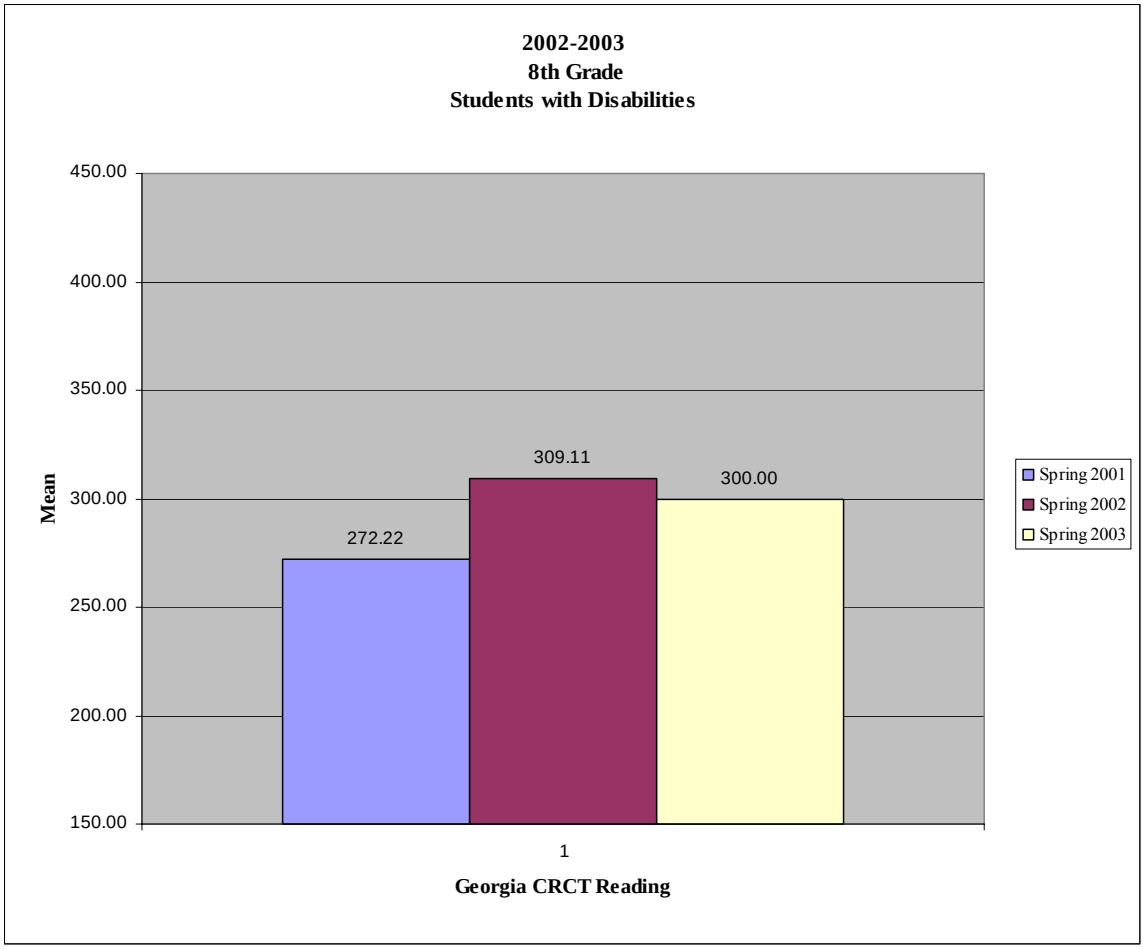

Figure E-7. Mean Scores for 8th Grade Students with Disabilities on Georgia's CRCT in Reading

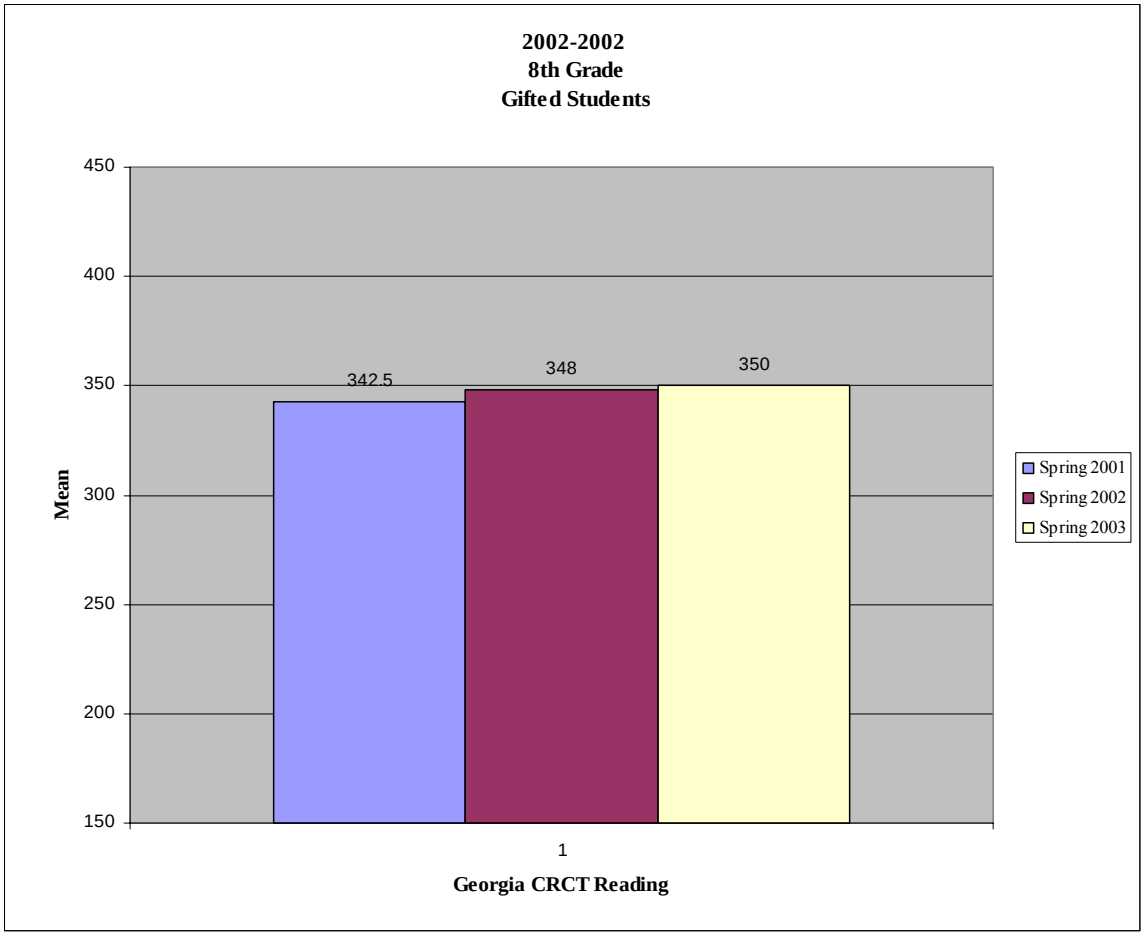

Figure E-8. Mean Scores for 8th Grade Gifted Students on Georgia's CRCT in Reading