THE IMPACT OF THE CORE KNOWLEDGE CURRICULUM AT THE JUNIOR HIGH LEVEL AS IT RELATES TO PERFORMANCE ON THE TEXAS ASSESSMENT OF KNOWLEDGE AND SKILLS

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The purpose of this study was to determine the impact of the comprehensive school reform model core knowledge on the reading achievement of eighth grade students located in a suburban north Texas school district. The data compared the mean scores on the Texas Assessment of Knowledge and Skills of students attending the experimental core knowledge school with the control school that did not use the core knowledge curriculum. Students from both schools were compared for student achievement gains overall as well as several other categories. The study also used a qualitative survey that asked key faculty members at both schools questions regarding levels of curriculum implementation, staff knowledge of curriculum, etc. The data showed no significant differences between student achievement scores at the experimental school compared with students at the control school. However, the study found that the type of standardized test seems to have an impact on whether students in a core knowledge curriculum show higher achievement than students in a traditional curriculum. Students in a core knowledge curriculum show higher achievement on norm-referenced standardized tests when compared with students not attending a core knowledge school. When taking a criterion-referenced test such as the Texas Assessment of Knowledge and Skills, there is no difference in reading achievement between the two groups.

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CHAPTER 1

INTRODUCTION

In 1983 the federal publication *A Nation At Risk* inspired significantly increased spending on public education while ultimately producing little progress in student achievement (Kirkpatrick, 2003). This bipartisan report also included the well-known statement regarding public schools, “If an unfriendly foreign power had attempted to impose on America the mediocre educational performance that exists today, we might well have viewed it as an act of war” (Kirkpatrick, 2003, p. 1). Besides increasing teacher salaries and per pupil expenditures, the 1983 publication also prompted more statewide testing programs. In addition, since the publication of *A Nation At Risk,* education reform has become a permanent issue on the national agenda, rather than just a local and state issue (Schugurensky, 2002).

With such focused attention, the idea of Comprehensive school reform began to take hold. Comprehensive school reform is the idea that improvements in student achievement occur most frequently when there is a total effort to make positive, academically focused, school-wide changes on behalf of all students. This idea was furthered in a study, *Special Strategies for Educating Disadvantaged Students* (April, 1997) which stated: “Students in schools working with whole-school reform tended to achieve greater gains than did students in schools attempting various pull-out programs” (p. 1). Research also indicates that working with externally developed school reform models can be a powerful catalyst for improvement when integrated into a school’s overall school reform plan (WestEd, 1997). However, even promising school

reform designs are likely to fail it they are implemented 1 element at a time rather than in a more comprehensive fashion (WestEd, 2002).

In 1997, the U.S. Department of Education, through legislation promoted by Congressmen Obey and Porter, established the comprehensive school reform demonstration program (WestEd, 2002). The Comprehensive school reform demonstration program is based on what has been learned in recent years about effective school reform models and approaches and was appropriated $145 million for the years 1998 and 1999. The U.S. Department of Education's stated purpose was to "provide financial incentives for schools that need to substantially improve student achievement, particularly Title I schools, to implement comprehensive school reform programs that are based on reliable research and effective practices" (WestEd, 2002, p. 2).

Since the 1983 publication of *A Nation At Risk* and the 1998 implementation of the comprehensive school reform demonstration, a variety of school wide reform programs have been implemented in school districts across the country. One such program is widely known as the core knowledge movement. In 1987, E.D. Hirsch published *Cultural Literacy: What Every American Needs to Know.* This, along with Hirsch's 1996 book, *The Schools We Need & Why We Don't Have Them,* gave rise to the core knowledge movement. Hirsch (1987) defined cultural literacy as possessing the "basic information needed to thrive in the modern world" (p. 1). Hirsch distinguished between the narrow ideas of culture as they relate to the acquaintance with the arts to include "the major domains of human activity from sports to science" (p. 1).

Furthermore, Hirsch (1987) explains that cultural literacy is not confined to 1 social class. He contends “cultural literacy constitutes the only sure avenue of opportunity for disadvantaged children, the only reliable way of combating the social determinism that now condemns them to remain in the same social and educational condition as their parents” (p. 1). This contention brings to the forefront the issue of education and the struggle to bridge the achievement gap between advantaged and disadvantaged students. Hirsch asserted that common core knowledge amongst all students would close the achievement gap. However, he cautioned that in order to break the cycle of the achievement gap, educators must break with many of the fundamental theories and practices common for decades. Hirsch explained that in the first decades of the twentieth-century, the ideas of Jean-Jacques Rousseau powerfully influenced the educational ideas of John Dewey, whom he believes has most deeply affected modern American educational theory and practice. Rousseau believed that we should encourage the natural development of young children and not impose adult ideas upon them before they can truly understand them (Hirsch, 1987, p. 2). This “content-neutral” educational development dominated American schools for decades. Dewey’s book, *Schools of To-Morrow*, strongly seconds Rousseau’s opposition to the mere accumulation of knowledge (p. 2). Dewey (1915) states: “Education is not something to be forced upon children and youth from without, but is the growth of capacities with which human beings are endowed at birth” (Dewey, p. 1). Hirsch (1987) believed that “only by piling up specific, communally shared information can children learn to participate in complex cooperative activities with other members of their community” (Hirsch, p. 2).

In his 1996 book, *The Schools We Need and Why We Don't Have Them,* Hirsch elaborates on his notion of the need for communal knowledge. Hirsch (1996) stated the following:

> We cannot afford any more decades dominated by ideas that promote natural, integrated project learning over focused instruction leading to well-practiced operational skills in reading and mathematics, and well-stocked minds conversant with individual subject matters like history and biology. We need to reject the ill-founded notions that every child learns naturally at his or her own pace and that teaching the child is more important than teaching the subject. (p. 2)

The differences between these two ideologies align with the periods of the Enlightenment and Romanticism. Hirsch believes that the progressive-Romantic approach to education, which has been the pervasive ideology in American education for decades, is ineffective in practice. Hirsch refers to a tragic paradox of history that in the last half of the twentieth century, the Brown vs. Board of Education landmark Supreme Court case was handed down at just the time that romantic progressivism finally succeeded in abolishing the emphasis on traditional academic content in the early grades (Hirsch, 1999, p. 2). Hirsch sees the tragedy in the fact that by the 1970s and 1980s the public schools into which children were integrated were schools in which the traditional knowledge necessary to communication and full participation in our society was very inconsistently taught.

Children from privileged homes learned vocabulary and knowledge from parents and outside activities that they were not being taught in schools while disadvantaged students, who did not receive such benefits at home, did not receive the benefits at all. Just at the time when all students were allowed, in theory, an equal opportunity in public education, Hirsch believes the majority of these students were once again

disadvantaged in contrast to their advantaged peers by the progressive educational ideas common throughout the country. This educational injustice can be corrected, he believes, by taking the positives that integrating public schools have provided with the positives of a sequenced curriculum for each grade level that is provided by the core knowledge curriculum.

According to Hirsch, although the chief beneficiaries of the educational reforms proposed by the core knowledge curriculum will be disadvantaged children, the same reforms will also enhance the literacy of children from middle-class homes. In a 2001 article, Hirsch called the fourth-grade reading gap (which widens in each succeeding grade) the "single greatest failure in American public schooling, and the most disheartening affront to the ideal of democratic education" (Hirsch, 2001, p. 1). The figures have shown that the achievement gap between middle-class and low-income students has been present in American public education for at least 50 years.

In 1964, Loban published a graph that showed student achievement and student age. The graph shows similar achievement between middle-class and low-income students in kindergarten through third grade. Beginning in fourth grade, the gap "begins to separate sharply and after that keeps the same heartbreaking trajectory" (Hirsch, 2001, p. 2). In the 1970s, Chall named this widening the fourth grade slump. (Hirsch, 2001, p. 2). In 1990, Chall published *The Reading Crisis: Why Poor Children Fall Behind*. In it she discusses the difficulty that children from low-income families often have when transitioning from learning the medium to understanding the message. Despite the best efforts of well-intentioned educators, the fourth grade slump has continued. The National Center for Education Statistics reports that the difference in the

average reading scale score for fourth graders eligible for free or reduced lunch versus those not eligible has been consistent for the years 1998-2003. (National Center for Education Statistics, 2005). The fourth grade slump and the reading gap between advantaged and disadvantaged students can be closed by "carefully working out content curriculum that develops academic knowledge and oral language during the long periods in the early grades that are currently (and very ineffectively) devoted to 'language arts'" (Hirsch, 2001). History and science should be emphasized over "imaginative fiction." Hirsch views this emphasis on fragmented fictional stories as a remnant of the progressive romantic emphasis on natural development that serves as a barrier to closing the fourth grade and the overall reading gap.

To be precise, Hirsch believes that the term reading gap should be referred to as a verbal gap. He believes that it begins well before children begin to read and continues after they have mastered the skills necessary to decode words. In the 1995 book, *Meaningful Differences,* Hart and Risley said, "Many a low-income child entering kindergarten has heard only half the words and can understand only half the meanings and language conventions of a high income child. Our schools, as currently constituted, do not reduce this original knowledge/vocabulary gap" (Hart, 1995). The verbal gap that Hirsch refers to is a perfect example of the "matthew effect" in education. This term comes from the line in the book of Matthew which says "unto every one that hath shall be given, and he shall have abundance, but from him that hath not shall be taken away even that which he hath." In education, those that hath, or the advantaged students continue to outpace those that hath not, the disadvantaged student, incrementally after fourth grade.

According to Hirsch, experts in vocabulary estimate that to understand spoken or written speech, a person needs to know about 95% of the words. The other 5% of word meanings can be inferred from context. Given these facts, it is easy to see the matthew effect in practice. If a kindergarten student understands 95% of a teacher's statements, the child is gaining new knowledge from the remarks as well as gaining new word meanings by inferring the meanings of the unfamiliar five % of the remarks. However, a disadvantaged student suffers the second portion of the matthew effect in that he doesn't understand enough of the initial remarks to grasp the entire meaning thus failing to gain knowledge from the remarks. He also doesn't gain any new word meanings from context. Furthermore, Hirsch argues, he loses even that which he hath—his interest, self-confidence, and motivation to learn.

In order to address these problems, the core knowledge curriculum was developed. It was a result of extensive research which assessed the content and structure of high performing elementary schools around the world, including Korea, Japan, France and Denmark (Hirsch, 1996). The Core Knowledge Foundation believes that, "for the sake of academic excellence, greater fairness, and higher literacy, elementary and middle schools need a solid, specific, shared core curriculum in order to help children establish strong foundations of knowledge, grade by grade (Core Knowledge Foundation, 2004).

The core knowledge sequence is comprised of four integrated components: solid knowledge, sequenced knowledge, specific knowledge, and shared knowledge. First, solid knowledge addresses the commonly heard concern that what students learn today will soon be outdated. The Core Knowledge Foundation believes that there is a body of

lasting knowledge that includes basic principles of constitutional government, important events of world history and essential elements of mathematics and of oral and written expression (Core Knowledge Foundation, 2004).

Next, core knowledge is a sequenced curriculum. It is based on the foundation that knowledge builds on knowledge. Children learn new knowledge by building upon prior knowledge. The core knowledge curriculum provides clear, sequential content for each grade level. For example, in first grade having such content allows students to enter each successive grade as prepared as possible and also helps eliminate the repetition of topics from year to year.

Third, core knowledge is specific. It seeks to remove the ambiguity often found in state or district curriculum. For example, rather than stating something generic such as students will demonstrate knowledge of people, events, ideas, and movements that contributed to the development of the United States, a core knowledge curriculum is specific (Core Knowledge Foundation, 2004). For example, within the area of music, seventh grade students will study the Romantics and Nationalists of Classical Music including Dvorak's Symphony No. 9, Grieg's Suites Nos. 1 and 2, and Tchaikovsky 1812 Overture (Core Knowledge Foundation, 2004). This type of specificity in content allows for less duplication throughout the grades and allows each student to move from grade to grade with a content specific background.

Finally, core knowledge is shared knowledge. Being literate means being familiar with a wide range of topics used by writers, newscasters, and speakers. Core knowledge seeks to create a broad-based shared knowledge for all children, without regard to the background or socio-economic level (Core Knowledge Foundation, 2004).

The implementation of the core knowledge curriculum continues to grow. As of January 2007 there are 42 K-8 visitation schools, 85 K-8 Official schools, and 421 K-8 friends of core knowledge schools. There are 266 core knowledge preschools. Also, as of April 2006, the types of schools implementing the core knowledge curriculum are 44% public, 35% charter, 15% private, and 6% parochial. Geographically the schools implementing core knowledge are 39% urban, 39% suburban and 22% rural (Core Knowledge, 2007).

Based on this information, a school district in a large metropolitan area in north central Texas implemented the core knowledge curriculum at the elementary level beginning in 2001-2002. During the 2002-2003 year, the core knowledge curriculum was implemented at 1 junior high in the district. The district examined published research that indicated that a core knowledge curriculum helped to narrow the learning gaps of students in similar types of schools. Based upon this research, along with the implementation of the core knowledge curriculum at the elementary level, the district decided to extend the curriculum to the junior high level during the 2002-2003 school year.

Purpose and Methodology of the Study

The purpose of the study is to examine the impact of implementing the core knowledge curriculum at the junior high level as it relates to performance on the Texas assessment of knowledge and skills.

The mixed methodology includes six statistical measures and a qualitative questionnaire administered to school administrators and lead English teachers at both

the core knowledge curriculum junior high school and the traditional curriculum junior high school. First, to determine the impact of the core knowledge curriculum on achievement, statistical analyses will be conducted comparing achievement on the reading test as measured by the Texas assessment of knowledge and skills of those students who were taught core knowledge curriculum in the 7th and 8th grades as compared to those students taught a traditional curriculum in 7th and 8th grades.

Next, to determine the impact of the core knowledge curriculum on the achievement of advantaged students, statistical analyses will be conducted comparing achievement on the reading test as measured by the Texas assessment of knowledge and skills of those students who were taught core knowledge curriculum in the 7th and 8th grades compared to those students taught a traditional curriculum in the 7th and 8th grades. Third, to determine the impact of the core knowledge curriculum on the achievement of economically disadvantaged students, statistical analyses will be conducted comparing achievement on the reading test as measured by the Texas assessment of knowledge and skills of those students who were taught core knowledge curriculum in the 7th and 8th grade as compared to those students taught a traditional curriculum in 7th and 8th grade.

Fourth, to determine the impact of the core knowledge curriculum on the achievement gap for advantaged and disadvantaged students, statistical analyses will be conducted comparing the achievement on the reading test as measured by the Texas assessment of knowledge and skills of those students taught the core knowledge curriculum in the 7th and 8th grades when compared to the advantaged and disadvantaged students who were not taught the core knowledge curriculum in the 7th

and 8th grades. Next, to determine the impact of the core knowledge curriculum between genders, statistical analyses will be conducted comparing achievement by gender on the reading test as measured by the Texas assessment of knowledge and skills of those students who were taught core knowledge curriculum in the 7th and 8th grades as compared to those students taught a traditional curriculum in 7th and 8th grades. Sixth, to determine the impact of the core knowledge curriculum between ethnicities, statistical analyses will be conducted comparing achievement by ethnicity on the reading test as measured by the Texas assessment of knowledge and skills of those students who were taught core knowledge curriculum in 7th and 8th grades compared to those students taught a traditional curriculum in 7th and 8th grades.

Lastly, to qualitatively examine the impact of the core knowledge curriculum, a questionnaire will be administered asking for open-ended responses to questions regarding level of curriculum knowledge and curriculum implementation on both the core knowledge campus and the traditional curriculum campus.

Research Questions

The following questions will be examined in order to determine the impact of the core knowledge curriculum on reading test results of 7th and 8th graders.

Research Question 1: How do the achievement test scores of 8th graders taught the core knowledge curriculum in the seventh and 8th grade differ from comparable 7th and 8th grade students who were not taught the core knowledge curriculum in the 7th and 8th grades as measured by the reading test results of Texas assessment of knowledge and skills?

Research Question 2: How do the achievement test scores of advantaged 8th grade students taught the core knowledge curriculum in 7th and 8th grades differ from comparable 8th grade students who were not taught the core knowledge curriculum in 7th and 8th grades as measured by the reading test results of the Texas assessment of knowledge and skills?

Research Question 3: How do the achievement test scores of disadvantaged 8th grade students taught the core knowledge curriculum in seventh and 8th grade differ from comparable 8th grade students who were not taught the core knowledge curriculum in 7th and 8th grade as measured by the reading test results of the Texas assessment of knowledge and skills?

Research Question 4: How does the achievement gap for advantaged and disadvantaged 8th grade students taught the core knowledge curriculum differ from comparable advantaged and disadvantaged students who were not taught the core knowledge curriculum as measured by the reading test results of the Texas assessment of knowledge and skills?

Research Question 5: Do the achievement test scores of different genders of 8th grade students taught the core knowledge curriculum differ from comparable genders of students who were not taught the core knowledge curriculum as measured by the reading test results of the Texas assessment of knowledge and skills?

Research Question 6: Do the achievement test scores of different ethnicities of 8th grade students taught the core knowledge curriculum differ from comparable ethnicities of 8th grade students who were not taught the core knowledge curriculum as measured by the reading test results of the Texas assessment of knowledge and skills?

Research Question 7: What qualitative information does the questionnaire reveal about the impact of the core knowledge curriculum compared to the traditional curriculum?

Research Hypotheses

Hypothesis 1: There is a statistically significant difference in the reading achievement of 8th grade students when immersed in a core knowledge curriculum in 7th and 8th grade compared to 8th grade students not taught the core knowledge curriculum in 7th and 8th grade.

Hypothesis 2: There is a statistically significant difference in the reading achievement of advantaged 8th grade students when immersed in core knowledge curriculum in 7th and 8th grade compared to advantaged 8th grade students who were not taught the core knowledge curriculum in 7th and 8th grade.

Hypothesis 3: There is a statistically significant difference in the reading achievement of disadvantaged 8th grade students when immersed in a core knowledge curriculum in 7th and 8th grade compared to disadvantaged 8th grade students who were not taught the core knowledge curriculum in 7th and 8th grade.

Hypothesis 4: There is a statistically significant difference in the achievement gap for advantaged and disadvantaged students in 8th grade taught the core knowledge curriculum when compared to the advantaged and disadvantaged students who were not taught the core knowledge curriculum compared to the advantaged and disadvantaged students who were not taught the core knowledge curriculum in 7th and 8th grade.

Hypothesis 5: There is a statistically significant difference in the reading achievement of different genders in 8th grade taught the core knowledge curriculum when compared to the different genders not taught the core knowledge curriculum in 7th and 8th grade.

Hypothesis 6: There is a statistically significant difference in the reading achievement of different ethnicities in 8th grade taught the core knowledge curriculum when compared to the different ethnicities not taught the core knowledge curriculum in 7th and 8th grade.

Hypothesis 7: There is a significant difference in the knowledge of curriculum and level of implementation for 8th grade students taught the core knowledge curriculum when compared to those students not taught the core knowledge curriculum in 7th and 8th grade.

Definition of Terms

This section includes definitions of terms important to this study. These definitions represent this particular study and are presented to provide common understanding.

- Achievement- The act of performing as measured by the Texas assessment of knowledge and skills test.
- Achievement gap- The test score gap that exists between advantaged and disadvantaged students based upon performance on achievement tests.
- Advantaged students- Students who do not participate in the federal free or reduced price lunch program.

- Control school- School not implementing the core knowledge curriculum.
- Core knowledge curriculum- The core knowledge curriculum, according to Hirsch, states explicitly what each student should learn at each grade level and provides for a sequential and planned progression of knowledge in language arts, history, geography, mathematics, science, and fine arts.
- Cultural literacy- The notion that people must possess the basic information needed to communicate effectively through reading, writing and speaking (Hirsch, 1987).
- Disadvantaged students- Students who participate in the federal free or reduced price lunch program.
- Experimental school- School implementing the core knowledge curriculum.
- Free or reduced price lunch- A federally subsidized school lunch program based upon family income.
- Matthew effect- A term for a phenomenon that has been observed in research many times on how new readers acquire the skills to read. Early success in acquiring reading skills usually leads to later successes in reading as the learner grows. Failing to learn to read before the third or fourth year of schooling is predictive of life-long problems in learning new skills. Hence, the term the Matthew Effect: the rich get richer and the poor get poorer (Merton, 1968).
- Texas assessment of knowledge and skills- An achievement test designed to measure student achievement of students in grades 3-12 in the state of Texas.

The test is aligned with the state mandated curriculum as stipulated in the Texas Education Code, Chapter 28 (Texas Education Agency, 2003).

- Texas essential knowledge and skills- A required curriculum, as stipulated in the Texas Education Code, Chapter 28, that consists of foundation and enrichment subjects. Districts in Texas are required to provide instruction in the essential knowledge and skills of the appropriate grade levels in the foundation curriculum (Texas Education Agency, 2003).
- Traditional curriculum- Districts in Texas are required to provide instruction in the essential knowledge and skills of the appropriate grade levels (Texas Education Agency, 2003) as part of a planned school program.

Limitations of the Study

This section includes limitations important to this study. These limitations represent this particular study and are presented to provide additional understanding. First, this study will be conducted in two public junior high schools located in north central Texas in a large metropolitan area. Studies including a larger number of schools or schools in a different geographic location may show other results. Next, the study is limited to the reading achievement test of the Texas assessment of knowledge and skills test to determine student academic growth. Other types of achievement measures may show other results. Finally, the study is limited to the 7th grade students from the selected schools within 1 district. Studies focusing on additional or different grade levels may show other results.

Significance of the Study

With the advent of the No Child Left Behind legislation, school districts across the nation are being held to high stakes' accountability for students of all races and socioeconomic backgrounds. One of the strengths of the core knowledge curriculum is that it claims to close the achievement gap between advantaged and disadvantaged students (Core Knowledge Foundation, 2004). Thus far, there has been little research into the effect of the core knowledge curriculum on the achievement gap of 8th grade students. The importance of the study is to add to the research regarding the core knowledge curriculum on the achievement of 8th grade students versus students not taught the core knowledge curriculum.

Organization of the Study

Chapter 1 provided an overview of the purpose of the study, research questions, research hypotheses, importance and justification, research limitations, and definitions of terms. Chapter 2 explores the literature regarding core knowledge curriculum reform model. Chapter 2 is organized into the following sections: overview of school reform; socio economic background and achievement; history of the core knowledge reform model; critics and proponents of the core knowledge reform model; research regarding the core knowledge reform model; and the summary. Chapter 3 provides an overview of the research design, subjects, instrumentation, data collection methods, and data analysis procedures. Chapter 4 presents an analysis of the data gathered from the study. Chapter 5 summarizes the findings and recommendations for further research in the field.

CHAPTER 2

REVIEW OF SELECTED LITERATURE

Hirsch (2004) explains, “the achievement gap between advantaged and disadvantaged children is not only dishearteningly wide, but also grows bigger the longer students stay in school” (p. 1). The achievement gap has been a compelling factor in both the comprehensive school reform model and the core knowledge curriculum reform model.

This chapter examines selected literature regarding the comprehensive school reform model and the core knowledge curriculum reform model. The chapter is divided into the following sections: overview of school reform; socio economic background and achievement; history of core knowledge reform model; critics and proponents of the core knowledge reform model; research regarding the core knowledge reform model; and the summary.

Overview of School Reform

Since the 1970s, various school reform models have been developed and executed to varying degrees in schools across the country. These reforms have focused on a variety of including curricular, disciplinary, instructional and organizational. The reasons behind the genesis of each school reform model are as varied as the programs themselves. For example, in 1987, Professor Levin from Stanford University began accelerated schools, designed as a model that seeks to “transform whole school communities- especially those set apart by high poverty, low academic performance and remediation…by accelerated instruction and gifted and talented teaching strategies

traditionally reserved for only the top 5% of students" (Accelerated Schools, 2007). Also in 1987, the Southern Regional Education Board (2006) developed high schools that work, a program that seeks "to increase the achievement of all students with special emphasis on career-bound students by blending the content of traditional college prep studies with quality vocational and technical studies" (p. 1). School reform developers have ranged from university researchers, foundations, companies, private organizations, government, districts, individual schools, or a combination of the above (EdSource, 2002).

Regardless of the developer, all school reform models share in the common goal of seeking to improve education either school-wide or in a particular aspect. Further, even school-wide reform efforts have differed in the way they are presented. Some school-wide reforms have called for a rigid set of curriculum, materials, and instructional strategies while others advocate a philosophical change based on the individual school needs. For example, first things first, a model developed in 1996 by the Institute for Research and Reform in Education calls for the implementation of seven critical features of the program using three specific strategies (Institute for Research and Reform in Education, 2006). Another reform model, the coalition of essential schools, begun in 1984 by Sizer, calls for personalized instruction to address individual needs and interests, yet leaving the degree to which schools engage dependant on the school needs and resources (Essential Schools, 2006 a).

Other factors can also have an impact on the success or failure of school reform efforts. Research suggests that high quality implementation is 1 of the greatest determinants of success with school reform efforts (Cooper, Slavin & Madden, 1998).

In order to determine whether or not a reform effort has been implemented effectively, 1 must understand the factors that affect the process. Such factors can include socio-cultural and within-school factors. Most reform efforts during the 1970s and 1980s focused on inputs and implementation of the reform efforts. While this focus is still considered an important piece of evaluation of a program, the recent trend has seen a shift to more attention placed on outcomes, such as test scores (EdSource, 2002). An example of such an outcome-based reform model is the 1993 program, success for all, developed by Slavin and Madden from Johns Hopkins University. This model seeks to ensure that all children acquire basic skills and problem solving and critical thinking skills by using a specific curriculum for reading and math at the elementary level (Success For All, 2006).

The trend of looking at outcomes of reform efforts was solidified in the mid 1990s. "Today receipt of federal funding, such as Title 1, is now contingent upon schools teaching to state academic standards and measuring student achievement against those standards with statewide, standardized achievement tests" (EdSource 2002, p. 4).

The comprehensive school reform demonstration program began in 1998 with the goal of "raising student achievement by helping public schools across the country to implement successful, entire-school reform programs that are grounded in scientifically based research" (EdGov, 2005). It was part of the FY1998 Labor-HHS-Education Appropriations Act sponsored by Congressmen Obey and Porter. It "provides funding to help schools adopt effective, research-based comprehensive school reform models that will help all students reach high standards" (NWREL 2006, p. 1). In 2002 the

comprehensive school reform program was signed into law as part of the Elementary and Secondary Education Act. The comprehensive school reform program has become an important part of the No Child Left Behind Act. As such, Congress has supported the comprehensive school reform program by appropriating $308 million to schools in fiscal year 2003 (EdGov, 2005).

A growing number of schools have received grants through the comprehensive school reform program since 1998. The number of schools receiving grants has grown from 1800 schools in 1998 to over 3000 from the 2001 and 2002 allotment (EdGov, 2005). Participants include schools from all 50 states, the District of Columbia, Puerto Rico and schools funded by the Bureau of Indian Affairs. In order to qualify for such funding, schools must integrate 11 components required by the legislation. These 11 components include:

- Employs proven methods and strategies based on scientifically based research
- Integrates a comprehensive design with aligned components
- Provides ongoing, high-quality professional development for teachers and staff
- Includes measurable goals and benchmarks for student achievement
- Is supported within the school by teachers, administrators and staff
- Provides support for teachers, administrators and staff
- Provides for meaningful parent and community involvement in planning, implementing and evaluating school improvement activities
- Uses high-quality external technical support and assistance from an external partner with experience and expertise in school-wide reform and improvement
- Plans for the evaluation of strategies for the implementation of school reforms and for student results achieved, annually
- Identifies resources to support and sustain the school's comprehensive reform effort

- Has been found to significantly improve the academic achievement of students or demonstrates strong evidence that it will improve the academic achievement of students (EdSource, 2002, p. 4)

In addition to meeting these components, the comprehensive reform program focuses on selecting schools that adopt comprehensive reforms rather than additive or piecemeal reform programs. The program does not require adoption of a specific program. Schools that indicate a readiness to adopt a comprehensive reform to help students reach high standards are considered. There are a wide variety of scientifically based whole-school reform models available to schools. Some of the better-known programs include *success for all*, *coalition of essential schools*, *high schools that work*, and *core knowledge*.

Success for all is a well-established entire school reform model. Robert Slavin, Nancy Madden and a team of developers at Johns Hopkins University established the reform model in 1993. The goal of the program is to ensure that all children learn to read, acquire basic skills in other subject areas, and build problem solving and critical thinking skills (successforall.net 2006). Currently, 1800 schools use the *success for all* reading model with an additional 200 that have added the math, science, and/or social studies components. Features of the program include research-based curricula for students in reading, writing, and language arts; one-to-one tutoring for primary grade students struggling in reading and extensive family support services (successforall.net 2006). Extensive research and evaluation on this program have been promising. Studies have shown statistically significant positive results for program students compared to control students (successforall.net 2006).

Theodore Sizer of Brown University founded the coalition for essential schools in 1985. Presently, over 1000 elementary and secondary schools use coalition for essential schools. The mission of the program is “to create and sustain equitable, intellectually vibrant, personalized schools and to make such schools the norm of American public education” (Essential Schools, 2005). This program espouses 10 common principles and follows the philosophy that each individual school determines how best to implement the principles. The main features of the program include personalized instruction to address individual needs and interests, multiple assessments based on performance of authentic tasks, the achievement of equitable outcomes for students, democratic governance practices, and close partnerships with the school’s community. Research results on the coalition of essential schools program have been positive, albeit not extensive. Coalition of essential schools analyses of results from research conducted by the Center for Collaborative Education in 2002 found that consistently higher passing rates for coalition of essential schools compared to 16 other public schools with similar demographics (Essential Schools, b, 2006).

A third widely used reform model is *high schools that work*. Developed in 1987 by the Southern Regional Education Board, this program seeks to “prepare general education students for their careers, both by raising their academic achievement and by providing them with real-life opportunities to problem-solve and produce products” (Southern Regional Education Board, 2005, p. 1). It is currently used in over 1000 schools in 31 states. Major goals of the program include raising student achievement to at least the national average in mathematics, science, communication, problem-solving, and technical concepts and skills, providing all students with a traditional college-

preparatory curriculum and high-quality vocational and technical studies; and supporting state and local policies and initiatives for sustaining continuous school-improvement (Southern Regional Education Board, 2005).

Finally, the Core Knowledge Foundation, a non-profit organization founded in 1986 by E.D. Hirsch, Jr. is a part of over 1000 schools across the country. It is based upon the philosophy that "all children, for the sake of academic excellence, greater fairness, and higher literacy must develop strong educational foundations in core academic subjects" (Core Knowledge, 2005). To achieve such a goal, the Core Knowledge Foundation has developed a curriculum guide and accompanying instructional materials for each grade level, kindergarten through 8th grade in language arts, history, geography, visual arts, music, math, and science (Core Knowledge, 2005). Results from the core knowledge program have been encouraging. A 3 year study from 1995-1998 conducted by Stringfield, Datnow, Borman & Rachumba at Johns Hopkins University compared student achievement at 4 core knowledge schools and 4 control schools. The research found that at schools where more than 50% of the teachers were implementing the core knowledge sequence, the performance of the core knowledge students was higher than that of the control students in math, reading and mathematics (National Evaluation of Core Knowledge Sequencing Implementations: Final Report, 1999). School reform today takes many different forms throughout the country but usually involves programs that are school-wide rather than piece meal. The availability of federal funds through the comprehensive school reform program, which has become an important part of the No Child Left Behind Act, has encouraged schools to seek out the best school-wide programs for their needs.

In 2002, researchers from the Center for Research on the Education of Students Placed at Risk conducted a meta-analysis on comprehensive schools' reform and student achievement. In the study, the researchers studied the specific effects of 29 of the most widely implemented comprehensive reform models. The researchers concluded that, "schools that implemented a comprehensive school reform model for five years or more showed particularly strong effects, but the models benefited equally schools of higher and lower poverty levels" (Borman, Hewes, Overman, & Brown, 2002). The meta-analysis also organized the 29 reform models into the following categories: strongest evidence of effectiveness, highly promising evidence of effectiveness, promising evidence of effectiveness, and greatest need for additional research. The core knowledge reform model fell into the category of greatest need for additional research (Borman, et. al., 2002).

Socio-Economic Background and Academic Achievement

In 1966, Johns Hopkins sociologist James Coleman published a report called *Equality of Educational Opportunity*. Some educators would consider this the most important education study of the 20th century (Kiviat, 2000). The US Office of Education in accordance with the Civil Rights Act of 1964 commissioned the report. It involved 600,000 children in 4,000 schools nationally. The research found that academic achievement was "less related to the quality of a student's school, and more related to the social composition of the school, the student's sense of control of his environment and future, the verbal skills of teachers, and the student's family background" (Coleman Report 1966). The media focused on another prediction of the

report: That black children who attended integrated schools would have higher test scores if a majority of their classmates were white. Proponents of busing focused on this finding in order to help further the goal of achieving racial balance in public schools.

The finding that peer effects were more important in determining achievement than school resources opened up the debate on how class sizes affect achievement. A 1999 study found that the effect of class size was negligible, as Catholic schools have larger classes and better performance. Furthermore, it found that to the extent that class size matters, it is more important for disadvantaged children (Lazear, 1999).

The 1966, educational researchers summarized the Coleman report to mean "it doesn't matter what schools do, if children are poor, they will not learn" (Payne 2003, p. 1). This conclusion sparked additional research and the formation of effective schools research by Lezotte and Edmunds in 1979. This research identified specific characteristics of effective schools and found that effective schools were ones in which there was equity and excellence. Equity was defined as the level of achievement being the same regardless of whether the child was minority or of a low socio-economic status. Excellence was defined as all students above the norm (Edmunds, 1979).

The relationship between socio-economic background and academic achievement continues to be debated. Several recent studies have shown a lag in achievement levels of low-income and minority youth over the preschool period (Karweit, Ricciuti, & Thompson, 1994). A study of Baltimore's public schools found the same result. Lower socioeconomic status children test well below the level of higher socioeconomic children at the start of first grade (Entwisle, Alexander, & Olson, 1997). A RAND Corporation study furthered this notion. In a 2004 article, RAND research

found that the most important factors associated with the educational achievement of children is not race, ethnicity, or immigrant status. Instead, the most critical factor appeared to be socioeconomic, including parent education levels, parental occupation status, neighborhood poverty and family income (Lara-Cinisomo, Pebley, Vaiana, Maggio, Berends & Lucas, 2004). This same study reached similar conclusions in evaluating both early childhood and high school samples. The RAND findings suggest that, when it comes to educational policies, less focus be placed on racial and ethnic factors, and more on socioeconomic factors (Lara-Cinisomo et al., 2004).

"School readiness" is a term used to describe children who have acquired the social, mental, and physical skills that prepare them for classroom learning before they start school. This term is often used in connection with explaining the achievement gap as it relates to socio-economic factors. A multitude of programs have proven successful in promoting school readiness including Head Start and public library reading programs (Lara-Cinisomo et al., 2004). Home factors that have shown to affect school readiness include the availability of children's books at home, time spent reading to children, visits to the library, and the amount of television children watch. The RAND corporation research found that children who are regularly read to and regularly visit the library have significantly higher reading and math scores, regardless of the socioeconomic background of the family or the degree of poverty of the neighborhood.

While much of the focus of educational reform has been on school-wide reform programs, some have suggested that more attention be paid to factors outside of school. In 1998, Gallagher wrote: "We need to face the unpleasant reality that education, by itself, is a weak treatment. It is clear that there are variables within the

family, within the culture, and within the physical environment, plus limitations within the genetic makeup of the individual, which will have a greater influence on student achievement than our 'improved educational program' for that student'" (p. 1).

The issue of poverty and the effect on educational growth has revealed interesting outcomes. In 1990, Orland reported in his study, *Demographics of Disadvantage*, that "the longer a child is in poverty, the more deleterious the effect on his or her educational growth. Furthermore, the concentration of poverty within a school can be shown to be harmful to all students in that school whether or not an individual student comes from a poor background" (p. 43).

Another approach in the discussion of the effects of poverty on academic achievement focuses on the social capital theory. The term social capital originates from a 1988 article by Coleman who argued that strong families and social networks improve children's performance in the classroom (Maeroff, 1999). Those students who gain social capital outside of school outperform those students who have little or no exposure to social capital outside of the school day. Furthering this idea, Maeroff stated that poor children are often lacking in four types of social capital:

- Sense of academic initiative
- Sense of knowing
- Sense of connectedness
- Sense of well-being (Maeroff, 1998)

Maeroff (1998) described connectedness as a part of the support system that most students need to succeed in education. He said, "Of all the riches denied to

disadvantaged children, perhaps the most important is a network that would allow them to thrive in schools and give them a sense of belonging" (p. 418).

In conclusion, although research overwhelmingly supports a correlation between the socio-economic level of students and academic achievement, there is also research showing that schools can and do make a difference in student achievement. Comprehensive school wide reform programs have shown to bridge the achievement gap. The question of how to help increase the social capital and school readiness of students before they begin school and throughout their educational careers remains much more perplexing.

History of the Core Knowledge Reform Model

The core knowledge movement began in 1987 with the publication of E.D. Hirsch's *Cultural Literacy* and was furthered with the 1996 book *The Schools we need and why We don't have them*. Both books called for a focus on a basic set of shared knowledge that Hirsch believes necessary to thrive in the modern world. Hirsch is careful not to narrowly define culture as it related to just a particular art or specific social class. Instead, he believes that cultural literacy "constitutes the only reliable way of combating the social determinism that now condemns them to remain in the same social and educational condition as their parents" (Hirsch, 1987 Preface). Further, Hirsch believes that focusing on a curriculum based upon core knowledge can break the cycle of poverty and illiteracy. However, in order to do so, schools and teachers must be willing to abandon many of the educational theories that were predominant over the last half century. Hirsch discusses the theories of Rousseau and Dewey, which

espoused education as a process of natural development. Hirsch dismissed these theories as placing too much faith in children's abilities to learn general skills from a few typical experiences. Instead, Hirsch (1987) states that, "only by piling up specific, communally shared information can children learn to participate in complex cooperative activities with other members of their community" (p. xv). To aid the reader, *Cultural Literacy* offers an appendix in which the author believes should serve as a descriptive list of the information actually possessed by literate Americans rather than a prescriptive list of books that every child should read. A culturally literate person should know about each book, while not necessarily having read each book.

Apart from the ideas of Rousseau and Dewey, Hirsch discusses the educational ideas of Plato who believed that specific content transferred to students through the educational system was by far the most important element of education. To some, this idea of content specificity might be embraced by the concept of core knowledge. However, Hirsch (1987) views this method as too restrictive. He states, "History, not superior wisdom, show us that neither the content-neutral curriculum of Rousseau and Dewey nor the narrowly specified curriculum of Plato is adequate to the needs of a modern nation (xvi).

The challenge of *Cultural Literacy* is to leave behind the content neutral ideas of Rousseau and Dewy and focus on content over skills. Hirsch (1987) says cultural literacy is the "background information, stored in their minds, that enables them to take up a newspaper and read it with an adequate level of comprehension, getting the point, grasping the implications, relating what they read to the unstated context which alone gives meaning to what they read" (p. xiii). Literacy involves more than the skills

necessary to read a book or newspaper. It involves understanding the context of what is read. To truly understand the words that one reads, it is necessary to know background information that isn't on the page. The mentality that one can always look up factual knowledge and that education should focus exclusively on skills is a dangerous one according to Hirsch. In a 2000 article, Hirsch explains that the consensus in cognitive psychology is that it takes knowledge to gain knowledge. To focus on content neutral curriculum based upon gaining skills at the expense of specific knowledge is folly. Hirsch believes that de-emphasizing factual knowledge actually disables children from looking things up effectively (Hirsch, 2000). Possessing background knowledge about a subject allows the reader to understand the new content more quickly and understand more content than the reader who has little or no background knowledge.

Another focus of the core knowledge curriculum concerns vocabulary. Hirsch's goal of narrowing the achievement gap between social class and ethnic and racial groups is addressed in the core knowledge approach to vocabulary. He believes the biggest academic gap between groups in the early years, which continues to grow, is the vocabulary gap (Hirsch 2000). In the 1995 book, *Meaningful Differences,* the authors stated that enormous vocabulary differences develop between children before they reach kindergarten and, in the absence of compensatory school, the initial disadvantage will grow because the low vocabulary child will learn less than the high vocabulary child when exposed to the same lessons (Hart, Risley, 1995). Hirsch expounds on the vocabulary gap with what he calls intellectual capital in his book, *The Schools we need and why we don't have them.* The more one knows, the more readily

one learns something new. Experts in a subject can learn new things in their domain faster than novices can, though, when novices and experts are equally ignorant about an unfamiliar subject, their rates of learning equalize (Hirsch, 1996). Thus, the more intellectual capital one possesses, i.e., factual knowledge, the easier it becomes to learn new material. Hirsch also discusses two advantages in possessing relevant background knowledge. First, there are fewer new things to be learned. By having to learn fewer things, the reader who possesses intellectual capital on the subject frees the mind to more quickly grasp new concepts without having to fixate on the basic information presented. Second, the broader the base of relevant knowledge, the greater the number of potential analogies or categories available for assimilating new information. Marzano (2003) furthers this idea of vocabulary development by discussing the potential positives and negatives of wide reading versus direct vocabulary instruction. He concludes that a combination of both strategies is likely the best approach. In sum, Marzano states that the research "paints a fairly clear picture of what a comprehensive program of vocabulary development might look like" (p.140). This includes ideas such as having students involved in wide reading about subject matter content of their choice. Also, students should receive direct instruction on words and phrases that are critical to their understanding of academic content (p. 140).

The idea that a core knowledge curriculum can help close the achievement gap between socioeconomic groups is furthered in the 1996 book, *The Schools we need.* Here, Hirsch gives a historical perspective of the effect of what he refers to as the "anti-subject-matter" theories of the 1920s and 1930s (Hirsch, 1996). He believes that these theories took a strong hold in schools in the 1960s that resulted in startling achievement

gaps. Between 1942 and 1966 public schools had begun to close the economic gap between races and social classes. However, after this period verbal SAT scores began a steep decline while the black-white wage gap, which had continually narrowed for 24 years, abruptly halted (Hirsch, 1996).

Another reason for implementing a core knowledge curriculum is evidenced in the poor performance of students in the United States compared to students in other countries. For example, educators in France, Germany, Taiwan and Japan teach students a specific core curriculum from 1 grade level to the next. While providing continuity of knowledge from one grade level to the next, these countries consistently score higher than American schoolchildren on international tests (Hirsch, 1996).

In response to his concerns regarding the fragmented and disjointed curriculum that he believed common throughout the country, Hirsch began the Core Knowledge Foundation, an independent, non-profit, non-partisan organization, in which the stated goal is to be dedicated to excellence and fairness in early education, in 1986 (Core Knowledge Foundation, 2005). The foundation works to further Hirsch's belief that, for the sake of academic excellence, greater fairness and higher literacy, early schooling should provide a solid, specific, shared core curriculum in order to help children establish strong foundations of knowledge (Core Knowledge Foundation, 2005).

The core knowledge curriculum is designed to provide an organized approach to presenting specific knowledge in language arts, history, geography, math, science and fine arts. By reducing educational gaps and redundancy in content, the curriculum seeks to build on knowledge from one year to the next from pre-kindergarten through 8th grade. The knowledge and skills learned each year become the students'

foundation for learning in subsequent years (Hirsch, 1996). The curriculum is not meant to completely supplant an established curriculum, but instead to complement a skills-based curriculum by providing carefully sequenced and challenging knowledge. The core knowledge curriculum is meant to comprise approximately half of a school's curriculum, thus leaving ample freedom for local requirements and variations (Core Knowledge Foundation, 2005).

The foundation does not have specified books or materials that must be used by schools that adopt the core knowledge curriculum. Even so, it does offer a wide variety of books meant to supplement the program. Titles such as *Core Knowledge Sequence for K-8 Schools, Core Knowledge Teacher Handbook,* and the Core Knowledge Grader Series of *What your [K-6] Grader needs to know* are available from the foundation website or widely in bookstores (Core Knowledge Foundation, 2005).

In the 2004 annual report, the Core Knowledge Foundation reported that it had 486 schools committed to implement the K-8 sequence and over 1000 classrooms using the core knowledge preschool sequence. This growth has exceeded the foundation projections by 40% (Core Knowledge Foundation, 2005). The year 2004 also saw two major research studies exhibiting positive results for schools implementing a core knowledge curriculum. The first study was conducted over a six-year period and demonstrated scores significantly higher for core knowledge students on national tests in six content areas, regardless of the sizes and the ethnic and economic profiles of those schools (Walberg, Meyer, 2004). The second study found that after the third grade, core knowledge students compared favorably to other students on statewide tests in reading and math (Walberg, Meyer, 2004).

In March of 2006, Dr. Hirsch's new book, titled *The Knowledge Deficit,* was published. The book focuses on why students are failing to make adequate yearly progress under the No Child Left Behind Act and how the problems can be corrected. Hirsch focuses on how schools can overcome the achievement gap that leaves poor students, who are disproportionately black and Hispanic, behind.

Critics and Proponents of Core Knowledge

It is hardly surprising that the 1987 publication of Hirsch's book, *Cultural Literacy: What every American needs to know,* was followed immediately by opposing views to the premises espoused by Hirsch. Perhaps most controversial was the inclusion of an appendix listing specific terms, dates, and people. Hirsch states that the list is provisional with the intention of illustrating the character and range of knowledge literate Americans tend to share. He also notes that over 100 consultants noted agreement on over 90% of the items included (Hirsch, 1987). The notion that a broad background of knowledge is crucial to reading achievement is furthered in the 1996 publication of *The Schools we need and why we don't have them.* Here, Hirsch, (1996) states, "if shared knowledge is needed among citizens to understand newspapers as well as one another, then by the same reasoning, shared knowledge is also needed among class members to understand the teacher and one another" (p. 14). The problem, he continues, is that students educated in a system focusing on skills rather than content, results in students who can decode words in a passage, but struggle to comprehend the contextual meaning because of limited background knowledge of the subject.

Andre (1988) discusses her concerns about the ideas promulgated in *Cultural Literacy.* She states, "Real literacy—the kind of literacy that enables people to participate fully in society—will not be achieved by treating children as mere receptacles for facts, but requires that children be encouraged to participate in the learning process and encouraged to develop their own capacities for critical and creative thinking" (p. 3). Andre likens Hirsch's ideas to simply filling up an empty vessel with facts and figures, apart from any context and experiences that might help them place the facts within the limited context of their own lives. Andre continues that Hirsch's attempt to fit everyone into a single culture is not the answer to solving the problems of academic achievement. She suggests schools strive to reflect the dynamic, pluralistic culture of today's society. Instead of trying to lead today's students to passively accept today's culture, education should empower students to change and advance society. Andre concludes that Hirsch's ideas may be applying a deceptively easy and morally dangerous fix to serious problems in American education.

Other concerns over the core knowledge curriculum have focused on the perceived elitist or Euro-centric concentration of information. Stuart (1994) cites the problem of "incomplete or overly focused on memorizing isolated facts and figures at the expense of analysis and context" (p. 3). She states that some educators argue that rather than focusing on grade-by-grade specifics, educators should focus on helping students develop research and problem-solving skills and the ability to think critically. Further, she discusses her concerns that a little knowledge can be a dangerous thing. If students do not study anything in depth, their knowledge will be ornamental and will have little to do with the substance of their lives.

In a 1999 article in *Rethinking Schools,* Walter Feinberg is critical of what he perceives as assumptions made by E.D. Hirsch with respect to his core knowledge curriculum. First, he discusses Hirsch's focus of the influence of the progressive teaching of Dewey on today's classroom teachers. Feinberg believes that Hirsch lends too much credence to what is being taught by many professors in today's schools of education. Feinberg (1999) believes that the reality of the public education is much different that Hirsch's perception of "Deweyesque laboratory school where children or their teachers do whatever they want, whenever they want" (p. 2). Next, Feinberg attacks Hirsch's belief that the progressive movement in education has been largely successful in wiping out rote memory in favor of skills based teaching in today's classrooms. He states that some studies have shown that rote memory is more common in schools with large numbers of poor and minority children. If true, this means that Hirsch's belief that core knowledge will benefit poor and minority students the most could be wrong at its very core. That is, that Hirsch would misunderstand the cause of classroom failure in the first place. Further, the author is critical of Hirsch's neglect of the multiple influences on teachers. He explains that Hirsch failed to survey classroom teachers to find out what their classrooms are actually like in practice and implies that there may be less project method teaching and more standardized testing than Hirsch realizes.

Another area of criticism for Feinberg deals with Hirsch's beliefs regarding economic equality. He believes Hirsch is too simplistic in equating greater economic equality with improved schooling. Moreover, he finds fault in Hirsch's link between international achievement and national economic performance. As evidence, he states

that while Hirsch is quick to point out America's dismal performance on international tests, the United States' economy compares favorably to many of the nations that have students who perform at a higher level that American students.

Finally, Feinberg's most pointed criticism of Hirsch deals with what Feinberg refers to as his inadequate understanding of the character of education. He articulates that Hirsch's ideas of meaning are that the ways in which meaning is learned is incidental, as is the role of the teacher. He sees Hirsch's books as embellishments that tell us why children do not share enough meaning with adults and how to get them to do so. Feinberg defines Hirsch's philosophy as a transmission view of meaning: "teachers hold meaning in their heads and their job is to transmit it in the most efficient way to the heads of students" (p. 4). In this view, "whole class instruction, telling, and rote memorization are the most effective means and standardized tests are the most effective means for accomplishing this goal" (p. 4). Feinberg advocates a transactional view of teaching meaning. Transactional teaching takes meaning as a social activity that involves reading, listening, talking, and writing. Feinberg suggests that meaning is not presented as a one-sided fact but rather possessing a crystallized and fluid quality.

A transactional approach to education views the role of schools as refining the process of meaning through interactions with others. Meanings may change over time since they are connected to experiences of the individual (Feinberg, 1999).

Eberstadt (1999) discusses the opposing perspective of Hirsch and Howard Gardner's progressive multiple intelligences. Gardner describes Hirsch's work as "a view of learning that is at best superficial and at worst anti-intellectual" (Eberstadt, 1999, p. 8). Gardner continues his argument against core knowledge by arguing that changes

in the world today are so rapid and decisive that it is not possible for schools to remain as they are. He focuses on child-centered education rather than subject-centered.

Takaki (1999) makes a similar criticism of Hirsch's core knowledge curriculum. He agrees with Hirsch in that there is certain information that every American should know. The problem, according to Takaki, lies in what content should be at the core and who should decide on the content. He states that more educators should come together and decide on content rather than leaving it up to bureaucrats. Takaki echoes Feinberg in his belief that knowledge should be vibrant and fluid rather than rigid and set.

In a 2002 article in *Epidemiology,* Kaufman discusses the perceived problems with the list included in Hirsch's 1987 book, *Cultural Literacy.* For example, he acknowledges that Hirsch justified his list by stating that more than one hundred consultants reported agreement on over 90 % of the items listed. However, Hirsch never explains how the agreement was ascertained. Did each consultant generate a list independently or were they given a list of items from which to choose? Further, Kaufman states that Hirsch never explains how the consultants were chosen. The list is referred to as the disease for which it claims to be the cure in that its arbitrariness only demonstrates the futility of trying to do what Hirsch wants to do. Examples of such arbitrary choices are the inclusion of leading businessmen such as Rockefeller while excluding counterpart labor leaders such as Gompers or Hoffa. Additional observations claim that Hirsch avoided the nonwhite by including Stuttgart and Hamburg while excluding Mexico City.

Hirsch's ideas also have a large number of proponents. Among these supporters are those who have utilized the core knowledge curriculum with positive results. Vail (1997) wrote that one of the first schools in the country that tried the core knowledge curriculum did so out of a desire to improve upon a deficit of specific factual knowledge. Crooksville Elementary School in Crooksville, Ohio was similar to many towns across the country in that it was experiencing a growing number of economically disadvantaged students. When the superintendent, a music buff, realized that many of the students in the district had never heard of Tchaikovsky, Verdi, or Frank Sinatra, he realized that there was an intellectual deficit present in the district. The district implemented the curriculum with some initial trepidation from the classroom teachers. After learning about the freedoms that it gave them with respect to delivery of content, the teacher embraced the curriculum. Teachers at Crooksville Elementary School acknowledge that their version of core knowledge is not just drill-and-kill memorization of dates and people. They refute the critics that say that young children cannot learn sophisticated concepts.

Finn (1997) wrote, in reference to Hirsch's 1996 book, *The Schools we need*, that it was "the most important education book" to date. He describes it as a "superb explication and analysis of the misguided ideas and ill-founded research that dominate U.S. education" (p. 8). Finn continues by explaining that the romantic progressivism that Hirsch believes is to blame for the malaise in public education is not supported by serious research or evaluation despite the fact that it seems to be deeply ingrained in the philosophy and ideology of the education profession.

Duff (1999) also discussed the failures of the progressive movement in education as well as the alternative choices including Hirsch's core knowledge. Duff discusses the popular jargon in education today such as "the guide on the side, not the sage on the stage." She states that the promises of a more humane system of education whereby schools would better address the individual needs of children have been largely unfulfilled. She also states that the progressive argument that children learn best when they can experiment and express themselves creatively is faulty. Also faulty is the assumption that reading, writing, and doing math happened in the same natural experiential way that all other skills developed. Duff stated that these skills are not natural skills and therefore need to be taught in a systematic manner by a sage on the stage. Additionally, the progressive ideas that students should learn at their own pace gave some teachers latitude to give up on disadvantaged students. If a student fell behind academically, rather than remediating the subject, the teacher could more easily dismiss the subject as being developmentally inappropriate. Thus, the students who were in the greatest need of intellectual capital were also the ones presented with the least content specific materials. Finally, Duff focuses on the progressive education movement's emphasis on teacher intellectual freedoms in the classroom. She states that the students with good teachers learned the knowledge they needed while those not blessed with a good teacher do not.

Research Regarding the Core Knowledge Curriculum

Stringfield, Datnow, Borman and Rachuba (1999) conducted a 3 year study of core knowledge schools. The study was commissioned in 1995 to learn the effects of

using the core knowledge sequence in a variety of school contexts and to determine the conditions under which core knowledge is likely to achieve reasonably full implementation. The study followed 6 new core knowledge schools and 6 schools regarded as advanced implementers of the program. All 12 schools were matched with demographically similar schools in their own districts that served as control schools. Schools in 7 states were used in the study including Colorado, Florida, Ohio, Maryland, Tennessee, Texas and Washington. About half of the schools studied served a majority population of students eligible for the federal free lunch program.

At the conclusion of the 3 year study the researchers concluded that although 12 study schools claimed to be using core knowledge, ten schools were doing so at a moderate or high level of implementation. The methods of determining levels of implementation included a 2 person team that visited each school 5 times over the 3 year study for 2 to 3 days with each visit. Specifically, each team recorded notes of classroom activities. In addition, each team used an instrument called the classroom observation measure. The teams also surveyed teachers for the 1st 2 years of the study regarding general questions on core knowledge and whether teachers intended to teach particular core knowledge topics during the school year. Finally, the teams examined the differences in achievement gains between the experimental (Core Knowledge schools) and the control schools (those not implementing core knowledge curriculum).

The research found that the degree to which core knowledge was implemented was a significant predictor of student achievement gain. The researchers concluded that a high degree of implementation required leadership from the principal, teachers' willingness, and district support. The researchers reported 3 qualitative outcomes for

students participating in the core knowledge curriculum. They found it provided a broad base of knowledge and a rich vocabulary while motivating students to learn and create a strong desire to learn more. Finally, they found it promoted the knowledge necessary for higher learning. School qualitative outcomes included: providing an academic focus and encouraging consistency in instruction, providing a plan for coherent, sequential learning from grade to grade, and promoting a community of learners. The quantitative research data were based upon student's performance on the California test of basic skills. This test is a norm-referenced test

The quantitative outcomes observed by the researchers were promising for proponents of the core knowledge curriculum. First, 10 of 12 core knowledge schools obtained measures of student engagement in the highly effective range. Next, the 2 schools with the highest mean student engagement ratings were the 2 that were determined to be highly implementing the curriculum, while the 2 lowest engagement ratings were those determined to have the lowest level of implementation. Next, the data indicated that in the more highly implementing schools, teachers were able to sustain student interest. This data suggests that students find core content stimulating and would contradict any assertion that students are not motivated in schools that implement core knowledge with fidelity.

Additionally, the research indicated that the growth of general knowledge base showed cumulative effects. Also, implementation of the core knowledge curriculum at the 3rd through 5th grade level showed a profound influence on students reading and math tests. There was a positive correlation between the percent of classrooms implementing core knowledge and the achievement level of students in math and

reading at grades 1 through 5. Finally, the report concluded that the core knowledge implementation produced clarity of goals, less repetition in the curriculum and more content rich instruction for students (Wahlberg & Meyer, 2004).

In 2001, Johnson, Janisch, and Fleming conducted a qualitative study to examine the effect of core knowledge content on the curriculum development work of teachers at an elementary school in Texas. The school was located in a highly impoverished neighborhood with approximately 95 % of students receiving free or reduced-price lunch. Of the students, 65% of the students were Hispanic, and 25% were African American. Johnson et al. (2001) reported that the study involved 31 teachers in the same large urban district in Texas. The teachers participated in a 2 year program called CLICK (Connecting Literacy with Content Knowledge). The purpose of the project was to connect literacy to core knowledge. Although the teachers represented 6 different elementary schools in the district, the data for the study came from only 1 of the schools. The teachers were divided into 2 groups. Primary level teachers focused on the implementation of the early literacy framework while the intermediate level teachers studied current literacy and devised literacy practice appropriate for their students. All teachers worked collaboratively with colleagues and university professors and created instructional units that combined literacy strategies and core knowledge content (Johnson, et al., 2001).

The researchers examined 3 different questions: (1) did the prescriptive nature of the Hirsch core knowledge stifle and constrain teacher planning? (2) How did teachers make connections between their study of literacy development theory and their creation of units for the Hirsch curriculum in instructional planning? (3) How did the children learn

and respond to the Hirsch units (Johnson et al., 2001)? The research found the typical teacher curriculum planning was unproblematic and self-evident. Since teachers had choices of what to teach within the mandated curriculum and how to deliver the instruction, there was no evidence of teacher planning being stifling or constraining. Further, the teachers reported that most students became engaged in the challenging topics and showed pride in their work. Teachers also reported that the content served to scaffold the literacy development of the students. Finally, research found that as teachers devised instructional strategies based on currently literacy theory to teach core knowledge content, they found the process to be a rich professional experience (Johnson, et al., 2001).

In Baltimore, Federal Hill Preparatory School reported positive academic achievement since implementing both Core Knowledge and Direct Instruction. The elementary school serves 311 students, of which 68% are low-income, and 77% are non-white. In a two-year span from 2003-2005, the percentage of students scoring proficient or advanced on the state reading achievement test went from 45% to 78%. The Maryland state reading achievement test is a norm-referenced test. The school's principal attributes the success to the combination of direct instruction and core knowledge, which allowed the school to offer both a scientifically based reading program and a curriculum rich in content across all core subjects (Core Knowledge, 2005).

Another elementary school, Nathaniel Hawthorne Academy in San Antonio, Texas has seen positive academic gains following the implementation of the core knowledge curriculum. Hawthorne Academy was the 3rd school in the nation to

implement the curriculum beginning in 1992. The school serves 500 students who are 100% low income and 92% non-white. In 2004, scores on the Texas assessment of knowledge and skills results far surpassed the district and state averages. The Texas assessment of knowledge and skills test is a criterion-referenced test. The school had an 80% overall passing rate compared with 53% district wide and 68% state wide. Also, the school's 7th grade Hispanic students closed the achievement gap with white 7th graders statewide. In fact, they surpassed the state average for white students by nearly 10%. The school attributes its success on never being satisfied with test results and spending time collaborating with other teachers for at least 90 minutes every week in a team setting.

In Kentucky, James Duff Elementary was rated a school in crisis by the state's accountability system as a result of the poor test scores in the late 1990s. The school serves 294 students who are 100% white and 100% low income. The poverty rate for Duff Elementary is twice the statewide rate and three times the national rate. After applying for and receiving a federal Comprehensive School Reform Demonstration grant, the school chose to implement the core knowledge curriculum several years ago. Since that time, the scores on statewide assessments have risen steadily. In 2004, scores in 4th grade reading and science and 5th grade math and social studies surpassed the state averages by wide margins. These standardized tests are norm-referenced. Teachers initially expressed anxiety about adequate classroom materials and the student's ability to handle the content. The school has seen professional collaboration increase as a result of the core knowledge curriculum. Finally, teachers reported that the rich curriculum of the core knowledge program has helped to make

students much more aware of the larger world outside of the small, rural community in which they live.

Additionally, a Colorado school serving grades kindergarten through 12 has witnessed positive results from implementing the core knowledge curriculum. The Sierra Grande School District in Blanca, Colorado serves 229 students in grades K-8, 77% low income and 69% non-white. Students attend school from 7:30 a.m. until 4:30 p.m. Monday through Thursday. This leaves Fridays available for professional development. This schedule allowed the school to achieve a high level of professional collaboration and curriculum alignment. Test scores have increased. In 2003-04 the percent of fifth graders scoring proficient or advanced in reading was near 85% while the average for schools with a similar percentage of low-income students was about 50%. The Colorado state standardized test is a norm-referenced test. In grades 3-6, the students scoring proficient or advanced in reading was just below the state average, despite having twice as many low-income students.

In 2004, Brading conducted a quantitative study to examine the effect of the core knowledge curriculum on the reading Texas assessment of knowledge and skills scores of elementary school students. The 1st group attended an elementary school that taught a traditional curriculum while the other group attended an elementary school that taught the core knowledge curriculum. The research revealed that no significant differences in the reading achievement scores as measured on the Texas assessment of knowledge and skills test. As noted before, the Texas assessment of knowledge and skills test is a criterion-referenced test.

A 2004 article in *Common Knowledge* examined the results of a longitudinal study of various test results of students in core knowledge schools with students in another non core knowledge school in the same district with a similar demographic make-up. The study examined scores on Virginia's state tests, the Standards of Learning, and the national Stanford 9TA test. It also measured the achievement of advantaged and disadvantaged students and the achievement gaps between advantaged and disadvantaged students at the two schools. The study revealed that core knowledge had the following positive effects: (a) core knowledge increased student academic achievement as measured on the Stanford 9TA tests (b) core knowledge promoted fairness in schooling by providing equal educational opportunity to advantaged as well as disadvantaged students (c) core knowledge helped narrow the achievement gap on the Stanford 9TA test between advantaged and disadvantaged students (d) core knowledge helped students achieve larger gains on the Stanford 9TA over two-year periods (Davis, 2004). The test results for the Virginia standards of learning test were inconsistent. Students attending the core knowledge school posted higher mean scores on some tests and did not on others. The Virginia standards of learning is a norm-referenced test.

One of the specified goals of the core knowledge curriculum is to close the achievement gap between advantaged students. However, students attending the core knowledge school from kindergarten to grade six had mixed results. The advantaged students outperformed disadvantaged students by seven points in reading and three points in language, while the disadvantaged students outperformed advantaged students by 18 points in math (Davis, 2004). The research also tracked gains from

grade to grade. Students in the core knowledge school made larger gains on the Stanford 9TA in all six cases examined. Many of these gains were statistically significant gains.

Finally, the research examined the differences in achievement within groups of advantaged and disadvantaged students. The results for advantaged students showed that the core knowledge group made highly significant statistical gains higher than the control group on the Stanford 9TA in the areas of reading, language, and math. The disadvantaged students in the core knowledge group also made gains in all six cases examined on the Stanford 9TA compared to the control group of disadvantaged students. The Stanford 9TA is a norm-reference test. The results of this study indicate that a core knowledge curriculum can help improve academic performance for both advantaged and disadvantaged students as well as helping to narrow the achievement gap between the two groups.

As noted in the above research studies, data was analyzed from standardized tests that were either criterion-referenced or norm-referenced. In most studies that evidenced positive results from schools implementing the core knowledge curriculum, a norm-referenced test was used to show the achievement gains. In studies that evidenced inconsistent or no achievement gains for schools implementing the core knowledge curriculum, a criterion-referenced test was used. The difference between the content of each type of test is important to note. Criterion-referenced tests are designed to measure skills that make up a designated curriculum identified by teachers and curriculum experts. Norm-referenced tests are designed to measure broad skill

areas sampled from a variety of textbooks, syllabi, and the judgments of curriculum experts (Huitt, 1996).

In 2004, at the request of the Core Knowledge Foundation, a group of research specialists at the University of Missouri analyzed national test score data from 22 core knowledge schools across 13 states. The data covered a six-year period from 1998-2003. The analysis included repeated measures ANOVA with appropriate post hoc analyses and t-tests to compare outcomes related to the effects of independent variables. The data was transferred to a graphing program for a graphic representation of the data analysis outcomes (Wedman & Waigandt, 2004).

The results showed an overall increase for each year shown as a national percentile rank. The 1998 mean score of 65% increased to 79% by 2003. The minimum percentile also showed an increase over the same time span. The 1998 minimum percentile was 33% and in 2003 had increased to 51%. The data was also sorted and analyzed based on content area. The data reflected a general upward trend across all 6 content areas evaluated over the 6 year period.

Another area examined was school performance based on ethnic profiles of the schools studied. The schools were divided into 2 categories. The 1st group were schools in which 80% or greater of the students were Caucasian and the 2nd group was schools in which less than 80% of the students were Caucasians. The data showed that while students with over 80% of Caucasian students tended to outperform students with those under 80% Caucasian students, it also showed that the latter group consistently scored well above the national average of the non-core knowledge schools with similar ethnic profiles.

A 3rd area examined was school performance based on economic profiles. Schools were again sorted into 2 groups. The 1st group contained schools in which 25% or more of the students participated in the federal free lunch program. The 2nd group was those schools in which less than 25% of the students participated in the free lunch program. The results over the 6 year study showed that the more affluent schools began with a higher mean passing rate (68%) and increased to a higher mean passing rate (78%) than the less affluent schools that began at 51% and increased to 56%. It was noted that the less affluent schools scored at or above the national average mean over the 6 year period. The final area of school performance evaluated the effect of school size on achievement. Schools were divided into 3 groups: small, (0-15 teachers) medium, (16-30 teachers) large, (31-60 teachers). The data showed that medium schools tended to outperform the other 2 groups in 5 of the 6 years studied. In recent years, the gap between medium and large schools has narrowed. The researchers concluded that based on the 6 years of available data, “there appears to be a strong relationship between student performance and the core knowledge curriculum” (Wedman, et al., p. 12 2004). Core knowledge schools consistently exceeded the national average across 6 content areas, regardless of the ethnic profile, economic profile, or school size.

Finally, in 1999 Whitehurst conducted research to examine the impact of the core knowledge curriculum on the achievement of 7th and 8th grade students as a dissertation for the University of Georgia. The study used analyses of covariance to determine if there were any significant differences in the 8th grade Iowa test of basic skills scores corrected for 6th grade Iowa test of basic skills scores of students who

were taught the core knowledge curriculum as compared to students taught a traditional curriculum (Whitehurst, 1999). Further, statistical analyses were conducted comparing the proportion of 9th grade English and mathematics classes failed at the end of the 1st semester with the proportion of students retained at the end of 9th grade. Also, Whitehurst conducted 2 post-hoc exploratory tests comparing the students' 8th grade Iowa test of basic skills social studies and science scores.

Results of the statistical analyses indicated statistically significant differences in the Iowa test of basic skills scores of core knowledge students in the areas of reading advanced skills, reading total, mathematics total, survey battery total, and social studies. No statistically significant differences were found in the Iowa test of basic skills scores of core knowledge students in the areas of language advanced skills, language total, mathematics advanced skills, and science. Also, no statistically significant differences were found in the percentage of 9th grade English and mathematics classes failed at the end of the 9th grade. Whitehurst concluded that the core knowledge curriculum is an effective alternative to a traditional curriculum to improve the achievement of middle grade students as measured by the Iowa test of basic skills.

In summary, the results of the effect of the core knowledge curriculum on achievement have been inconsistent, sometimes even within the same research report. The 2004 research by Davis concluded that student achievement was improved on the Stanford 9TA test in some areas while improved achievement on the Virginia state tests was not noted.

Summary of Core Knowledge Research

Hirsch believes that in order to participate fully in society, students need to acquire a knowledge base of general, shared information (Hirsch, 1996). The chief beneficiaries, he believes, of a core knowledge curriculum are disadvantaged children who do not have the degree of exposure to such shared knowledge outside of the classroom. However, Hirsch believes that such a curriculum will benefit all children and will help to close the achievement gap between advantaged and disadvantaged students (Hirsch, 1996). Hirsch acknowledges that many of today's students possess an enormous amount of knowledge about a wide variety of subjects. However, he believes that much of this knowledge is ephemeral and narrowly confined to their specific generation (Hirsch, 1996). Hirsch contends that these same students lack the knowledge of authors of books and that newspapers take for granted among readers from all generations. Hirsch (1999) states that, "just as it takes money to make money, it takes knowledge to make knowledge" (p. 20). Hirsch believes that schools that provide a core knowledge curriculum to students provide an education that is fair and equitable for all students, regardless of socio-economic background or race (Hirsch 1999). Critics such as Feinberg (1999) assert that Hirsch's ideas "fail to consider that race, class, and gender influence both content and the way it is presented, and, moreover, that they influence it in a way that reproduces patterns of dominance in our society" (p. 3). Further, Feinberg states that one of Hirsch's major weaknesses is in remaining "silent even about the most obvious relationship between economic policy and poverty-unequal school financing" (p. 3). This study is being conducted to discover if the implementation of Hirsch's core knowledge sequence at the junior high level influences

the scores of students based on the Texas assessment of knowledge and skills test scores of students exposed to the core knowledge curriculum when compared to similar students in another junior high school exposed to a more traditional curriculum. My hypothesis is that the students exposed to the core knowledge sequence will have higher scores as a group than the students exposed to the more traditional curriculum.

Summary

This chapter explored the literature regarding the comprehensive school reform model and the core knowledge curriculum reform model. The chapter is organized in to the following sections: overview of school reform; socio economic background and achievement; history of core knowledge reform model; critics and proponents of the core knowledge reform model; research regarding the core knowledge reform model; and the summary. This research seeks to examine whether a gap exists in the reading achievement scores (as measured by the Texas assessment of knowledge and skills test) between students who have been continuously enrolled in a junior high school that has taught the core knowledge curriculum and students who have been continuously enrolled in a junior high school that has taught a traditional curriculum

CHAPTER 3

RESEARCH METHODOLOGY AND PROCEDURES

The purpose of this research is to use both quantitative and qualitative methods to determine whether the implementation of the core knowledge program at one junior high school has an impact on the test scores of students on the Texas assessment of knowledge and skills test when compared to the same test scores of students at another junior high with a more traditional curriculum. This chapter explores the procedures to gather and analyze data and the procedures to test the hypotheses posed in the study. It is organized into the following sections: context, research design, research questions, sample for qualitative analysis, data collection, data analysis, and summary.

Context

The study was conducted in a north Texas suburban school district. The district houses 19 elementary campuses, 5 junior high schools, and 2 high schools. The total 2004-2005 enrollment of the district was 19,440 and was comprised of 29 schools. The ethnic breakdown of all students was 19.6% Hispanic, 9.4% Asian/Pacific Islander, 12.5% African American, 0.9% Native-American, and 57.5% White. The district also had 37.3 % of the students classified as economically disadvantaged. The core knowledge junior high school used in this study had an enrollment of 800 students while the traditional curriculum junior high had and enrollment of 951 during the 2004-2005 school year. The ethnic breakdown of the core knowledge junior high during the 2004-2005 school year was 21.6% Hispanic, 10.0% Asian/Pacific Islander, 14.9% African American, 1.3% Native American, and 55.2% White. The ethnic breakdown of the

traditional curriculum junior high school during the 2004-2005 school year was 23.4% Hispanic, 7.7% Asian/Pacific Islander, 13.2% African American, 0.4% Native American, and 55.2% White. The percent of economically disadvantaged students enrolled at the core knowledge junior high school during the 2004-2005 school year was 43.4% while the percent of economically disadvantaged at the traditional junior high school during the same period was 43.8%.

Research Design

The research design of this study is a mixed research methodology. The subjects used in the study were selected from the total number of students enrolled in the 8th grade for the 2005-2006 school year who were also consecutively enrolled at the same junior high campus in both the 7th and 8th grades. From this group, 60 students from each school were randomly selected. Each of the 60 students and their parents were given a permission letter, which summarized the research and these letters were signed and returned. The mean scores and passing rate of the group of 60 students from the junior high school that taught the core knowledge curriculum were compared with the mean scores and passing rate of the 60 junior high students who were taught the traditional curriculum. Next, a qualitative study was conducted with administrators and lead English teachers from both campuses. The use of qualitative research is designed to strengthen the quantitative data gathered from simply comparing test scores between students in the two schools being studied. Silverman (2006) states that “qualitative researchers can look at how an apparently stable phenomenon (e.g., a tribe, an organization or a family) or in this case a school, is actually put together by its participants” (p. 44). Surveys were administered to each

school's principal and assistant principals as well as lead English teachers to determine individual views of levels of implementation, teacher and school buy in to the core knowledge program, and student, parent and community perception of the core knowledge curriculum. Additional information was also derived based on the qualitative data.

The independent variable in this study was the implementation of the core knowledge curriculum at one junior high school. The dependent variables were the reading achievement scores of 8th grade students, the reading achievement scores of 8th grade advantaged students, and the reading achievement scores of disadvantaged 8th grade students as measured by the Texas assessment of knowledge and skills test.

Research Questions

The search centered on 7 questions. Statistically, the first 6 questions will be treated by comparing the mean scores and passing rate of each group of students from the control school and the experimental school on the Texas assessment of knowledge and skills test administered in April, 2006. The questions and relevant null hypotheses are related to the impact of the core knowledge curriculum on student achievement.

How do the achievement test scores of 8th grade students taught the core knowledge curriculum in 7th and 8th grade differ from comparable 8th grade students who were not taught the core knowledge curriculum in the 7th and 8th grades as measured by the Texas assessment of knowledge and skills?

Null Hypothesis 1: There is no statistically significant difference in the reading achievement of 8th grade students when immersed in a core knowledge curriculum in 7th and 8th grade when compared to 8th grade students who were not taught the core knowledge curriculum in 7th and 8th grades.

How do achievement tests scores of advantaged 8th grade students taught the core knowledge curriculum in 7th and 8th grade differ from comparable 8th grade students who were not taught the core knowledge curriculum in 7th and 8th grade as measured by the Texas assessment of knowledge and skills?

Null Hypothesis 2: There is no statistically significant difference in the reading achievement of advantaged 8th grade students when immersed in a core knowledge curriculum in 7th and 8th grades when compared to advantaged 8th grade students who were not taught the core knowledge curriculum in 7th and 8th grade.

How do the achievement test scores of disadvantaged 8th grade students taught the core knowledge curriculum in 7th and 8th grade differ from comparable 8th grade students who were not taught the core knowledge curriculum in 7th and 8th grade as measured by the Texas assessment of knowledge and skills?

Null Hypothesis 3: There is no statistically significant difference in the reading achievement of disadvantaged 8th grade students when immersed in a core knowledge curriculum in 7th and 8th grade when compared to disadvantaged 8th grade students who were not taught the core knowledge curriculum in the 7th and 8th grade.

How does the achievement gap for advantaged and disadvantaged students taught the core knowledge curriculum differ from comparable advantaged and disadvantaged students who were not taught the core knowledge curriculum as measured by the Texas assessment of knowledge and skills?

Null Hypothesis 4: There is no statistically significant difference in the achievement gap for advantaged and disadvantaged students taught the core knowledge curriculum when compared to the advantaged and disadvantaged students who were not taught the core knowledge curriculum.

Do the achievement test scores of different genders of 8th grade students taught the core knowledge curriculum differ from comparable genders of students who were not taught the core knowledge curriculum as measured by the reading test results of the Texas assessment of knowledge and skills?

Null Hypothesis 5: There is no statistically significant difference in the reading achievement levels between genders of students taught the core knowledge curriculum when compared to students who were not taught the core knowledge curriculum.

Do the achievement test scores of different ethnicities of 8th grade students taught the core knowledge curriculum differ from comparable ethnicities of 8th grade students who were not taught the core knowledge curriculum as measured by the reading test results of the Texas assessment of knowledge and skills?

Null Hypothesis 6: There is no statistically significant difference in the reading

achievement levels of different ethnicities of students taught the core knowledge curriculum when compared to students who were not taught the core knowledge curriculum.

All information relating to student academic achievement and demographics was collected from district records after seeking and attaining approval from the University of North Texas Institutional Review Board (IRB) as well as approval by the administration of both schools studied in one suburban district in north Texas.

Sample

The sample includes 60 8th grade students from each junior high school studied who have taken the reading portion of the Texas assessment of knowledge and skills test in the spring of 2006, and previously in the spring of 2005 as a 7th grade student. The experimental group was selected from 1 junior high school that began implementation of the core knowledge curriculum during the 2001-2002 school year while the control group was chosen from one junior high school that taught a traditional curriculum. The core knowledge school and the traditional school were closely matched based on factors of enrollment, racial makeup, and socio economic levels. Both junior high schools selected to participate in this study were similar in total years of teacher experience and were comparable to district averages of teacher experience. Through an extensive district curriculum writing initiative, the district has sought to level the playing field for teachers in regard to curriculum instruction at all 5 junior highs. (Shea Stanfield, personal interview June 19, 2006). By addressing this area, the district was

able to minimize the discrepancy related to instructional practices among junior high schools.

Additionally, both schools represented in this study were required to teach a state mandated grade specific curriculum for all subjects known as the Texas essential knowledge and skills. The core knowledge junior high school also taught the core knowledge sequence developed by the Core Knowledge Foundation. In order to align the district curriculum to maximize the core knowledge curriculum, the content coordinators along with the district core knowledge coordinator mapped out which portions of the core knowledge curriculum could be aligned with the Texas essential knowledge and skills standards and how each portion of the core knowledge curriculum would impact assessment of each student. (Shea Stanfield, personal interview June 19, 2006). Additionally, the district aligned the Texas essential knowledge and skills vertically pre-K through 12. For each of the Texas essential knowledge and skills student expectation, the district has developed local content standards that lend specificity and clarity (Steve Chapman, personal interview June 19, 2006). The sample groups are comprised of all 8th grade students who were continuously enrolled in their respective school for their entire 7th and 8th grade years. The compelling interest of this study is to examine the effects of the core knowledge curriculum. The sample includes matched pairs of students from the core knowledge school and the traditional school, examining mean difference of achievement. Students in the sample were matched according to their ethnicity, gender, and participation in the federal free and reduced lunch program.

To maintain confidentiality, only a student identification number was assigned to each student when he/she enrolled in the district-identified students. To provide anonymity for schools, each school was also assigned an identification number.

Data Collection

The measurements of achievement in reading were taken from the Texas assessment of knowledge and skills test from the spring of 2006 and previously in the spring of 2005. The Texas assessment of knowledge and skills was given to both the experimental and the control group in the study along with the entire population of all tested grade levels in the school district. The Texas assessment of knowledge and skills test was used to measure academic achievement. The test is a state-developed standardized test given to all students in grades three through 11 enrolled in public schools in Texas. The Texas Education Agency sets a passing standard for each specific test administration. Therefore, the total percent of items that needs to be answered correctly in order to meet minimum expectations may vary slightly from 1 test administration to the next.

With approval of the district superintendent, the district's test results on the Texas assessment of knowledge and skills test for 2005 and 2006 were obtained from district records. The district granted permission to record individual test results of the population of this study, which included additional data on the population's characteristics. The students' reading achievement scores were analyzed to determine if there were any significant differences in the scores of students who were taught the core knowledge curriculum in the 7th and 8th grades as compared to those who were

taught the traditional curriculum in the 7th and 8th grades. The qualitative data collection consisted of interviews with both principals and lead English teachers at both campuses. The interview questions related to the amount of class time spent on core knowledge curriculum, the degree of faculty, student, and parent buy in to the program, and the informal overall impressions of the core knowledge and the traditional curriculums. Silverman, (2006) discusses the importance of interviewing data collection. He emphasizes that interviewers should "ask each question precisely as it is worded and in the same order that it appears on the schedule. They should not show surprise or disapproval of an answer, offer impromptu explanations of questions, suggest possible replies, or skip certain questions (p. 121).

Data Analysis

An analysis was conducted comparing the reading achievement scores of the 8th grade students in the samples to determine if there were any significant differences in the scores of the students who were taught the core knowledge curriculum in the 7th and 8th grades versus those who were taught the traditional curriculum in the 7th and 8th grades. This was done by comparing the means scores of students for each of the 6 research questions examined. Additionally, based upon the results of the data analysis, qualitative data were gathered from interview surveys with the principal, 2 assistant principals and lead English teachers from each campus. Silverman, (2006) states,

> The primary issue is to generate data which are valid and reliable, independently of the research setting. The main ways to achieve this are the random selection

> of the interview sample and the administration of standardized questions with multiple choice answers which can be readily tabulated (p. 118).

Specifically, these groups were be given a standardized question survey regarding the curriculum that their particular school used during the time frame of the study. The survey questions used a combination of Likert scale response questions as well as open-ended questions.

Summary

This chapter provided an overview of the purpose of the study, context, research design, hypotheses, subjects, instrumentation, and data analysis. Chapter 4 presents the findings of the study. The 1st section presents and describes the descriptive statistics that were used to compare demographic and contextual characteristics of the schools and the students in the study. The next section presents the data and reviews the findings related to the research questions. The 3rd section describes the qualitative data obtained. The final section provides a summary of the chapter.

CHAPTER 4

PRESENTATION AND ANALYSIS OF THE DATA

This chapter provides presentation, analysis, and interpretation of both the quantitative and qualitative data derived from the study. The 1st section restates the research questions. The next section presents the data and provides an analysis and interpretation of the 1st 6 quantitative research questions. The final section presents the data and provides an analysis and interpretation of the 7th, qualitative research question.

Restatement of Research Questions

Research Question 1: How do the achievement test scores of 8th graders taught the core knowledge curriculum in the 7th and 8th grade differ from comparable 7th and 8th grade students who were not taught the core knowledge curriculum in the 7th and 8th grades as measured by the reading test results of Texas assessment of knowledge and skills.

Research Question 2: How do the achievement test scores of advantaged 8th grade students taught the core knowledge curriculum in 7th and 8th grades differ from comparable 8th grade students who were not taught the core knowledge curriculum in 7th and 8th grades as measured by the reading test results of the Texas assessment of knowledge and skills?

Research Question 3: How do the achievement test scores of disadvantaged 8th grade students taught the core knowledge curriculum in 7th and 8th grade differ from comparable 8th grade students who were not taught the core knowledge curriculum in

7th and 8th grade as measured by the reading test results of the Texas assessment of knowledge and skills?

Research Question 4: How does the achievement gap for advantaged and disadvantaged 8th grade students taught the core knowledge curriculum differ from comparable advantaged and disadvantaged students who were not taught the core knowledge curriculum as measured by the reading test results of the Texas assessment of knowledge and skills?

Research Question 5: Do the achievement test scores of different genders of 8th grade students taught the core knowledge curriculum differ from comparable genders of students who were not taught the core knowledge curriculum as measured by the reading test results of the Texas assessment of knowledge and skills?

Research Question 6: Do the achievement test scores of different ethnicities of 8th grade students taught the core knowledge curriculum differ from comparable ethnicities of 8th grade students who were not taught the core knowledge curriculum as measured by the reading test results of the Texas assessment of knowledge and skills?

Research Question 7: What qualitative information does the questionnaire reveal about the impact of the core knowledge curriculum compared to the traditional curriculum?

Quantitative Data Results

This section provides the presentation and analysis of the quantitative data collected for this study. It provides the research questions 1 through 6 followed by data analyses used to answer each research question.

Descriptive statistics were used to examine the means and passing rate for 8th grade students at both the control and experimental schools on the reading portion of the Texas assessment of knowledge and skills test during the 2004-05 school years compared with the 2005-06 school years. The information was obtained for the reading test scores for both schools for the total targeted population as well as for each category examined within the total targeted population.

Research Question 1: How do the achievement test scores of 8th graders taught the core knowledge curriculum in the 7th and 8th grade differ from comparable 7th and 8th grade students who were not taught the core knowledge curriculum in the 7th and 8th grades as measured by the reading test results of Texas assessment of knowledge and skills?

Table 1 represents the Texas assessment of knowledge and skills test mean scores and passing rates for the total targeted population at both the experimental school and the control school for the 2004-05 school years compared to the 2005-06 school years for the same population.

In examining the total targeted population for both the experimental and control schools, the experimental (core knowledge curriculum) school revealed the same passing rate as the control school that delivered the traditional curriculum (90%) in 2004-05. However, in 2005-06 the experimental schools passing rate was slightly lower (90% vs. 93.3%) than the control school. Additionally, the mean score for the experimental school during the 2004-05 school year was slightly higher (2300 vs. 2254) than the control school and showed greater gains in 2005-06 (2391.8 vs. 2357.6) than the control school. In conclusion, although the experimental school showed a higher

mean score to begin and a greater gain in mean scores than the control school from 2004-05 to 2005-06, the control school revealed a greater gain in passing rate for the same time period (90% vs. 93.3).

Table 1

Texas Assessment of Knowledge and Skills Means and Passing Rate for the Total Sample Population

	2004-2005	2005-2006
Experimental School		
Reading		
Mean	2300.0	2391.8
Passing Rate	90% (54/60)	90% (54/60)
N	60	60
Control School		
Reading		
Mean	2254.4	2357.6
Passing Rate	90% (54/60)	93.3 (56/60)
N	60	60

Research Question 2: How do the achievement test scores of advantaged 8th grade students taught the core knowledge curriculum in 7th and 8th grades differ from comparable 8th grade students who were not taught the core knowledge curriculum in

7th and 8th grades as measured by the reading test results of the Texas assessment of knowledge and skills?

Table 2 represents the test mean score and passing rates for the advantaged total population at both the experimental school and the control school for the 2004-05 school years compared to the 2005-06 school years for the same population.

In examining the total advantaged population for both the experimental and control schools, the experimental (core knowledge curriculum) school revealed a lower passing rate (90.5% vs. 95.1%) than the control school. In 2005-06 the experimental school showed a greater increase in passing rate (95.5% vs. 97.3) than the control school but still remained lower. However, examination of the mean score of the total advantaged population reveals that the experimental school was higher in both 2004-05 (2316.2 vs. 2286.6) and in 2005-06 (2421.1 vs. 2419.5). In conclusion, although the experimental school revealed a lower overall passing rate for the advantaged populations at both schools in both the 2004-05 and 2005-06 school years, the experimental school showed a higher mean score for advantaged students in the same years.

Table 2

Texas Assessment of Knowledge and Skills Means and Passing Rates for the Advantaged Total Sample Population

	2004-2005	2005-2006
Experimental School		
Reading		
Mean	2316.2	2421.2
Passing Rate	90.5% (38/42)	95.5% (42/44)
n	42	44
Control School		
Reading		
Mean	2286.6	2419.5
Passing Rate	95.1% (39/41)	97.3% (36/37)
n	41	37

Research Question 3: How do the achievement test scores of disadvantaged 8th grade students taught the core knowledge curriculum in 7th and 8th grade differ from comparable 8th grade students who were not taught the core knowledge curriculum in 7th and 8th grade as measured by the reading test results of the Texas assessment of knowledge and skills?

Table 3 represents the test mean score and passing rates for the disadvantaged total population at both the experimental school and the control school for the 2004-05 school years compared to the 2005-06 school years for the same population.

In examining the total disadvantaged population for both the experimental and control schools, the experimental (core knowledge curriculum) school revealed a higher passing rate (88.2% vs. 78.9%) than the control school. In 2005-06 the experimental school showed a marked decrease in passing rate (73.3% vs. 87%) while the control school showed a marked increase in passing rate. However, examination of the mean score of the total disadvantaged population reveals that the experimental school was higher in both 2004-05 (2285.5 vs. 2285.4) and remained higher in 2005-06 despite the dramatic decrease in passing rates (2305.8 vs. 2258.0). In conclusion, although the experimental school revealed a dramatic decrease in passing rate for the disadvantaged populations at from 2004-05 to the 2005-06 school years, the experimental school showed a higher mean score for disadvantaged students in the same years than did the control school.

Table 3

Texas Assessment of Knowledge and Skills Means and Passing Rate for the Disadvantage Total Sample Population.

	2004-2005	2005-06
Experimental School		
Reading		
Mean	2260.2	2305.8
Passing Rate	88.2% (15/17)	73.3% (11/15)
n	17	15
Control School		
Reading		
Mean	2188.1	2258.0
Passing Rate	78.9% (15/19)	87 (20/23)
n	19	23

Research Question 4: How does the achievement gap for advantaged and disadvantaged 8th grade students taught the core knowledge curriculum differ from comparable advantaged and disadvantaged students who were not taught the core knowledge curriculum as measured by the reading test results of the Texas assessment of knowledge and skills?

Table 4 represents the test mean score and passing rates and examines the achievement gap between the advantaged and disadvantaged total population at both

the experimental school and the control school for the 2004-05 school years compared to the 2005-06 school years for the same population.

In examining the achievement gap between the total advantaged and disadvantaged population for both the experimental and control schools, the experimental (core knowledge curriculum) school revealed a difference in the achievement gap in passing rate (2.3%) in 2004-05 and a marked increase in the achievement gap in pass rate (22.2%) in 2005-06. By contract, the control school revealed a greater initial difference in the achievement gap in pass rate (16.2%) in 2004-05 but narrowed the achievement gap pass rate (10.3%) in 2005-06. Examination of the mean scores achievement gap between the total advantaged and disadvantaged populations reveals that the experimental school showed a lower difference (56) in 2004-05 and an increased achievement gap as measured by the mean score in 2005-06 (115.3). The control school showed a similar trend with a lower difference in mean achievement scores in 2004-05 (98.5) in 2004-05 and greater differences in achievement gap as measured by mean scores in 2005-06 (161.5). In conclusion, the experimental school showed a greater achievement gap with regards to pass rate as measured between 2004-05 and 2005-06 than the control school. However, both the experimental school and the control school showed similar characteristics with regards to the mean scores achievement gap between advantaged and disadvantaged students. Both schools revealed an increase in the achievement gap between advantaged and disadvantaged students when comparing the scores for the 2004-05 and 2005-06 school year.

Table 4

Texas Assessment of Knowledge and Skills Mean and Passing Rate for the Achievement Gap between the Total Sample Population of Advantaged and Disadvantaged Students

	2004-2005	2005-06
Experimental School		
Reading		
Mean (Advantaged)	2316.2	2421.1
Mean (Disadvantaged)	2260.2	2305.8
Mean Achievement Gap	56	115.3
Passing Rate (Advantaged)	90.5% (38/42)	95.5% (42/44)
Passing Rate (Disadvantaged)	88.2% (15/17)	73.3% (11/15)
Passing Rate Achievement Gap	2.3%	22.2%
Control School		
Reading		
Mean (Advantaged)	2286.6	2419.5
Mean (Disadvantaged)	2188.1	2258.0
Mean Achievement Gap	98.5	161.5
Passing Rate (Advantaged)	95.1 (39/41)	97.3 (36/37)
Passing Rate (Disadvantaged)	78.9 (15/19)	87 (20/23)
Passing Rate Achievement Gap	16.2%	10.3%

Research Question 5: Do the achievement test scores of different genders of 8th grade students taught the core knowledge curriculum differ from comparable genders of

students who were not taught the core knowledge curriculum as measured by the reading test results of the Texas assessment of knowledge and skills?

Table 5 represents the test mean score and passing rates and compares the difference in achievement between male and female students at both the experimental school and the control school for the 2004-05 school years compared to the 2005-06 school years for the same population.

In examining the difference in achievement for male and female students for both the experimental and control schools, the experimental (core knowledge curriculum) school revealed a higher passing rate for female students in both 2004-05 (96.2 vs. 85.3) and in 2005-06 (92% vs. 88.2%). However, the gap between males and female students passing rate at the experimental school decreased from 10.9% in 2004-05 to 3.8% in 2005-06. The control school revealed similar passing rates between male and female students as the experimental school, except that males scored higher in both years. In 2004-05 the passing rates for male students at the control school were higher (94.1%) than the female students (88.4). In 2005-06, the passing rates for male students at the control school remained slightly higher (94.1% vs. 93%) than the passing rate for females at the control school. Examination of the mean score between the male and female students total population at the experimental school showed a higher initial mean score for females in 2004-05 (2318.9 vs. 2285.5) as well as in 2005-06 (2411.4 vs. 2377.4). The control school mean scores showed similar characteristics with the passing rates, with the male students slightly above the female students in both 2004-05 (2243.6 vs. 2285.4) and in 2005-06 (2427.1 vs. 2330.1). In conclusion, the

experimental school revealed a greater difference in the achievement between male and female students than the control school in both school years.

Table 5

Texas Assessment of Knowledge and Skills Mean and Passing Rate for the Achievement Scores between Male and Female Students Total Population

	2004-05	2005-06
Experimental School		
Reading		
Mean (Male)	2285.5	2377.4
Mean (Female)	2318.9	2411.4
Mean Achievement Gap	33.4	34
Passing Rate (Male)	85.3% (29/34)	88.2% (30/34)
Passing Rate (Female)	96.2% (25/26)	88.4% (23/26)
Passing Rate Achievement Gap	10.9%	0.2%
Control School		
Reading		
Mean (Male)	2285.4	2427.1
Mean (Female)	2243.6	2330.1
Mean Achievement Gap	41.8	97
Passing Rate (Male)	94.1% (16/17)	94.1 (16/17)
Passing Rate (Female)	88.4% (38/43)	93 (40/43)
Passing Rate Achievement Gap	5.7%	1.1%

Research Question 6: Do the achievement test scores of different ethnicities of 8th grade students taught the core knowledge curriculum differ from comparable ethnicities of 8th grade students who were not taught the core knowledge curriculum as measured by the reading test results of the Texas assessment of knowledge and skills?

Table 6 represents the test mean score and passing rates and compares the difference in achievement between comparable Black, Hispanic, and White students at both the experimental school and the control school for the 2004-05 school years compared to the 2005-06 school years for the same population.

In examining the difference in achievement for comparable Black, Hispanic, and White students for both the experimental and control schools, the experimental (core knowledge curriculum) school revealed a lower passing rate for Black students (66.7% vs. 100%) and White students (88.6% vs. 90.2), yet a higher passing rate for Hispanic students (100% vs. 90%) in the 2004-05 school year when compared to the same groups from the control school. The results for the experimental school in 2005-06 showed lower passing rates for all three groups when compared to the same groups from the control school. Mean scores for the three groups at the experimental school in 2004-05 showed a slightly higher mean score for White students at the experimental school (2338.7 vs. 2266.5) than for the same group of students at the control school. The same was true for Hispanic students at the experimental school in 2004-05 (2245 vs. 2227.5). However, Black students at the experimental school scored slightly lower than Black students at the control school in 2004-05 (2214.8 vs. 2251.8). The mean score for all three groups remained the same in 2005-06. That is, the mean scores for White students at the experimental school remained higher (2240.6 vs. 2376.9) than for

the same group of students at the control school. Hispanic students at the experimental school in 2005-06 again scored higher than their counterparts at the control school (2276.7 vs. 2271.6). Finally, the mean score for Black students at the experimental school remained lower than the Black students at the control school (2272.5 vs. 2358.6).

Table 6

Texas Assessment of Knowledge and Skills Mean and Passing Rate for the Comparable Achievement Scores of Black, Hispanic, and White Students

	2004-05	2005-06
Experimental School		
Reading		
Mean (Black)	2214.8	2272.5
Mean (Hispanic)	2245	2276.7
Mean (White)	2338.7	2440.6
Mean Achievement Gap With Control School		
Black	-37	-106.8
Hispanic	17.5	5.1
White	72.2	63.7
Passing Rate (Black)	66.7% (4/6)	100% (5/5)
Passing Rate (Hispanic)	100% (15/15)	73.3% (11/15)
Passing Rate (White)	88.6% (31/35)	97.1% (34/35)
Passing Achievement Gap With Control School		
Black	-33.3%	-16.7%
Hispanic	10%	-6.7%
White	-1.6%	-.5

Table 6 (*continued)*

	2004-05	2005-06
Control School		
Reading		
Mean (Black)	2251.8	2358.6
Mean (Hispanic)	2227.5	2271.6
Mean (White)	2266.5	2376.9
Mean Achievement Gap With Experimental School		
Black	37	106.8
Hispanic	-17.5	-5.1
White	-72.2	-63.7
Passing Rate (Black)	100% (5/5)	100% (5/5)
Passing Rate (Hispanic)	90% (9/10)	80% (8/10)
Passing Rate (White)	90.2% (37/41)	97.6% (40/41)
Passing Achievement Gap With Experimental School		
Black	33.3%	16.7%
Hispanic	-10%	6.7%
White	1.6%	5%

Qualitative Data Results

The relevance of qualitative research has been discussed and debated widely. In 1992 Hammersley discussed the value of qualitative data and stated that benefits include, “It is relatively flexible. It studies what people are doing in their natural context. It is well placed to study processes as well as outcomes. It studies meanings as well as causes”. All of these findings are applicable to this particular qualitative instrument.

The survey administered was flexible in that it tailored to specific faculty members at each campus. It was also flexible because it requested that respondents give a rating on a 5 point scale for questions 1 through 3 and asked for open-ended responses in questions 4 through 10. It also studied what people were doing in their natural context of being on the particular campuses that each respondent was asked about. Next, it is helpful in this study to not only examine the outcomes as reported in questions 1 through 6 but to examine the processes that each campus used to implement their specific curriculums. Finally, qualitative data in this study seeks to examine the meanings and causes behind the results.

Research Question 7: What qualitative information does the questionnaire reveal about the impact of the core knowledge curriculum compared to the traditional curriculum?

With regards to research question seven, a 10 question qualitative survey was administered to the principal, assistant principals, and lead English teachers at both the control and experimental school. In it the participants were asked 3 questions related to their knowledge of curriculum. The last 7 questions focused on perceived strengths and weaknesses of the core knowledge curriculum versus the traditional curriculum as well as well as levels of implementation on each campus.

Specifically, question 1 of the qualitative survey asked respondents, “during the 2005-6 school year, how knowledgeable were you regarding the implementation of your overall school curriculum?” On a 5 point scale with five being the highest, the average score among all respondents was a 4. Question 2 asked, “During the 2005-2006 school year, how knowledgeable was the staff regarding overall implementation of the school

curriculum?" On a 5 point scale, the average score among all respondents was 3 1/2. Question 3 asked, "During the 2005-2006 school year, how well was the curriculum implemented on your campus?" The average score among all respondents was a 3 ½ .

When the ratings for these same questions are examined by campus, the results vary somewhat. The experimental (core knowledge curriculum) school average score for questions, 1, 2, and 3 was 4, 3, and 3. The control (traditional curriculum) school average score for the same three questions was 4, 4, and 4. These results show that both the experimental and control school respondents rated their own knowledge of implementing their respective curriculums very high. However, the respondents at the experimental school rated the staff's knowledge of implementing the core knowledge curriculum as only somewhat knowledgeable while the respondents at the control school rated the staff's knowledge of implementing the traditional curriculum as very high. Also, the respondents at the experimental school rated the question of how well the curriculum was actually implemented on their campus as a three (somewhat) while the respondents at the control school rated the same question as a four (very high).

Table 7

Results of qualitative survey questions 1-3 completed by principal, assistant principals and lead English teachers at experimental and control school

Question	Average Score (On 5-point scale)	Experimental School (Core Knowledge)	Control School (Traditional)
Personal Knowledge of Implementing Curriculum	4.0	4.0	4.0
Staff Knowledge of Implementing Curriculum	3.5	3.0	4.0
How Well Was Curriculum Implemented	3.5	3.0	4.0

The last 7 questions asked respondents open-ended questions regarding strengths, weaknesses, advantages, and disadvantages that they perceived regarding their specific campus curriculum. Question 4 asked respondents to discuss the strengths of the curriculum that was used on their own campus. The responses from the experimental core knowledge curriculum focused on items specific to the core knowledge curriculum. This included having teachers trained in the core knowledge curriculum, having a core knowledge coordinator on campus, monitoring of the program by the principal, and producing a timeline of core knowledge curriculum integrated into the district curriculum and the Texas essential knowledge and skill. The respondents at the control traditional curriculum school focused on specific department strengths rather than campus wide curriculum strengths. Some responses included the use of a district math facilitator to support the curriculum combined with a common planning time for math teachers each day. Other responses cited the English and social studies

departments as major strengths based upon the implementation of the district curriculum in those areas.

The 5th question asked for any perceived weaknesses of each campus curriculum. The responses for this question also varied between campuses. The biggest perceived weaknesses amongst respondents at the experimental core knowledge school focused on the turnover of staff and dissemination of materials to teachers in order to effectively deliver the core knowledge curriculum. The control school survey revealed a concern about the alignment of curriculum between grades. This is interesting to note since one of the areas that the Core Knowledge Foundation touts a strength is that it specifically aligns curriculum for each grade level. The core knowledge website states, “Only a school system that clearly defines the knowledge and skills required to participate in each successive grade can be excellent and fair for all students” (Core Knowledge Foundation, 2007).

Question 6 of the qualitative survey asked what specific advantages that students gained by being exposed to either the core knowledge curriculum or the traditional curriculum. Answers from the experimental school focused on the benefit of interdisciplinary units and the strength of having the curriculum aligned between grades as well as with state curriculum. The respondents from the control traditional curriculum school concentrated on the benefit of having a curriculum that was aligned with the Texas essential knowledge and skills. They believed this focused instruction benefited students by helping them meet success on state-mandated testing.

Question 7 asked about any perceived disadvantages that students might have encountered as a result of not being exposed to either the core knowledge curriculum or

the traditional curriculum. Responses from those at the experimental school did not cite any specific disadvantages. They pointed out that since the core knowledge curriculum was integrated into addressing all state-mandated curriculum and served as enhancement to the traditional curriculum, that students did not have any specific disadvantages from students who received the traditional curriculum only. The control traditional school responses ranged from no perceived disadvantages to the concern that students receiving the traditional curriculum may miss out on connections between subjects, which could be made with more interdisciplinary units.

Next, question 8 asked what factors, if any, kept the campus from fully implementing the curriculum that was in place. Respondents from the experimental core knowledge school mentioned that having to balance the district, state, and federal requirements regarding curriculum posed a challenge to full implementation of the core knowledge curriculum but generally regarded the curriculum as being followed. The control traditional curriculum school indicated that full implementation had taken place. The only factor mentioned regarded faculty members who did not follow the district curriculum to the degree necessary.

The following question of the qualitative survey asked respondents which curriculum they would choose to implement on their campus if given the choice. Not surprisingly, all answers indicated the curriculum that they were currently implementing. Reasons given by the core knowledge respondents were that they believed that the core knowledge curriculum provided specific things that the traditional curriculum did not such as exposure to a wider range of vocabulary, field trips to topics studied in the core knowledge model, and guest speakers on core knowledge subjects. The control

traditional school answers mentioned that they believed that the core knowledge curriculum model was more effective at the elementary level. They also cited concerns that since not all district elementary schools were core knowledge schools that those students entering junior high school who attended a core knowledge school rather than a traditional curriculum may begin the 7th grade with a different knowledge base than those students not exposed to the core knowledge curriculum at the elementary level.

Finally, question 10 asked respondents to make a judgment based upon their prior knowledge as to which curriculum benefited students more specifically in the area of reading achievement. The answers were again in line with the specific curriculum that each respondent was currently working under. Responses all cited successes that the campuses were achieving using the curriculum in place. One response supports that the teacher and the teaching method is the most important factor in determining student achievement in the area of reading achievement.

Summary

This chapter presented and analyzed data related to each research question. Chapter 5 provides a summary, findings, conclusions, policy recommendations, and recommendations for future research.

CHAPTER 5

FINDINGS, CONCLUSIONS, RECOMMENDATIONS AND SUMMARY

This chapter presents the findings, additional considerations, conclusions, policy recommendations, recommendations for future research, and summary. Section 1 describes the study while section 2 discusses the findings and conclusions for each research question. Section 3 discusses policy recommendations and recommendations for future research.

Description of the Study

This study examined the impact that the core knowledge curriculum had on the reading achievement levels of junior high students in the 8th grade at two junior high schools located in north Texas suburban school district. Analyses were conducted to compare the reading achievement levels of a sample of 60 students from each school who were continuously enrolled in the 7th and 8th grades to determine if there were any significant differences in the scores of students who were taught the core knowledge curriculum in the 7th and 8th grades as compared to students who were taught a traditional curriculum in the 7th and 8th grades. 7 research questions were used in the study. Questions 1-6 were examined using descriptive statistics while question 7 was examined using qualitative data.

Methodology

The first 6 research questions used the mean score to compare both the experimental and control schools reading achievement levels and used various groupings of students. The mean score is the most commonly reported measure of central tendency and was used to determine the average score for a given research question.

The last research question examined information obtained from a survey given to the principal, assistant principals, and lead English teachers at both the experimental and control schools in the study. The survey used a combination of questions that called for an evaluation and open-ended questions.

Findings

This section discusses the findings from the 7 research questions as well as conclusions based upon those findings.

Research Question 1: How do the achievement test scores of 8th grade students taught the core knowledge curriculum in 7th and 8th grade differ from comparable 8th grade students who were not taught the core knowledge curriculum in the 7th and 8th grades as measured by the Texas assessment of knowledge and skills?

> Null Hypothesis 1: There is no statistically significant difference in the reading achievement of 8th grade students when immersed in a core knowledge curriculum in 7th and 8th grade when compared to 8th grade students who were not taught the core knowledge curriculum in 7th and 8th grades.

Research Question 2: There were no significant differences between the 2004-2005 and 2005-2006 reading achievement scores on the Texas assessment of knowledge and skills test for students taught the core knowledge curriculum in the 7th and 8th grades when compared to students who were taught the traditional curriculum in the same grades. The null hypothesis was accepted.

How do achievement tests scores of advantaged 8th grade students taught the core knowledge curriculum in 7th and 8th grade differ from comparable 8th grade students who were not taught the core knowledge curriculum in 7th and 8th grade as measured by the Texas assessment of knowledge and skills?

> Null Hypothesis 2: There is no statistically significant difference in the reading achievement of advantaged 8th grade students when immersed in a core knowledge curriculum in 7th and 8th grades when compared to advantaged 8th grade students who were not taught the core knowledge curriculum in 7th and 8th grade.

Research Question 3: There were no significant differences between the 2004-2005 and 2005-2006 reading achievement scores of advantaged 8th grade students on the Texas assessment of knowledge and skills test for students taught the core knowledge curriculum in the 7th and 8th grades when compared to students who were taught the traditional curriculum in the same grades. The null hypothesis was accepted.

How do the achievement test scores of disadvantaged 8th grade students taught the core knowledge curriculum in 7th and 8th grade differ from comparable 8th grade

students who were not taught the core knowledge curriculum in 7th and 8th grade as measured by the Texas assessment of knowledge and skills?

> Null Hypothesis 3: There is no statistically significant difference in the reading achievement of disadvantaged 8th grade students when immersed in a core knowledge curriculum in 7th and 8th grade when compared to disadvantaged 8th grade students who were not taught the core knowledge curriculum in the 7th and 8th grade.

There were no significant differences between the 2004-2005 and 2005-2006 reading achievement scores of disadvantaged 8th grade students on the Texas assessment of knowledge and skills test for students taught the core knowledge curriculum in the 7th and 8th grades when compared to students who were taught the traditional curriculum in the same grades. The null hypothesis was accepted.

Research Question 4: How does the achievement gap for advantaged and disadvantaged students taught the core knowledge curriculum differ from comparable advantaged and disadvantaged students who were not taught the core knowledge curriculum as measured by the Texas assessment of knowledge and skills?

> Null Hypothesis 4: There is no statistically significant difference in the achievement gap for advantaged and disadvantaged students taught the core knowledge curriculum when compared to the advantaged and disadvantaged students who were not taught the core knowledge curriculum.

There were no significant differences between the 2004-2005 and 2005-2006 achievement gap reading scores of 8th grade students on the Texas assessment of knowledge and skills test for students taught the core knowledge curriculum in the 7th and 8th grades when compared to students who were taught the traditional curriculum in the same grades. The null hypothesis was accepted.

Research Question 5: Do the achievement test scores of different genders of 8th grade students taught the core knowledge curriculum differ from comparable genders of students who were not taught the core knowledge curriculum as measured by the reading test results of the Texas assessment of knowledge and skills?

Null Hypothesis 5: There is no statistically significant difference in the reading achievement levels between genders of students taught the core knowledge curriculum when compared to students who were not taught the core knowledge curriculum.

There were no significant differences between the 2004-2005 and 2005-2006 reading achievement between genders reflected in scores of 8th grade students on the Texas assessment of knowledge and skills test for students taught the core knowledge curriculum in the 7th and 8th grades when compared to students who were taught the traditional curriculum in the same grades. The null hypothesis was accepted.

Research Question 6: Do the achievement test scores of different ethnicities of 8th grade students taught the core knowledge curriculum differ from comparable ethnicities of 8th grade students who were not taught the core knowledge curriculum as measured by the reading test results of the Texas assessment of knowledge and skills?

Null Hypothesis 6: There is no statistically significant difference in the reading

achievement levels of different ethnicities of students taught the core knowledge curriculum when compared to students who were not taught the core knowledge curriculum.

There were no significant differences between the 2004-2005 and 2005-2006 reading achievement between ethnicities reflected in scores of 8th grade students on the Texas assessment of knowledge and skills test for students taught the core knowledge curriculum in the 7th and 8th grades when compared to students who were taught the traditional curriculum in the same grades. The null hypothesis was accepted.

Information gained from the surveys administered to the principals, assistant principals, and lead English teachers at both the experimental and control schools reveals additional insight into the patterns revealed from the quantitative data presented above. Both schools results showed that the respondents believed that they personally had a very high level of understanding of how to implement the curriculum specific to their own campus. However, the experimental school's respondents rated the staff's knowledge of how to implement the core knowledge curriculum as somewhat high while the control school rated their staff's knowledge of how to implement the traditional curriculum as very high. Reasons cited by respondents of the experimental school that may help explain the difference in perception of curriculum knowledge were staff turnover and the specific core knowledge training that was specific to that curriculum. This training was in addition to the district required curriculum training for new teachers. Further, the experimental school surveys revealed a belief that the core knowledge training for teachers was an additional skill set that was embraced by most, but not all of the teachers at the core knowledge school. Therefore, not having the staff

comprehensively implementing the curriculum, at least in the perception of administrators, caused a lower ranking in this area.

Additional Considerations

Examining the quantitative data alone, one may conclude that the core knowledge curriculum had no statistically significant impact in any of the areas examined in this study. However, there are several other factors to take into consideration regarding what effects the core knowledge curriculum may have. A 2002 meta-analysis of 29 widely implemented comprehensive school reform models concluded that "schools that implemented a comprehensive school reform model for five years or more showed particularly strong effects, but that the models benefited equally schools of higher and lower poverty levels" (Borman, Hewes, Overman, & Brown 2002). The experimental core knowledge school in this study began the curriculum in 2002-2003. Therefore, all of the benefits of the core knowledge may not have been recognized since the study examined the third and fourth years of implementation. Further, in a 2004 study of the effect of the core knowledge curriculum at the elementary level, Brading stated: "the development of this knowledge is a cumulative process that takes several years to accomplish…a more long term study would garner additional information as it relates to the cumulative effects of curriculum on reading achievement" (p. 115). This study examined the achievement of students who were continuously enrolled in the 7th and 8th grades in both the experimental and control schools. The study did not account for students who may have attended core knowledge elementary schools within the district.

Conclusions & Discussion

The goal of this study was to examine the impact of the core knowledge curriculum on the reading achievement levels of students. The quantitative results from this study indicate no significant relationship between the use of a core knowledge curriculum in the 7th and 8th grades and an increase in reading achievement as measured by the Texas assessment of knowledge and skills test. However, the qualitative information gained from this study as well as from earlier research seems to indicate the need for further research. One such qualitative study was in 1999, when Stringfield et al., concluded a 3 year study of core knowledge schools. The study concluded that the degree to which the core knowledge curriculum was implemented was a significant predictor of student achievement gain. The study noted that a high degree of implementation required leadership from the principals, teachers' willingness, and district support. (Stringfield, et al., 1999).

It is noteworthy that, as indicated in Table 7 of Chapter 4, both the levels of staff knowledge of implementing curriculum and how well the curriculum was implemented, the average score from the principal, assistant principals, and lead English teachers was lower for the experimental core knowledge school than for the control traditional curriculum school. These data indicate that perhaps the levels of actual implementation was a contributing factor to there being no discernible difference between the reading achievement scores of students in both schools as measured by the Texas assessment of knowledge and skills test.

The 1999 Stringfield study also revealed 3 qualitative outcomes for students who participated in the core knowledge curriculum and four school qualitative outcomes for schools that participated in the core knowledge curriculum. The student outcomes included providing a broad base of knowledge, motivating students to learn, and creating a desire to learn more. The school outcomes were, providing an academic focus encouraging consistency in instruction, providing a plan for coherent, sequential learning from grade to grade, and promoting a community of learners (Stringfield, et al., 1999).

Many of these same outcomes were mentioned in the qualitative survey administered to the principal, assistant principals, and lead English teachers at both the experimental core knowledge school and the control traditional curriculum school in this study. Specifically, respondents from the experimental core knowledge school noted that they believed that some of the interdisciplinary core knowledge curriculum allowed students a deeper understanding of the specific content. They also consistently noted that having a structured curriculum alignment from one grade level to the next helped teachers to be more efficient in delivering content.

In 2001 Johnson et al., conducted a qualitative study that examined 31 teachers in a large urban district in Texas. The research sought to gain qualitative data in 3 areas. The areas were: (1) did the prescriptive nature of the core knowledge program stifle and constrain teacher planning? (2) How did teachers make connections between their study of literacy development theory and creation of units for the core knowledge curriculum, (3) How did the children learn and respond to the Hirsch units? (Johnson, et al., 2001). The qualitative research revealed that the curriculum planning was

unproblematic. Since the core knowledge curriculum is meant to only consist of about half of the curriculum, planning core knowledge units did not cause time restraints. The research also showed that the core knowledge curriculum allowed for teachers and students to make connections in learning that might not have otherwise been possible in a traditional curriculum. Finally, the teachers in the study revealed that they believed the core knowledge content allowed them to scaffold or align the literacy development of their students more easily.

Similarly, the same types of comments were evidenced in the survey administered to the principal, assistant principal, and the lead English teachers in this study. Common responses focused on the enriching curriculum that teachers and administrators believed students engaged in at the experimental school's core knowledge curriculum. Again, the idea that students benefited from the grade level alignment structure of the core knowledge curriculum was mentioned in several survey responses.

In summary, it is worth noting that earlier research which indicates that a core knowledge education can improve student achievement on a standardized test as well as narrow the achievement gap between advantaged and disadvantaged students may depend on the type of standardized test used to determine achievement. In 2004, Davis reported on a longitudinal study in Virginia that compared students in a core knowledge school with students in another school in the same district with similar demographic make-up. The research used test results on Virginia's state tests, the Standards of Learning, and on the national Stanford 9TA test. The study also examined the achievement of advantaged and disadvantaged students as well as the

achievement gap between advantaged and disadvantaged students at the two schools (Davis 2004). The results of the study revealed four major findings: (1) core knowledge increased student academic achievement as measured on the Stanford 9TA test, (2) core knowledge promoted fairness in schooling by providing equal educational opportunity to disadvantaged as well as advantaged students, (3) core knowledge helped narrow the achievement gap on the Stanford 9TA test between advantaged and disadvantaged students and (4) core knowledge helped students achieve larger gains on the Stanford 9TA over 2 year periods (Davis, 2004).

Equally significant to the gains noted above, the results on the Virginia standards of learning tests showed results that were quite inconclusive. The core knowledge students posted higher mean scores in some areas and lower mean scores in other areas when compared to students in another, non-core knowledge school in the same district with similar demographics (Davis, 2004).

Although the same student groups were used for both tests, the tests in Virginia yielded quite different results. The difference between the Stanford 9TA test and the Virginia standards of learning test is important to understand, especially as it related to the results discussed in this study using the Texas assessment of knowledge and skills test. The major difference is that the Stanford 9TA test is a norm-referenced test while both the SOL and the Texas assessment of knowledge and skills tests are criterion-referenced tests. Huitt describes the differences between the two types of tests in four different dimensions. In regards to purpose, norm-referenced tests are used to rank each student with respect to the achievement of others in broad areas of knowledge and to discriminate between high and low achievers. For criterion-referenced tests,

purpose is defined as being used to determine whether each student has achieved specific skills or concepts and to find out how much students know before instruction begins and after it has finished. With regards to content, norm-referenced tests are defined as measuring broad skills areas sampled from a variety of textbooks, syllabi, and the judgments of curriculum experts while criterion-referenced tests define content as measuring specific skills that make up a designated curriculum that is identified by teachers and curriculum experts. Further, the item characteristics for norm-referenced tests are defined as having each skill tested by less than four items which vary in difficulty while criterion-referenced tests are defined as having each skill tested by at least four items in order to obtain an adequate sample for student performance and to minimize the effects of guessing. Finally, the score interpretation for norm-referenced tests are defined by having each individual compared with other examinees and assigned a score expressed as a percentile. The score interpretation for criterion-referenced tests is defined as having each individual compared with a preset standard for acceptable achievement with the score usually expressed as a percentage (Huitt, 1996).

The commonality in the results of both the Virginia study and the Texas study is that when a norm-referenced test is used to compare achievement of students who received a core knowledge curriculum with students who did not, the results showed increased student achievement. However, when a state test such as the SOL or the Texas assessment of knowledge and skills test, which are both criterion-referenced tests is used to compare the achievement of students who received a core knowledge curriculum with students who did not, the results were inconclusive. Students in the

core knowledge group were higher that their cohorts in some areas of achievement and were lower in others.

The same trend held true when examining whether the core knowledge curriculum helped to narrow the achievement gap between students receiving the core knowledge curriculum and those who did not. When using the norm-referenced Stanford 9TA test, the research showed a statistically significant advantage in favor of core knowledge students. However, when using the criterion-referenced Virginia standards of learning and the Texas assessment of knowledge and skills tests, there was no significant difference in the achievement between students receiving the core knowledge curriculum and those who did not.

Policy Recommendations

This section presents policy recommendations that arose from this study.

1. Develop a meta-analyses of all core knowledge research as it pertains to standardized testing and differentiate between norm-referenced and criterion-referenced testing.

2. Design a district curriculum that aligns the district junior highs that implement the core knowledge curriculum with the district curriculum for 7th and 8th grades.

3. Provide necessary funding for district elementary and junior high schools that implement the core knowledge curriculum to have annual evaluations to determine the level of implementation.

Recommendations for Future Research

The following recommendations for future research have been derived from the literature review, results, and conclusions of this study.

1. Conduct a longitudinal study comparing the achievement of students who were continuously enrolled in a core knowledge curriculum from kindergarten through the 8th grade.

2. Conduct future research in a state that uses both norm-referenced and criterion-referenced standardized testing to examine whether each type of tests yields different results in terms of achievement of core knowledge students.

3. Conduct future research to determine the impact of the core knowledge curriculum on the achievement scores of students enrolled in special education classes.

4. Conduct future research to determine the impact of the core knowledge curriculum on the achievement scores of students as it relates to attendance.

5. Conduct future research to determine the impact of the core knowledge curriculum on the achievement scores of students as it relates to the number of years the school has implemented the curriculum.

6. Conduct future research to determine the impact of the core knowledge curriculum on the achievement scores of students as it relates to the students being enrolled in teachers who are classified as highly qualified as designated by the No Child Left Behind legislation.

7. Conduct future research to determine the impact of the core knowledge curriculum on the achievement scores of students as it relates to achievement on other areas of the Texas assessment of knowledge and skills test such as social studies and science.

8. Conduct a longitudinal study to determine the impact of the core knowledge curriculum on the achievement scores of students as it relates to achievement on end-of course examinations in high school.

Summary

This chapter presented a description of the study, discussed the research questions, findings, descriptive and qualitative statistics, conclusions, and discussed policy recommendations and future research recommendations.

APPENDIX A

RESEARCH STUDY CONSENT FORM

October 30, 2006

Dear Parent,

For the past three years the Hurst-Euless-Bedford Independent School District has implemented the core knowledge curriculum on several campuses. I am conducting a research study through the University of North Texas Educational Administration Program to determine if this curriculum has been effective in increasing the reading achievement of the students. In order to conduct this study I need your permission to use your child's reading achievement scores from his/her Texas assessment of knowledge and skills test from the spring of 2006. I will then compare the scores of the students who receive core knowledge curriculum with students who receive traditional curriculum.

There should be no risk involved for your child in this process. Your child's identity will not be used in the study. Students will be given a code number by the campus before any information is presented to me. The data provided by the campus will be kept confidential and used only for research purposes.

This study may provide useful information to the Hurst-Euless-Bedford Independent School District. The results may help us determine if the core knowledge curriculum is effective in increasing the reading achievement of students.

This research project has been reviewed and approved by the UNT Institutional Review Board (940) 565-3940. Contact the UNT IRB with any questions regarding your child's rights as a research subject.

This research project has also been reviewed and approved by the Hurst-Euless-Bedford I.S.D. You may contact me at [redacted]or my faculty sponsor, Dr. Jane Huffman, UNT Department of Teacher Education and Administration, at (940) 565-2832 with any questions regarding this research project.

Thank you for your assistance in this study.

Sincerely,

Toby D. Givens
Doctoral Student
UNT College of Education
Assistant Principal
Hurst-Euless-Bedford ISD

You are making a decision about whether or not to have our child's data used in this study. Your signature indicates that you have decided to allow this information to be used and that you have read or have had read to you the information provided in the Consent Letter and that you have received a copy of the Consent Letter.

Printed Name of Student

_____ _____

Signature of Parent or Guardian Date

APPENDIX B

RESEARCH STUDY QUALITATIVE SURVEY

You are invited to participate in a survey regarding curriculum implementation. In this survey, approximately 8 people will be asked to complete a survey that asks questions about curriculum implementation at your school. It will take approximately 10-20 minutes to complete the questionnaire.

Your participation in this study is appreciated and will aid in the completion of my research regarding the impact of the core knowledge curriculum on reading achievement at the junior high level. There are no foreseeable risks associated with this project. It is very important to learn about your opinions.

Your survey responses will be strictly confidential and data from this research will be reported in the aggregate. If you have questions at any time about the survey or the procedures, you may contact Toby Givens at 817-454-3724 or by email at givenst@hebisd.edu

Thank you very much for your time and support.

1. During the 2005-2006 school year, how knowledgeable were you regarding the implementation of your overall school curriculum?

__ A Great Deal
__ Very
__ Somewhat
__ Little
__ Not At All

Additional Comments:

2. During the 2005-2006 school year, how knowledgeable was the staff regarding implementation of your overall school curriculum?

__ A Great Deal
__ Very
__ Somewhat
__ Little
__ Not At All

Additional Comments:

3. During the 2005-2006, how well was the curriculum that was in place implemented on your campus?

__ Very Well
__ Well
__ Somewhat

__ Little
__ Not At All

Additional Comments:

4. During the 2005-2006 school year, what were the strengths of your campus curriculum?

5. During the 2005-2006 school year, what were the weaknesses of your campus curriculum?

6. During the 2005-2006 school year, what advantages did students have by being exposed to a traditional curriculum versus using the core knowledge curriculum or vice versa?

7. During the 2005-2006 school year, what disadvantages did students have by being exposed to a traditional curriculum versus using the core knowledge curriculum or vice versa?

8. During the 2005-2006 school year, were there any factors that prevented the curriculum from being implemented? If so, what were they?

9. From your prior knowledge of both traditional curriculum and the Core Knowledge curriculum, which would you choose to implement on your campus and why?

10. From your experiences, do you think that students benefit more from a traditional curriculum or a core knowledge curriculum in the area of reading achievement?

APPENDIX C

RESEARCH STUDY QUANTITATIVE DATA TABLE

	CK School 04/05	**CK School 05/06**	**Non-CK School 04/05**	**Non-CK School 05/06**
Black	(4/6) 66.7 **(2214.8)**	(5/6) 83.3 **(2272.5)**	(5/5) 100 **(2251.8)**	(5/5) 100 **(2358.6)**
Hispanic	(15/15) 100 **(2245.0)**	(15/11) 73.3 **2276.7)**	(10/9) 90 **(2227.5)**	(10/8) 80 **(2271.6)**
White	(35/31) 88.6 **(2338.7)**	(35/34) 97.1 **(2440.6)**	(41/37) 90.2 **(2266.5)**	(41/40) 97.6 **(2376.9)**
Advantaged	(42/38) 90.5 **(2316.2)**	(44/42) 95.5 **(2421.1)**	(41/39) 95.1 **(2286.6)**	(37/36) 97.3 **(2419.5)**
Disadvantaged	(17/15) 88.2 **(2260.2)**	(15/11) 73.3 **(2305.8)**	(19/15) 78.9 **(2188.1)**	(23/20) 87 **(2258.0)**
Male	(34/29) 85.3 **(2285.5)**	(34/30) 88.2 **(2377.4)**	(17/16) 94.1 **(2285.4)**	(17/16) 94.1 **(2427.1)**
Female	(26/25) 96.2 **(2318.9)**	(25/23) 92 **(2411.4)**	(43/38) 88.4 **(2243.6)**	(43/40) 93 **(2330.1)**
CK	(60/54) 90 **(2300.0)**	(60/54) 90 **(2391.8)**		
Non-CK			(60/54) 90 **(2254.4)**	(60/56) 93.3 **(2357.6)**

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