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The influence of Head Start and other pre-school programs on student achievement

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THE INFLUENCE OF HEAD START AND OTHER PRE-SCHOOL PROGRAMS ON STUDENT ACHIEVEMENT

By

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A Dissertation Presented in Partial Fulfillment
Of the Requirements for the Degree
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ABSTRACT

The purpose of this study was to investigate the influence that Head Start and district operated pre-school program for economically disadvantaged students on the scores of state mandated tests given at third grade. The data used in this study were collected from the attendance records of Head Start and the district operated pre-school and test scores in grade three of a school district in East Texas. The attendance data for the 1997 – 1998 and the 1998 – 1999 school years were used with the test data for the years that these students were in grade three (2001-2002 and 2002-2003). The scores from the Texas Assessment of Academic Skills (TAAS) given during the 2001 – 2002 school year and the scores of the Texas Assessments of Knowledge and Skills (TAKS) given during the 2002-2003 school year were used in this study. The TAAS scores were reported by the state in percentages but the TAKS scores were reported as scale scores. These had to be converted but this was possible using the formula given on the Texas Education Agency web site. The students were divided into two large groups: economically disadvantaged students and advantaged students. The membership in each group was determined by whether or not the student qualified for free or reduced lunch. Students on free or reduced lunch are considered to belong to the economically disadvantaged group. The groups' means were compared using an Analysis of Variance and a Tukey post hoc test. This study concluded that attending Heart Start or pre-school did not close the gap between economically disadvantaged students and advantaged students if scores on state mandated test were used as the determining factor.

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DEDICATION

This dissertation is the culminating project of a journey that began in the spring of 2000. It has been a journey with many twist and turns that has stretched my creativity and cognitive ability as well as my organizational and time management skills. The completion of this journey would not have been possible if it had not been for friends, family, and students who offered continues support, and encouragement. To them I express my deepest appreciation and sincere thanks and dedicate this dissertation.

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CHAPTER 1

Introduction

Purpose of the Study

Students who come from economically disadvantaged families, especially those from minority homes, tend to have lower success rates in schools than students from more economically advantaged households. Economically disadvantaged students also are more likely to drop out before high school graduation and are therefore considered at risk (Solorzano & Yosso, 2001). The federal government created Head Start in 1965 to help children from economically disadvantaged homes bridge the educational gap caused by the lack of experiences and skills that the home environment did not afford (Vinovskis, 1999).

After the establishment of Head Start, one of the next steps toward educational reform initiated on the federal level was the establishment of Goals 2000. President George Bush and the National Council of Governors established Goals 2000 to encourage the establishment of standards-based education. The trend of setting standards also was the beginning of high-stakes testing programs on a state level (Clarke, Madaus, Horn & Ramos, 2000). President George W. Bush's No Child Left Behind (NCLB) legislation, the culmination of this process, established mandatory testing nationwide. The results of these tests are to be used to establish whether or not schools have met the progress goals set at the beginning of the year. (Lewis, 2002).

Some states had testing programs in place before the NCLB legislation was enacted. In the state of Texas, the Texas Assessment of Academic Skills (TAAS) exam was used from spring of 1981 until the 2001-2002 school year in grades three and eight to evaluate student progress and to determine each school's annual report card. Beginning with the school year 2002-2003, the new Texas Assessments of Knowledge and Skills (TAKS) was given. The purpose of this study was to investigate the relationship between TAAS and TAKS scores of young at-risk children who have attended early childhood programs provided by federal and/or local school districts and those who have not (Patterson, 2000). For the purpose of this study an at-risk student was one who came from an economically disadvantaged home and was eligible to receive free lunch or reduced lunch at school. The study examined whether early childhood programs truly do help to close the educational gap between students considered at risk and those who came from higher economic level homes. The scores from the state of Texas tests, TAAS and TAKS, were used for comparison. The scores from these tests are used by the Texas Education Agency to evaluate the states' schools and to determine their yearly report card.

Justification for the Study

Young children who live in environments that do not nurture them in academic, social and emotional areas enter first grade lacking many necessary skills. A direct correlation has been shown to exist between the lack of nurture in homes and the economic level (Patterson, 2000). The lack of skills comprises the educational gap between these students and students of higher-level socio-economic status. Children who are economically disadvantaged have traditionally not had the opportunity to attend any

type of early childhood programs that might provide the experiences that their environment lacks.

Early childhood programs have been in place in this country for many years but they were initially not part of the public school system (Clarke, et al. 2000). These experiences were available only to those children from the higher levels of society who could pay for the programs offered by churches and private individuals. Other countries have offered free programs for all of their young children for many years, but Head Start is this nation's one and only attempt to provide pre-school for any section of its population. This program was designed to bridge the gap between children who were economically disadvantaged and their peers of higher economic status by increasing their chances for educational success.

With the pending full implementation of the No Child Left Behind (NCLB) legislation and the potential consequences that failing to meet its requirements can mean, school districts all over the country are looking at ways to help all students succeed (Hill, 2001). This is especially true of the testing requirements that are part of the assessment that NCLB will require. States that already have testing programs in place are in some cases attaching very high stakes to the extent that students will not be permitted to proceed to the next grade level or even graduate from high school if they do not make a passing score on the states' tests.

Determining whether early childhood programs for at-risk students can provide the skills needed to be successful on these tests should help districts meet their NCLB goals. In East Texas, many school districts are composed of a majority of students who are socio-economically disadvantaged and enter school at-risk of not being academically

successful (Academic Excellence Indicator System, 2001-2002). Therefore, if early childhood programs can be shown to help students achieve passing scores on these state-mandated tests, school districts will be more likely to support the programs and perhaps even expand then to include additional students.

Theoretical Framework

The work of Piaget is considered to be the beginning of the constructivist movement (Cooper, 1993). From his observations of young children, Piaget determined that by interacting with their environment children used what they already know to build or construct other meaning. Cooper (1993, p.16) summarizes it by saying, "Constructivists view reality as personally constructed, and state that personal experiences determine reality, not the other way around." Vygotsky added his social learning perspective, concluding that children learn through interaction and dialogues with others in their environment (Vygotsky, 2002b).

The work of Piaget and Vygotsky, as well as others, has had a great effect on the development of the curricula that are currently being used in Head Start and other early childhood programs. Constructivism places great emphasis on active, hands-on learning, interactive teaching and cooperative learning. These types of activities are considered to be the heart of what is considered developmentally appropriate practice for young children (National Association for the Education of Young Children, 2003). The experiences provided by most socio-economically disadvantaged homes have been shown not to meet these criteria.

In his discussion of constructivism and transformative learning, Martin (1997) uses four figures to visually explain the four domains of Mezirow's (1991) theories of

transformative learning. This graphic is intended to help others gain understanding of the concepts being presented by representing them in a visual form. Two of these are reproduced in Figure 1. They seem to have relevance to constructivism and the way that it applies to the early childhood classroom. The first illustration symbolizes the learners' original understanding of a topic with the outside rim of the drawing signifying the meaning perspective of the learner. In part A, the learner is linking the new knowledge to information that has already been learned. Part B illustrates how the learning is added to the previous knowledge. The idea of linking new knowledge to what a child already knows and then building upon that understanding is an essential element in early childhood curricula. Through this process a child is actively involved in interacting with his/her learning environment and constructing his/her own understanding. Martin's depiction of this concept gives a visual understanding of this point.

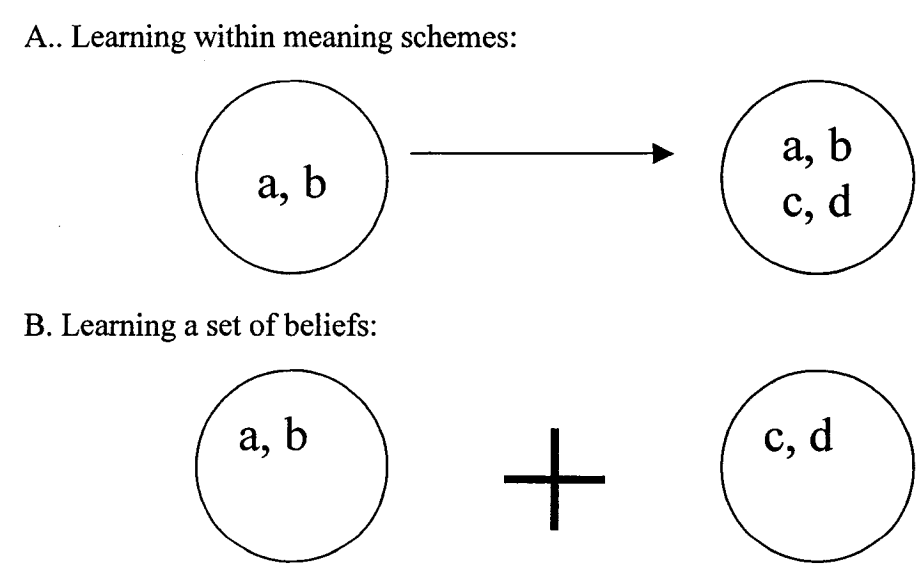

Figure 1. Martin's Visual Explanation of Mezirow's First Two Domains

Research Questions

In examining the scores from the Texas Assessment of Academic Skills (TAAS) and Texas Assessments of Knowledge and Skills (TAKS) the following questions were asked:

1. Do students who attended Head Start score as well as or better on the state's mandated test at grade three as socio-economically disadvantaged students who did not attend Head Start?
2. Do students who attended Head Start score as well as or better on the state's mandated tests in grade three as those socio-economically disadvantaged students who attended pre-schools operated by the school district?
3. How do the students who attended Head Start compare with all other students in grade three on the state's mandated test?
4. How do the scores of the students who were enrolled in the school district's pre-school compare with all other students in the grade three on the state's mandated test?

Null Hypotheses

For the purpose of this study, the following null hypotheses were tested:

H1. There would be no significant difference between the scores on the Texas Assessment of Academic Skills and/or the Texas Assessments of Knowledge and Skills of children who attended Head Start and those of children of socio-economically disadvantaged status who did not attend any form of early childhood program.

H2. There would be no significant difference between the scores on the Texas Assessment of Academic Skills and/or the Texas Assessments of Knowledge and Skills of children who attended Head Start and students enrolled in the pre-school operated by the district.

H3. There would be no significant difference between the scores on the Texas Assessment of Academic Skills and/or the Texas Assessments of Knowledge and Skills of children at grade three who attended Head Start and those of the other children in the third grade.

H4. There would no significance difference between the scores on the Texas Assessment of Academic Skills and/or the Texas Assessments of Knowledge and Skills of children who attended the pre-school operated by the district and the other children in the third grade.

Figure 2 gives a visual representation of the comparisons that this study proposes to make.

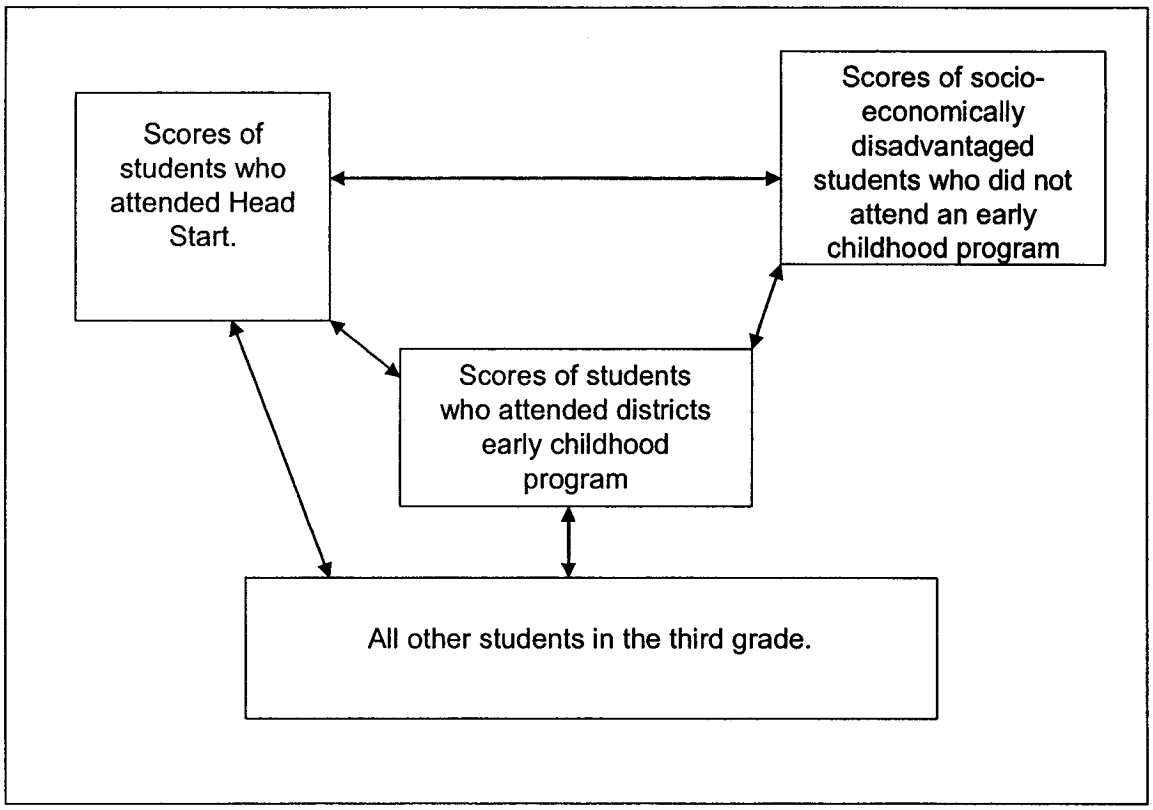

Figure 2. Visual Representation of Comparisons in Study

Definitions of Terms

The following definitions of terms used in this study were taken from the Association for Supervision and Curriculum Development (2003) glossary of terms.

1. Accountability – measurable proof that teachers, schools, districts, and states are teaching students efficiently and effectively, usually illustrated by student success rates on various tests. Accountability goals may be based on student mastery of core knowledge.
2. Assessment – measuring or judging the learning and performance of students. Assessment instruments include tests for achievement, competency, aptitude and performance, as well as other measures such as questionnaires, surveys, essays, observations, portfolios, etc.

3. Standards – statements of what students should know and be able to do, usually determined by grade level. "Content" standards delineate what students are to learn in various subject areas; "performance" standards specify what levels of learning areas; "opportunity-to-learn" standards state the conditions and resources necessary to give all students an equal opportunity to meet performance levels; "world-class" standards indicate content and performance expectations in other industrialized countries.
4. High-Stakes Tests - those tests whose scores determine rewards or penalties for schools, administrators and children, either solely or in part. In 18 states, high school students must pass state-mandated standardized tests to graduate; by the year 2003, 26 states will make these tests a prerequisite for graduation from high school as well as base grade-level promotions on test scores.
5. Standardized Tests – tests constructed so that the questions, conditions for administering, scoring procedures, and interpretations are consistent. There are two types of standardized tests: criterion-referenced and norm-referenced.
6. Achievement Tests – standardized tests that measure knowledge and skills acquired in key academic subjects found in most school districts' curriculum and textbooks (i.e., reading – vocabulary, word analysis, comprehension; language – spelling; mechanics; usage; math – computation; concepts; applications; social studies and science.)
7. Constructed Response – test items that require students to write a short or extended answer, designed to encourage thinking and reasoning rather than memorization and recitation.

8. Selected Response – test items that supply an array of possible answers to a question from which a student must choose the correct or best response (ex. multiple choice, true/false, matching).
9. Economically disadvantaged student – for the purpose of this study are students who are eligible for free or reduced-price meals under the National School Lunch and Child Nutrition Program or other public assistance.
10. Texas Assessment of Academic Skills (TAAS) - The exam given by the state of Texas from 1981 until the 2001-2002 school year to evaluate student progress and to determine each school's annual report card (Texas Education Agency, 2003).
11. Texas Assessments of Knowledge and Skills (TAKS) – The exam given by the State of Texas beginning during the school year 2002-2003. It replaced the TAAS (Texas Education Agency, 2003).

CHAPTER 2: LITERATURE REVIEW

High-Stakes Testing – An Overview

Introduction

Testing in schools in the United States dates back to colonial days, but in the last twenty years much of the testing has been taken out of the control of the teacher and the local school boards. In earlier times tests were constructed and graded by the teacher. Tests, along with other activities, were used to determine a student's progress. Many tests were given during the year and this testing over time determined if a student was prepared to move to the next grade level. Today many tests are organized into standardized formats and graded by machine. This has become a national issue with the passing of the No Child Left Behind (NCLB) legislation (United States Government, 2002) and the high stakes that have been connected to scores. Currently there are states where the score on one test can determine whether a child passes to the next grade, whether a student receives a high school diploma or whether a college or university graduate receives a teacher certification (Hill, 2001).

Educational reform in this country is seemingly driven by testing (Cimbriez, 2002). Proponents of this reform believe that when students are held accountable on tests, teachers will focus on the tested information and change their instructional techniques to improve students' learning. Therefore, these proponents conclude that each time there is a need to change teaching practices, all that must be done is to change the test.

The second assumption underlying this push for testing is the idea that if high-stakes are not attached to tests, teachers and/or students will not take the tests seriously (Cimbriez, 2002). It is believed that the promise of rewards or the threat of sanctions must be present to ensure change. An overview of the history of the development of testing in the nation's schools should help build an understanding of why these different points of view have developed.

History

In the early days of the 19th century, when there were rather small numbers of students in the nation's schools, leading educators such as Mann believed that all students could learn if they were properly taught. These beliefs began to change as the number of students began to grow and the diversity of the student body increased (Clarke, et al. 2000). Binet first devised the Intelligence Quotient (IQ) test to evaluate children in French schools (DeKalb Public Schools, 2003). This caused educators to change their beliefs about why students succeeded or failed in schools. They reasoned that it was not the teaching method that determined the attainment of students, but students' ability to profit from instruction.

In 1918, C. H. Judd, who was Director of the School of Education at the University of Chicago, stated that ". . . unsatisfactory school results [are] to be traced to the native limitations in the ability of the child or to the home atmosphere in which the child grows up" (Judd, 1918, p.152). He then discussed the virtues of what was then called "scientific measurement" or testing. The use of Binet's IQ test provided the opportunity for educators to test students and place them in the proper curriculum for their ability level. There was a problem with the complexity of test when it came to

giving Binet's test to large numbers of students. The test in its original form required that it be individually administered, and scored and the results interpreted by trained psychologists (Clarke, et al. 2000).

The cumbersome task of having professionals give and manually grade the tests limited its use until 1914, when F. J. Kelly invented the multiple-choice test item (Samelson, 1987). This made it possible to administer a test in a short period of time and have it quickly graded by unskilled clerks. The use of this type of testing was greatly increased when the United States government needed a way to efficiently classify recruits during World War I. In 1917, Arthur Otis developed what was to become known as the Army Alpha and Beta group intelligence tests. Large school districts then began to use these tests to track students by placing them into ability groups, and colleges used them to rationalize admissions procedures.

Clarke, et al. (2000) state that the combination of this newly developed multiple-choice format and the demand from government and large school districts was all that the fledgling test-publishing industry needed. By the 1920s, it had evolved into a highly profitable billion-dollar industry. At this time the major providers of tests were the College Board that began in 1900; Houghton Mifflin in 1916; and the Psychological Corporation or PsychCorp, California Test Bureau, and World Book, which began in the 1920s. All of these were able to capitalize on the popularity of intelligence testing that used a multiple-choice format and the societal drive towards efficiency and scientific management.

Tyler's work in the 1930s and 1940s led him to maintain that educational objectives should be defined using both content and behavioral components (Tyler,

1934). This work provided the foundation for the later work of Bloom, Mager and Popham, all of whom championed behavioral objectives testing in the 1960s and 1970s (Clarke, et al. 2000).

Clarke (et al. 2000) believes that the current obsession with educational testing really began in the 1950s with the public's dissatisfaction with education. The Soviets' launch of Sputnik sent shock waves though the nation's educational systems and put the way mathematics and science were taught under very close scrutiny. This was followed by the 1970s "back to basic skills" movement and the 1983 release of the National Commission on Excellence in Education's *A Nation at Risk.* In 1985, the United States Congress passed the National Defense Education Act, the first legislation to explicitly mandate standardized testing programs. This was followed by the Coleman report in 1986, which shifted the philosophy of evaluation from one that looked at resources devoted to education to one of measuring results using students' scores on multiple-choice tests.

In 1955, the invention of the high-speed scanner was very significant, for when paired with the popular multiple-choice format, tests could be given efficiently and at lower cost. When this occurred, the process of standardized testing moved from the states and local school districts to commercial ventures. Companies could test every student in a state for two or three dollars per student and the results could be obtained in two to four weeks. Several companies used this new high-speed scanner to their advantage. One of these was National Computer Systems (NCS), whose only services were testing, and survey scoring. Another was Scantron, which introduced the first desktop scanner to read and score test answer sheets. The company now has the largest market share of optical

mark-reading equipment, even though its profits mainly come from the scannable forms that the schools purchase after they have, in many cases, been given the scanners (Clarke, et al. 2000).

Finally, the demand for accountability and all of the record keeping that it required made multiple-choice, commercial, standardized tests a very attractive tool for measuring results. All of these influences culminated in 2002 with the passing of No Child Left Behind (NCLB). This legislation requires states to test students at given grade levels each year and connects broad reaching consequences to schools and districts whose scores do not reach satisfactory goals (United States Government, 2002).

Commercial Connection

The NCLB legislation provides $400 million for states to develop and administer the tests given to students in grades three through eight. Three test publishers and one scoring firm are now jockeying to divide much of these funds. The three publishers, Harcourt Educational Measurement, CTB McGraw-Hill, and Riverside Publishing (owned by Houghton Mifflin Company), write 96 percent of the tests administered at the state level in the United States, while NCS Pearson is the leading scorer of standardized tests. Educational Testing Service (ETS) has also entered the field and is competitively bidding for the right to develop and score tests for some of the states with the largest school populations (Public Broadcasting Systems, 2002; Kohn, 2002).

Some critics of the testing industry make the accusation that it hides behind what is seen as a need to protect the integrity, objectivity, and fairness of the assessing instruments. The skeptics further state that what is objected to is the corporatization of educational assessment. Placing the emphasis on the cost and efficiency of the process

rather than helping children be successful in the learning process. It is also believed that those who teach children are best equipped to evaluate them and that one test, given on one day, cannot give an accurate picture of what a child really knows. Gallagher (2000) cites the basic points made by most of the critics. They believe that this type of reform:

1. Supports functionalist views of teaching and learning by reducing classroom work to practice in discrete skills and the transmission of bodies of knowledge;
2. Wrests control of classrooms from the hands of teachers and places it in the hands of remote experts, thus alienating teachers (and students) from their work;
3. Diverts teachers' and students' attention away from the intrinsic rewards of education and toward extrinsic sanctions;
4. Focuses our attention on the least important or useful information about learning ("lower-order" skills, mechanical corrections), rather than on those we consider most important (higher-order skills, process);
5. Narrows and often waters down the curriculum, placing emphasis on the knowledge and skills that remote outsiders deem most important or at least most easily measured;
6. Disadvantages second-language students and students from non-majority backgrounds; and
7. Diverts attention from the real, structural problems of education.

Khon (2002) states that the commercial side of testing is not as simple as just developing, administrating and scoring tests, because the publishing companies not only produce tests, but many ancillary products as well. There are materials designed to assist

school districts in preparing children for taking the tests and materials to help unsuccessful students acquire the skills that they seem to be lacking. These companies offer consultants to train faculty in using these materials as well. Testing is no longer a simple matter of a grade or score, pass or fail; it is big business, very big business.

Standards

Schools and school districts have traditionally set goals for what they wanted students to accomplish. It was not until former President Bush and the National Governors' Association set the National Educational Goals with the emphasis on content standards that the push for standards based education became strong on a national scale. The National Educational Goals were supposed to be reached by the nation's schools by the year 2000 (Clarke, et al. 2000). At that time, national standards for the various academic areas were intended to be voluntary. The federal government was not the only agency formulating guidelines. In the 1980's, the National Council of Teachers of English (NCTE), in conjunction with the International Reading Association (IRA), formulated a set of standards for the teaching of reading and English (Gottlieb, 2001). Other organizations soon followed with their subject-specific voluntary standards.

Standards were defined as statements of what students are to know and be able to do. The various types of standards, according to McBrien and Brandt (1997), address various important aspects of learning. They include:

1. Content standards which cover what students are to learn in various subject areas, such as mathematics and science.
2. Performance standards, which specify what levels of learning are expected.

3. Opportunity-to-learn standards, which state the conditions and resources necessary to give all students an equal chance to meet performance standards.
4. World-class standards, which indicate content and performances that are expected of students in other industrialized countries. This term is also attached to the movement in the United States to bring the nation's students' academic achievement and knowledge on par with students' accomplishments in other industrialized countries.

Many of the state education agencies felt that the federal and association guidelines were lacking in the necessary level of academic rigor and/or measurable specificity (Gottlieb, 2001). Even though the decisions about instructional content have traditionally been left to the local schools, the state agencies embarked on projects to define measurable standards. The push to have consistent standards for all of the schools was given further impetus by segments of the public who believe that the level of scholastic achievement of pupils in the public schools leaves much room for improvement.

Researchers looked at standards that have been written by various states to compare them for soundness, rigor, clarity, and specificity (Gottlieb, 2001). Groups such as the American Federation of Teachers (AFT), Fordham Foundation, and Council for Basic Education (CBE) conducted studies. The report from the CBE examined 42 states' standards for both mathematics and English language arts. The CBE reached the conclusion that 28 states have rigorous or very rigorous standards. However, Gottlieb (2001) says that many of the states, standards were found to have one or more of the following problems:

1. The reading requirements were vague and not specific. They did not state the types of reading or how much was expected of students.
2. There were inadequate literacy requirements from particular periods or genres.
3. They lacked adequate student research activities that required pupils to gather information from various sources and credit others' ideas.
4. There were very limited requirements for language study that required students to examine word origins, slang, etc.

The CBE concluded that if standards are to succeed, they must be clear, high, but not unreachable, and specific, but not directive. (Joftus & Berman, 1998). They also concluded that teachers and students need support from parents, school administrators, districts, and states to achieve the goals that standards set.

The Center for Improvement of Early Reading Achievement (CIERA) asked researchers Wixson and Dutro (1998) to look at the reading standards for Kindergarten through grade three in fourteen states. Using content analysis methods, they evaluated the standards and made conclusions paired with recommendations. These included:

1. Standards and objectives need to be more specific in the early grades.
2. Reading needs to be conceptualized in a way that makes curriculum, instruction, assessment and the reporting of needs manageable, without oversimplification.
3. A balance needs to be struck between sufficient state guidance and local flexibility.
4. A viable curricular path over grade levels needs to be provided.

5. An accurate way of assuring that the content is appropriate for the particular grade levels needs to be provided.

Using the NCTE/IRA guidelines as points of comparison, Mesmer (1997) examined the structure and content of language arts standards of four states: Colorado, Florida, Michigan, and New Hampshire. From this study Mesmer contended that the "list" style of some state standards seemed to restrict teacher creativity, while the less specific standards lend themselves to greater flexibility. Terms of content were found to be remarkably similar in the four states. Her findings showed an emphasis on concepts and skills such as the use of varied strategies in decoding and comprehension, construction of meaning from text, and conventions of English. She also concluded that standards for teaching English to those who have another first language were a common omission. Mesmer (1997) concluded that it really did not matter how standards were written or organized; they would have limited impact on students.

The Thomas B. Fordham Foundation took its second look at the topic of standards (Mesmer, 1997). The Foundation's study found that during the two years since their first study, there had been some improvement. The areas of improvement identified were:

1. Overall, the state standards had become more specific and measurable.
2. Content has made a comeback in the states that were willing to dictate particular subject matter for particular grade levels.
3. The national standards that are being promoted by many professional organizations no longer had as much influence as they once did

Gottlieb (2001) concluded that most states still could not legitimately claim to have fully embraced standards-based educational reforms and needed to improve both

academic standards and accountability. Only five states (Alabama, California, Texas, North and South Carolina) of the 42 studied were considered as having solid standards with sufficient degrees of accountability. Gottlieb (2001) also noted that there were 12 states that had sufficient accountability, but inferior standards.

Standards and Curriculum

The American Federation of Teachers (AFT) stated in its current review of educational reform that standards-based education was firmly in place in all 50 states. The study also found that none of the states were coordinating standards, curriculum, tests, and accountability measures. It further concluded that few states had developed even the most basic curricula to accompany the standards set by the state educational agencies. Furthermore, in most states mandated tests were based on weak standards or did not match what was being taught. The report further found that many of the states that had mandated tests with high stakes had correlated test content with that states' academic standards (American Federation of Teachers, 2001).

The AFT has been evaluating states' standards in English, mathematics, science, and social studies since 1995 (Manzo, 2001). This group judges each standard on specificity and clarity. The AFT's study was the first to evaluate the status of curriculum development and how it was aligned with the state's standards. It showed that 17 states had adopted policies that linked students' promotion to whether or not they were able to demonstrate proficiency on the state's test. At the time of this study, twenty-seven states had high school exit exams that were aligned to the states' standards, but none had fully developed curricula. The major areas of concern included learning sequences, instructional resources, teaching strategies, performance indicators, and lesson plans.

Education Week conducted a survey of 1000 public school teachers as part of The Quality Counts 2001 Report. The results from this survey showed that 87 percent of the teachers believed that the standards were a "move in the right direction" and 74 percent felt that the level of the standards in their states was "about right" (Olson, 2001, p. 1). The findings of this report were basically in line with the study done by AFT.

Zenger and Zenger (2002) looked at formation of standards and posed another question. They wanted to know how the scope and sequence of the skills and materials were established for each grade level. During a recently completed study they sent surveys and questionnaires to the head of each of the 50 states' education agencies, the national professional councils, subject matter associations, major textbook publishers, major universities, educational leaders, and selected local school districts throughout the nation. The Zengers also included personal interviews with innumerable educators. According to their report, not one of the people or groups contacted indicated that they had studied how content should be sorted and placed at specific grade levels. The most common answers to their questions were, "It's in the textbook," "It's in the curriculum guide," or "We've always taught that in that grade." The Zengers did find that the National Council for Social Studies (NCSS) was the only group to make a concerted effort to organize the subject matter and skills taught at each grade level using specific criteria as a guide. This being the only example they found, they called into question the very foundations upon which the standards were built. Having questioned the foundations of the standards, they also questioned the credibility of the high-stakes tests based on those standards.

No Child Left Behind Legislation

Public Law 107 – 110, the No Child Left Behind Act, was signed into law on January 8, 2002 (United Stated Government, 2002) and is the most sweeping reform ever made to the original Elementary and Secondary Education Act (ESEA) since its enactment in 1965. This act changed the role of the federal government and its relationship to the schools that receive federal dollars by requiring that they meet accountability standards on their states' test. This new accountability system involves five critical steps:

1. States must create their own standards for what a child should be able to know and learn for all grade levels. Standards must be developed in math and reading as soon as possible and for science by the 2005-2006 school year.
2. Once the standards are in place, each state is to formulate tests aligned with these standards. These tests will be used to evaluate every student's progress in each of three grade spans: grades 3-5, grades 6-9, and grades 10-12. The evaluation is to begin during the 2005-2006 school year for reading and math, with science following during the 2007-2008 school year.
3. Each year districts are to set goals for improvement. Adequate progress toward meeting these goals is expected to be made by each state, school district and individual school. The progress will be measured and reported for all students as well as by demographic group: economically disadvantaged, racial and/or ethnic minorities, students with disabilities, and/or those with limited English proficiency.

4. The results of all testing will be publicly reported in the form of yearly district and individual school report cards.
5. Schools that continually fail to make adequate progress toward their standards will be held accountable.

This new law gives the 50 states the right to establish their own standards and more freedom to direct their funds into programs believed to be the most beneficial to the students in their schools (United States Government, 2002). It is also designed to eliminate much of the paperwork that has accompanied the use of federal funds. Additional funds from this legislation will be given to districts that adopt research-based programs that have proven successful in the areas of math and reading.

According to NCLB, parents will have more choices in the kind of education their children are receiving (United States Government, 2002). Students who attend schools that continually fail to meet their standards may transfer to those that are succeeding. There will also be more funds for the establishment of charter schools.

High-Stakes Testing and Assessment

As school districts across the nation began to write standards and hold their teachers responsible for making sure those students were taught, testing quickly found its place at the top of the assessment list for accountability. In his book, *The Truth About Testing: An Educators Call to Action,* Popham (2001, pp.15-16) states that during his teaching career, which has spanned almost fifty years, "...educational tests were transformed from teacher's tools into teacher's terrors." He further states that he is not opposed to standardized testing or even high-stakes testing if the tests are constructed in

such a manner that they supply evidence about the quality of the schools, and if they promote student's mastery of worthwhile skills and knowledge.

Popham (2001) is so concerned with what he calls the maelstrom of test-obsession he states that this new emphasis in the nation's schools could become the "whirlpool" that drags our educational system down. Popham believes high-stakes tests scores do not necessarily mean that a school is providing a good education for its students and he is not alone in his beliefs. The April issue of *The American School Board Journal* (2002), reports results of a poll taken of their readers that tends to agree with Popham's conclusions.

Parents, teachers and administrators are beginning to question the value of all of the pressure to achieve high scores and the effect it is having on students (Schrag, 2000). In one Massachusetts community, 300 students boycotted the administration of the Massachusetts Comprehensive Assessment System (MCAS) tests in the spring of 2002. With the support of their parents, teachers and members of the public, these students stayed home on the day the test was administered. In November, after a large majority of students failed the test, the state Board of Education decided to lower the score required to pass.

Massachusetts is not the only state to report negative reaction to high stakes testing. In Wisconsin the legislature refused to fund the state's exit examination (Schrag, 2000). This legislation had been approved two years earlier with much public fanfare and the backing of the state's governor. Governor Tommy Thompson has been a national leader in the push for higher standards and higher accountability. Despite the backing of the Governor, the test proved very unpopular with the public; therefore a compromise

was reached so that a student's achievement would not be totally assessed on one test. A variety of criteria would be used and a failing exam would not result in an automatic denial of a diploma.

There was also talk in Virginia about a Massachusetts-style boycott (Schrag, 2000). Parents, teachers, and school administrators were so opposed to the state's Standards of Learning assessments that they inspired several bills in the state legislature. One bill would require that the members of the state board of education take the eighth grade assessments in each of the four tested areas: English, mathematics, science, and social studies. The scores were to then be reported to the general public. None of the bills related to the testing program passed during the 2000 legislative session, but the political pressure is still on the increase.

There is also a very personal side to high-stakes testing. Behind each of these scores is a very real child and many of them are feeling the stress caused by this form of testing (Cole, 2001). For example, a fifth-grader in North Carolina was a "B" student but a rather erratic test-taker. The student reported having nightmares in which her books were "squishing" her and the pencils stabbing her. In another instance, an eleven- year-old threw up the night before the test. There have also been reports of problems that range from stomachaches, to insomnia and depression. The Alliance for Childhood, a partnership of healthcare professionals and educators, asked the states' policymakers to consider these examples and others as documentation of the toll these high-pressure tests are taking on young children.

Nathan (2002), the principal of the Boston Arts Academy, offered another perspective on effects of high-stakes testing. She described her school as one "...with a

rich arts and academic curriculum, taught by highly qualified and committed teachers in an atmosphere of respect and high expectations." The curriculum in this school is designed to be hands-on, using open-ended learning. Teachers do not base their instruction on just a textbook, and students do not spend most of their time answering questions at the end of chapters. Nathan fears that the Massachusetts Comprehensive Assessment System (MCAS) will shift the emphasis from high-quality instruction, adequate materials, fully staffed and equipped libraries, and art and music programs to one that concentrates on test-prep workbooks and test review type courses. In addition, she adds that all the resources spent on testing will not lower class sizes, provide professional development for teachers, or give the needed latitude for teachers to teach in many different styles to accommodate the students who do not learn best in the more "traditional" ways (Nathan, 2002).

Popham (2001) also voiced his concern about what high-stakes testing is doing to the nation's schools' curricula. He calls this phenomena "curricular reductionism." It means that the curriculum in schools is not growing but actually shrinking. With all of the emphasis on tests over English language arts and mathematics, the subjects that are not tested received less attention or emphasis. These subjects are either not being taught at all or are just being given space on the teachers' lesson plans at the end of the day. Then on most days, class time is so full of test practice, teaching test-taking strategies and test formatted worksheets for language arts and math that there is little if any time left for social studies and science. Popham paraphrases the saying "survival of the fittest" in referring to all of this testing by calling it, "...survival of content that fit-test best the high-stakes test" (Popham, 2001).

Not only do non-tested subjects receive little attention because of the emphasis on testing, but the very fabric of the subjects that are tested tends to be distorted (Popham, 2001).Teachers tend to focus on only the skills needed for the test. What this means is that if the test only calls for low-level cognitive challenges, then that is the level of difficulty on which the teacher will concentrate. If the higher levels of thinking are not assessed, they are not taught, depriving students of a rich curriculum and the vast experiences that they should be having. Popham emphasized that teachers are not really the villains in this saga. Unfortunately, they are the victims along with their students, but the most unfortunate consequence is that our society loses because students are not given the opportunity to reach their full potential.

The teachers' delivery of instruction in classes has been adversely affected along with the curriculum, but, more importantly, the students are the ones who are losing the most. Heubert (2002) states that testing programs and the educational practices that have accompanied them have had adverse effects on the low-achieving students they were supposed to help. Students who have difficulty with mathematics, poor reading and test taking skills, as well as those who struggle with limited English, are leaving school without graduating. Not having a high school diploma, in this society, means lower-paying jobs and diminished opportunity for employment. It also means limited further education, higher risk of getting involved in criminal activities, and greater risk of dysfunction in their family life. The National Research Council (NRC)(2001) has concluded that holders of the General Equivalency Diploma (GED) do not fare much better than those who received no diploma at all.

The concern that is being stated about high-stakes testing is heightened even more when one looks at the statistics (Heubert, 2002). In the states where tests are required for graduation, students of color, those with disabilities, those from low-income families, and those who are English language learners are failing at the alarming rate of from 60 to 90 percent. These figures do not include the students who dropped out or were retained in grades before they took the graduation exams.

Failing to receive a high school diploma is not the only consequence of scoring poorly on one of the states' tests. Many states require that if a student in grades three through eight does not pass his/her yearly test, then they will not be promoted to the next grade (Heubert, 2002). Research conducted over the last several decades has shown that students who have to repeat a grade are in no better position than those poorer students who are promoted to the next grade. The National Research Council (2001) report concluded that low-performing elementary and secondary students who were required to repeat a grade, when compared to students who were equally weak but who were promoted to the next grade, did less well academically, were much worse off socially and much more likely to not complete high school. Heubert's (2002) article cites studies which show that having to repeat a grade is the single strongest predictor of whether or not a student will drop out. This predictor, according to these studies, is stronger even than parental income or mother's educational level.

In July of 2000, The American Educational Research Association (AERA) published a position statement on high-stakes testing in grades pre-K to 12. The AERA study stated that decisions that affect individual students' life chances or educational opportunities should not be made on the basis of test scores alone. According to AERA

other relevant information should be taken into account to enhance the overall validity of such decisions. AERA further stated that scores obtained from this one test represent only one type of information and other types of data should be included to supplement and confirm the validity of the test scores (Bernal & Valencia, 2000).

Another organization that has published a position statement on high-stakes testing is The National Association for Multicultural Education (NAME), which states in part that "NAME strongly believes that standardized and state mandated testing damages the quality of teaching and learning and poses unwarranted, unethical, and sometimes illegal barriers to equal opportunity for large numbers of Americans..." (National Association for Multicultural Education, 2002, p.1).

Calling this a nightmare for states, Louisiana's superintendent of education estimated that as many as 80 percent of schools in his state would fail to meet the targets that were set for them, while officials in Wyoming predict that over half would not meet theirs (Karp, 2002). North Carolina, frequently cited as an example of the progress that standards and testing can bring, calculated that 75 percent of the schools in that state would not meet new standards if they had been in place over the last three years. The department of education in Rhode Island has released the statement that during the past four years no school in that state would have met the new criteria.

Some of the methods that are being used to help raise tests scores seem to be rather extreme. Sinberbrand (2002) reported a study conducted in the schools of Virginia by the National Bureau for Economic Research. Findings from this study, released in 2002, indicated that many of the underperforming districts were attempting to give the students in their schools an extra edge on the state's test, Standards of Learning, by

adding roughly 18 percent more calories to lunchroom fare on exam days. This action is based on a study done by the American Institutes for Research showing that higher glucose levels in the blood can boost concentration. Other states are now looking at what is happening in Virginia to see if implementation of this same strategy might be beneficial to their testing programs.

Another side of high-stakes testing is the legal one. Parents and students are asking what rights school districts have to keep a student from moving to the next grade because of one test. Quigley (2001) looked at the court cases and legal position. He specifically looked at the 1978 case of Horowitz and Ewing that stated that students do have a constitutionally protected property interest in academic matters. He concluded that there is a serious threat to student rights posed by high-stakes testing. It is his contention that this type of testing is being grossly abused in the name of greater accountability to serious detriment of the children in our schools. Quigley (2001) truly believes that high-stakes testing in its present format is "...a gross failure of moral imagination, a failure both of educators and of policymakers, who persistently refuse to provide the educational resources necessary to guarantee an equal opportunity to learn for all our children" (p. 2).

In his rather lengthy article in *The Boston Public Interest Law Journal*, Quigley (2001) states that students do have the right to due process protections in the area of high-stakes testing. He states that there are four core rights of students as they relate to testing:

a. The right to expect that the test is accurate and is an appropriately utilized evaluation tool,

b. The right to be tested on only the material that has been taught,

c. The right to expect that the level of preparation they have had meets professionally acceptable standards, and

d. The right that there has been fair and adequate preparation made for the students to take the tests as well as having a fair possibility to pass.

Funding

Testing on the scale required by No Child Left Behind is a multi-million dollar concern (Hill, 2001). When Senator Jim Jeffords voiced his opposition to the NCLB bill, he cited inadequate funding as the reason for his objection. The legislation provides $400 million to cover the cost of the annual testing in all the public schools in the nation. According to Hill, this will not cover the total cost of test booklets, answer sheets, and scoring, so the states will be expected to pay what NCLB does not fund. The remainder of the funding is going to have to come from already over stretched school budgets. Something will have to be cut from school programs to make up the difference, with subjects like art, music, physical education and special programs for low-achieving students being the first to be eliminated (Nathan, 2002). This seems to make a never ending circle with the students who need the help the most being trapped in the middle. Those with the most to lose are not being able to keep the little that they already have.

No Child Left Behind legislation ties funding and other consequences to increasing test scores in every school every year. This culminates in twelve years when every child is to be reading on grade level by the time that they reach grade three (Lewis, 2002). This legislation expects the pattern of test results to go straight up every year. But according to David Figlio (2000) at the National Bureau of Economic Research (NBER), scores tend to rise and fall from one year to another. The NBER states that to truly

determine a school's progress and the funding associated with it, the tests results should be based on the average of results over multiple years.

There is another side to the funding issue. It involves bonuses that are paid to teachers and schools by some states when their schools perform well on state mandated tests and the effect it has on the morale of teaching staffs that do not meet their goals. (Cole, 2001). Schools set their test targets using a complex formula formulated by the state. The teachers in schools that reach or surpass their targets receive a bonus.

An example of this bonus program can be found in the schools of Roanoke Rapids, North Carolina, a town in the northern part of the state with a population of about 17,000. The fifth graders in the district's schools spend about two weeks each year just taking standardized tests (Cole, 2001). Each teacher in schools in Roanoke Rapids that reaches or surpasses his/her targets receives as much as $1,500. The lowest-achieving schools that do not reach their targets are in danger of being taken over by state appointed turn a round teams.

Over the years, scores have risen in Roanoke Rapids, which has resulted in teachers in three of the four schools receiving bonuses. The one school whose teachers have never received bonuses is located in a poorer neighborhood that has shown only modest gains each year. This has definitely had an effect on teacher morale. The teachers in this school feel even more pressure to meet the state set-goals. Principal Kathy Lawson said, "The state tries to shame us into meeting its goals, but we have educational victories every day that can't be measured by computer scanner" (Cole, 2001, p. 2). However, the state superintendent of public instruction responds to criticism by saying that "without

consequences, there aren't assurances that the curriculum has been delivered" (Cole, 2001, p.2).

Validity

During the last sixty years there have been countless studies conducted on testing, but none have been able to validate that high-stakes testing will improve education (Cimbriez, 2002). Stake and Rugg (1991) and Zancanella (1992) have basically drawn the same conclusions. They believe that the drive for testing is politically motivated rather than stemming from a desire to actually improve instruction. The general public has seemingly come to believe that attaching high stakes to a test is appropriate even if the consequences are out of proportion (Cimbriez, 2002). Thus, passing just one test can be considered equal in value to an entire year of schoolwork in grades 3 through 8 in determining promotion.

Allington (2000) contends that there are at least ten strategies that can improve a school's overall test scores without actually improving learning or student performance. He has documentation that each has been tried or implemented in various states and/or school districts:

1. Altering the answer sheets is one of the most common ways to raise scores without improving student learning. Allington (2000) has documentation that schools have tried various methods of altering answer sheets that range from erasing wrong answers to having students only answer certain questions and later someone else filling in the remaining answers. The problem of altering answer sheets in Texas was deemed severe enough that in May 1999 the state legislature passed a bill making altering tests or tests results a felony punishable

by fines up to $10,000 and up to 10 years in jail (Southwest Educational Development Laboratory, 2000).

2. Encouraging low-achieving students to not attend school on exam day is another popular way of increasing scores. Some schools have been documented encouraging low achieving students to not attend school on the day of the test. Others have gone so far as to schedule field trips for classes of Title 1 remedial reading students. This has caused some states to require that the scores of zero be recorded for students who are absent when the exam is given.
3. Expelling low-achieving students during the weeks that precede the date of the test administration is another way to improve testing results. Allington (2000) states this to be more prevalent in high schools than in the lower grades. This same strategy has also been discussed in detail by Bracey (2000) in his article *The10th Bracey Report on the Condition of Public Education.*
4. Many states require special modifications for pupils with disabilities or provide the option of excluding them from testing altogether. There are cases where districts have had low-achieving students identified as having a disability in order to give then assistance while taking their exams.
5. There has also been an increase in the use of "non-approved" test accommodations for students with disabilities. One section of the Disabilities Act of 1997 (IDEA) was designed to help stem this ever-increasing practice by requiring that students identified with disabilities take the required test. The legislation also requires that these tests scores be part of the aggregate scores reported to the public. There are districts that have circumvented this by

having these accommodations included in the student's Individual Education Plan (IEP), which IDEA does allow.

6. Targeting resources toward certain groups can also help increase a district's scores. Districts that resort to this strategy usually conclude that higher achieving students are going to pass without much work and low achieving students are not likely to pass no matter what is done. Therefore, it is the middle group that could profit most from the focusing of resources. In these instances time and money are targeted to only the middle students leaving the high and low achieving students to their own resources.
7. There is another strategy that is similar to the one above. This involves segregating students by achievement levels. For example, a school might take all of the students that they believed would not pass the exam and placed them in one class. The justification being that by removing the students that were low achieving from the classroom with high achievers the teachers would have more time to work with students that it was felt would pass the tests. The other rationale was that by placing low achieving students in smaller classes with extra help they would progress further and possibly achieve at a higher level. In most cases the results did not prove this to be true.
8. Many of the companies that publish tests and/or textbooks also publish test preparation materials. According to Allington's (2000) research, many school districts pour large amounts of their materials budgets into this type of resources. There is very little data to verify that these materials really do increase test scores.

9. Retaining low achieving students has shown to increase scores in the short run, but this strategy is extremely costly in the long term because it adds additional years of schooling to large numbers of students.
10. Some school districts have resorted to changing the school year so that students have more time in school before the state set testing date. They believe that by giving the students more time in the classroom students will perform better on the exams. In one case the school's summer vacation is from March 1 – May 30th because the state test date is usually during the winter months.
11. In some states where the politicians have made raising tests scores part their political agenda, there have been instances where the level of difficulty of the reading passages has steadily decreased, insuring that these political goals were met and scores increased.
12. The final strategy is that of changing the cut-off scores. This has been done in several instances when the governing agency realized just how many students might fail to meet the standard (Allington, 2000). Bracey (2000) and Bernal & Valencia (2000) have also cited instances of states changing the cut-off scores to increase the passing rate.

Each and every one of these so called strategies tend to defeat the stated purpose that these tests were originally designed to measure and consequently invalidated any interpretation that might be given to the scores (Allington, 2000).

Texas Model

Texas began the implementation of its TAAS tests during the 1980-1981 school year (Patterson, 2000). The new versions, called the TAKS, were given for the first time during the spring of the 2002-2003 school year. Those who support the tests call attention to the statistics which show that overall test scores have risen each year. Statistics also show that there were gains in the number of African-American, Hispanic and economically disadvantaged students passing the test, even though the percent of increase was not as great as that of white students. If one looks at the numbers, TAAS has been a success. Some believe that TAAS has improved education in the state. The TASS and TAKS were the basis for the No Child Left Behind legislation and proponents believe that these gains can be generalized to all of the nation's schools (United States Government, 2002).

Officials in Texas who support the testing program say that the tests are doing exactly what they were designed to do (Patterson, 2000). Some Texas officals say that the tests are built on the standards and the curriculum designed to meet those standards. TAAS is a way of ensuring that the curriculum has been taught. Those who oppose TAAS contend that the teachers in the state are teaching to the tests, but those who are in favor of the tests feel that this is a positive fact rather than a negative one. Ann Smisko, the associate commissioner for curriculum assessment and technology for the Texas Education Agency, has been quoted as saying, "We have a curriculum that has to be taught. [Teachers] ought to be teaching to the test – and they are"(p.3). Smisko seems to believe that the "teaching to the test" accusations arise because of a misunderstanding of appropriate practice. We encourage teachers to plan lessons about the objectives that the

state has written. We release old test questions, so that parents, teachers and students can view the types of questions that are typically asked. She continues by saying that we do not intend for schools to slavishly practice specific test items, and those that do are missing the point. We want the teachers to teach objectives not test items (Patterson, 2000).

TAAS critics say that these numbers do not tell the entire story. Those who are most vocal have a different definition of "teaching to the test" (Patterson, 2000). They say that teachers spend hours concentrating on methods that claim to raise test scores regardless of their pedagogical value. Each and every hour that is spent in the pursuit of learning how to make a higher score on a test is an hour lost when students could be encouraged to be curious, creative thinkers (Patterson, 2000).

Bracey (2000) has called the success of TAAS all "smoke and mirrors." He contended that the low passing grade set for TAAS equates to about the 25th percentile on a typical standardized commercially available achievement test. He states that portions of TAAS reading test have become progressively easier over time. The improvement in scores according to Bracey (2000) cannot be related to academic achievement, but to the lessening of difficulty of the tests.

Summary

With the enactment of the No Child Left Behind legislation, nationwide mandated testing has become a reality. Those who favor holding schools accountable believe that by using tests such as TAAS and TAKS and connecting consequences to the scores, schools and teachers will better meet the needs of students (Patterson, 2000). They believe that after setting standards, testing will ensure that the objectives have been

taught. NCLB has been touted as a way to give parents a better understanding of what is going on in their children's schools and the option to move their children to better schools if their neighborhood school is not performing well.

Opponents of using high-stakes testing for accountability believe that not enough work has been done on the standards to make sure that they are developmentally appropriate at each grade level (Zenger & Zenger, 2002). They also have come to the conclusion that the tests currently in place relies too heavily on multiple-choice questions and does not always test the standards. Schrag (2000) calls into question using high-stakes testing because of the pressure it puts on children, teachers, and parents.

Schools were among the first institutions founded when settlements were established in this country. The public school system has long been a tenant of this democracy (Clarke, et al. 2000). Unlike school systems in other countries that only educate the best, the brightest, and those who can afford to pay for an education, one of the goals for schools in the United States has been to educate each and every child. The schools in the United States want to try to help each and every child reach their fullest potential. Clarke states that those who oppose this legislation believe that it threatens the very foundations upon which our schools were built. One of the strengths of our democracy has been the willingness of the citizenry to pay the taxes that support an education that promotes critical thinking and evaluating skills. Graves (2002) has stated that:

> The strength of our democracy, as well as our great success in business, is in our capacity to invent, or find a better way to look at problems from several vantage points within a free society. I know that our president prizes these aspects of our national character. There is a mistaken notion, however, that a test is good just because it is a test. Current tests require one right answer and are conditioning Americans to think this is what learning is all about. The massive amounts of time

> spent either preparing for tests or taking them have displaced writing and original, thinking, and have dulled the thinking edges of our students. Indeed, current approaches to assessment are lowering standards, and America is in danger of losing an entire generation of its future citizens whose problems may be even greater than our own (p. 2).

The present road that the educational system in United States is taking has had its most profound effect on students and teachers in grades one through twelve. Whether or not standards based education and the high-stakes testing that has been attached to it will improve or damage our school systems is yet to be seen. Only time will tell as this generation of students leaves school and becomes part of the workforce. Even before the effect of NCLB can be evaluated, the current President Bush is proposing that this same type of testing and evaluation be applied to the nation's early childhood programs. These programs have long been more constructivist based and those who work with these age groups are now caught up in the overall debate.

Early Childhood Education

With the implementation of Head Start under the Johnson administration, educational programs for children under the age of six were funded by the federal government (Singh, 2003). The programs were run by various agencies in the 50 states and were evaluated by loosely put together criteria. In 2003, the Bush administration proposed what many early childhood professionals hope will not become high stakes testing for young children. This section will take a historical look at the role of early childhood programs, the curricula presently in use, and the guidelines recommended by the National Association for the Education of Young Children (NAAEYC). There will be a special focus on Head Start, the only nationwide early childhood program, and the impact the new Bush proposals could have on all early childhood programs.

History

Throughout history the welfare of children, their growth and development and their education has been viewed with widely contrasting theories (Santrock, 2000). In Europe during the Middle Ages, children were perceived as being born into the world as basically evil. The goal of child rearing was to remove the sin from the child's life and to provide salvation. Near the end of the seventeenth century, Locke proposed that children were not innately bad but were more like a "blank slate." He advised parents to spend time with their children, helping them develop characteristics that would enable them to become contributing members of society. In the eighteenth century the philosopher Rousseau stressed that children were inherently good and should be permitted to grow naturally, with little parental monitoring or constraint.

Basing his educational theories on those of Schelling, Frobel established the very first formal educational program for young children in Germany (Frobel, 2002). Schelling viewed the concept of art as the unity of the natural and the spiritual forming a bridge between German idealism and romanticism. Frobel used this naturalistic view to formulate that children learned through play. He organized the children's play instincts he observed in a constructive style using songs, stories, games, and individual and group activities. The focus of the activities was creative play, social interaction, and natural expression. These activities were the foundation for the Kindergarten program established in 1837. Frobel also founded the Universal German Educational Institute to train teachers for his Kindergartens and published several books on education including *The Education of Man* written in 1826.

After World War I, Jean Piaget began to work with Theodore Simon in Alfred Binet's child psychology laboratory. He noticed that the Parisian children around the same age level made similar mistakes on true-false intelligence tests. From his observations, he began to suspect that the key to human knowledge might be discovered by observing how the young child's mind develops. He formulated four stages of child development (sensory-motor, preoperational, concrete operational, formal operation) that are part of the foundation of what has become the modern movement of early childhood education (Papert, 2002).

Vygotsky (2002a) contended that thought and language develop along lines that are not parallel but cross again and again. Then at a certain moment around age two, the curves of development meet and join to initiate a new form of behavior. This is the point at which thought becomes verbal and speech becomes rational. At first it seems that a child's language is only for superficial social interaction, but at some point this language goes underground to become the structure of the child's thinking. Therefore, language becomes essential in formatting thought and determining personality features. Vygotsky's theories culminated in what he called the Zone of Proximal Development, the difference between the child's capacity to solve problems on his own and his capacity to solve them with assistance. It also includes all the functions and activities that a child or a learner can perform only with assistance from someone else (Schutz, 2002).

No brief summary of the pioneers of the development of education for young children would be complete without mention of Montessori. She contended, as did Rousseau, that education is not something that the teacher does, but it is a natural process that develops spontaneously in the young child. Learning is not acquired by listening to

words, but through the experiences in which the child acts on his/her environment (Seldin, 2002). The teacher's task is not to spout information, but to prepare and arrange a series of motives for cultural activity in a special environment made for the child. Montessori influenced many who helped further develop the theories of education. Including Anna Freud, Jean Piaget, Alfred Adler and Erik Erikson. Montessori is also credited with the development of the open classroom, individualized instruction, manipulative teaching materials and toys, and programmed instruction (Wortham, 1998).

Just as the view of education of young children has changed over time in Europe, so have the reasons and support for early childhood programs shifted over time in the United States. The Puritans in colonial times believed that everyone should be literate so that they could read the Bible. With the founding of the Republic, the emphasis shifted to satisfy the need for a literate and intelligent electorate who could actively take part in governing the new nation. By the mid-nineteenth century education was seen as a method of enabling individuals and society as a whole to increase economic productivity. Today education is viewed as both a way to educate citizens and to provide for a literate, productive work force (Vinovskis, 1999).

Those responsible for providing education for young children has changed, just as views concerning how young children should be educated. During colonial times, parents were the primary educators, but in later times their role was supplemented, then replaced, by the local school districts. Parents funded the first schools, but financial responsibility was soon taken over by the local community. Currently the state and federal government are the major contributors to the financial support of local school. Along with financial

support has come state and federal regulations and evaluation programs (Vinovskis, 1999).

Standards for Early Childhood Education Programs

The National Association for the Education of Young Children (NAEYC) and The National Association of Early Childhood Specialists (NAECS), which is part of the United State Department of Education, have put together a position statement describing four features that they believe are essential if early learning standards are to be developmentally effective (National Association for the Education of Young Children, 2003). It is the opinion of both groups that early learning standards are a valuable part of a high-quality, comprehensive program for young children. These two groups believe that standards contribute to young children's educational experiences and their future success only if the standards meet the following guidelines:

1. Emphasize significant, developmentally appropriate content and outcomes;
2. Are developed and reviewed through informed, inclusive processes;
3. Use implementation and assessment strategies that are ethical and appropriate for young children;
4. Are accompanied by strong supports for early programs, professionals, and families.

These four features are listed in detail in Table 1 (National Association for the Education of Young Children, 2003). The National Association for the Education of Young Children's position statements tend to be used as the foundation for the majority of both private and publicly operated early childhood programs; therefore, their statement

on standards and their application has great bearing on how early childhood programs are presented nationwide.

Table 1. Four Essential Features Needed for Standards to be Effective

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1. Effective Early Learning Standards Emphasize Significant, Developmentally Appropriate Content and Outcomes

    a. Effective early learning standards give emphasis to all domains of early development and learning.
    b. The content and desired outcomes of effective early learning standards are meaningful and important to children's current well-being and later learning.
    c. Rather than relying on simplifications of standards for older children, the content and desired outcomes of effective early learning standards are based on research about the processes, sequences, and long-term consequences of early learning and development.
    d. Effective early learning standards create appropriate expectations by linking content and desired outcomes to specific ages or developmental periods.
    e. The content of effective early learning standards, and expectations for children's mastery of the standards, must accommodate variations--community, cultural, linguistic, and individual--that best support positive outcomes. To do so, early learning standards must encompass the widest possible range of children's life situations and experiences, including disabilities.

2. Effective Early Learning Standards Are Developed and Reviewed Through Informed, Inclusive Processes

    a. The process of developing and reviewing early learning standards relies on relevant, valid sources of expertise.
    b. The process of developing and reviewing early learning standards involves multiple stakeholders. Stakeholders may include community members, families, early childhood educators and special educators, and other professional groups. In all cases, those with specific expertise in early development and learning must be involved.
    c. Once early learning standards have been developed, standards developers and relevant professional associations ensure that standards are shared with all stakeholders, creating multiple opportunities for discussion and exchange.
    d. Early learning standards remain relevant and research based by using a systematic, interactive process for regular review and revision.

3. Early Learning Standards Gain Their Effectiveness Through Implementation and Assessment Practices That Support All Children's Development in Ethical, Appropriate Ways

a. Effective early learning standards require equally effective curriculum, classroom practices, and teaching strategies that connect with young children's interests and abilities, and that promote positive development and learning.
b. Tools to assess young children's progress must be clearly connected to important learning represented in the standards; must be technically, developmentally, and culturally valid; and must yield comprehensive, useful information.
c. Information gained from assessments of young children's progress with respect to standards must be used to benefit children. Assessment and accountability systems should be used to improve practices and services and should not be used to rank, sort, or penalize young children.

4. Effective Early Learning Standards Require a Foundation of Support for Early Childhood Programs, Professionals, and Families

a Research-based standards for early childhood programs, and adequate resources for high-quality programs, build environments where standards can be implemented effectively.
b. Significant expansion of professional development is essential if all early childhood teachers and administrators are to gain the knowledge, skills, and dispositions needed to implement early learning standards.
c. Early learning standards have the most positive effects if families--key partners in young children's learning--are provided with respectful communication and support (National Association for the Education of Young Children, 2003, p.2-3).

Curricula for Early Childhood Programs

Lunenburg (2000) has identified and reviewed the five most commonly used curriculum models that are currently being used by Head Start and other early childhood programs in the United States. The first of these curricula is the Bank Street Developmental-Interaction Approach. This approach was developed by the Bank Street College of Education in New York City. This college of education was founded in 1970 and has long been on the cutting edge of early childhood curriculum development (Bank Street College, 2003). This program is strongly influenced by the philosophies of Dewey, who believed that children learn best when actively involved in hands-on experiences

(John Dewey Society, 2002). The central tenet of the Bank Street Curriculum is that of developing the whole child using hands-on activities. This program also encourages children to use their own judgment to build understanding (Lunenburg, 2000).

The second curriculum was developed by Diana Trustier-Dodge in 1979 and was based on her career as an early childhood educator. The Creative Curriculum of Teaching Strategies focused on the social competence of the child. The teacher divides the learning environment into ten interest areas: art, blocks, cooking, computers, house corner, library corner, music and movement, the outdoors, sand and water, and table toys. Teachers of this curriculum were self-instructed rather than being formally trained (Lunenburg, 2000).

High/Scope Educational Research Foundation (ERF) staff developed the High/Scope Curriculum during the 1960s and 1970s. According to Lunenburg (2000), this curriculum was based on Piaget's constructivist approach to learning. In a classroom where the High/Scope curriculum is being used, children are engaged in active learning in well-equipped interest areas. The adult's role in these classrooms is to support the child's active learning by organizing the environment and establishing a consistent daily routine. To accomplish this task, the High/Scope curriculum has identified fifty-eight key experiences that are vital to child development and grouped them into ten categories: (a) creative representation, (b) language and literacy, (c) initiative and social relations, (d) movement, (e) music, (f) classification, (g) serration, (h) number, (i) space, and (j) time. This program was originally designed for children from disadvantaged homes and is one of the most widely used Head Start curricula (Education Research Foundation, 2003).

Kamii and DeVries also used Piagetian constructivist principles in the 1980s to develop what has become known as the Kamii-DeVries Constructivist Perspective (Lunenburg, 2000). Believing that young children can and will construct their own learning from interacting with the world in a logical-mathematical framework, the authors developed a curriculum grounded in traditional early childhood educational practices. This curriculum has teachers prepare the environment in which the active learning is to take place, respond to the child's reactions and extend their ideas.

Montessori, a physician working with poor children in Italy, developed what became the first organized educational curriculum for young children. This program focuses on the individual child working independently to accomplish prescribed tasks using materials in a precise way. Montessori designed materials to fit the special criteria of this curriculum. It is still used worldwide by teachers with special training in the Montessori Method (Lunenburg, 2000). Her work had a strong influence on Piaget and many of the programs ideas, materials, and methods she developed have been incorporated into more traditional early childhood classrooms over the years (Seldin, 2002).

The direct instruction model for pre-school was based on the behavioral learning principles of Carl Bereiter and Siegfried Englemann, who operated a pre-school program at the University of Illinois-Urbana in the mid-1960s (Lunenburg, 2000). Later this curriculum expanded into the Follow Through Early Childhood Program. The materials that were published by the Science Research Associates were derived from the Follow Through Early Childhood Program. This curriculum focuses on academics. The teachers leads small groups of children in precisely planned 20-minute sessions using question-

and-answer lessons in mathematics, language and reading. Over time this program became known as Direct Instruction and has proven to be more teacher-centered than learner centered. Being teacher-centered, this program proved more developmentally appropriate for elementary age students, rather then young children.

The final curriculum Lunenburg (2000) reviewed comes in an English version entitled Writing to Read 2000 and a Spanish program called VALE. These curricula were developed by J. H. Martin for IBM in the late 1990s. It uses the young child's natural desire to communicate to focus on listening, speaking, reading, and writing. Thematic units, computer centers, work journal centers, writing/typing centers, make words center, books on tape library centers and activity centers are used to focus the child's attention on these skills.

Educating the Economically Disadvantaged

From the beginning, there has always been a deep continuing concern in the United States for the education of those who were economically disadvantaged (Vinovskis, 1999; Caputo, 2003). From colonial times until the nineteenth century, private charities and local communities tried to provide a minimal education for poor children. In the early twentieth century, these programs were expanded to include children from poor immigrant and African-American families. In the mid 1960's the federal government assumed a large role in the education of children from these demographic groups.

Nationwide programs for children from economically disadvantaged families begin with the election of Lyndon Johnson, a former school teacher (Vinovskis, 1999). He believed, as did many in his administration, that by providing a good education for

children from low-income families, poverty could be eradicated. In 1965 the Eighty-Ninth Congress passed the first Elementary and Secondary Education Act (ESEA) that targeted funds specifically for programs for disadvantaged children under Title I. The designers of this legislation believed that ESEA would eliminate much of the large academic achievement gap between children from economically disadvantaged families and their more fortunate counterparts.

In 1994, the Clinton administration and the 103rd Congress restructured Chapter I programs, including Head Start. They returned the program to its original name (Title I) and stressed standards-based education as well as mandating the creation of state-level high academic content standards incorporated into the local schools curriculum. The program evaluation was to be linked to this curriculum. The reforms were tied to Goals 2000 that were established by the previous administration (Vinovskis, 1999).

Head Start

Head Start was founded in 1965, as part of then President Johnson's "War on Poverty" (Singh, 2003). It is a federally funded program designed to provide comprehensive developmental services to America's culturally and economically disadvantaged pre-school children. Head Start's focus is on improving the condition of the whole child including educational, psychological, nutritional, physical and mental health needs. The participation of the family is an integral part of the program's planning and delivery.

Head Start was this nation's first attempt at providing early education for young children who otherwise would not have had the opportunity. Other countries such as France, Belgium and Italy provide pre-school for all children three and four-year-olds.

Young children of immigrants in these countries are also included in these programs at no charge to the families. In the United States, only the state of Georgia offers free universal pre-school, although it is only for four-year-olds (Starr, 2002).

Even though Head Start is a national program, the implementation was left to the states and each has implemented it in different ways (Archer, 2002). As mentioned above, the state of Georgia has used funds from its state lottery to implement universal pre-school. In Rhode Island, as part of the welfare reform legislation, lawmakers approved a wide-ranging initiative called Starting Right. This program gives parents vouchers to help pay for virtually any service that they might need. This includes care for their children by family members, in daycare centers and/or in small programs operated in private homes. To help ensure the quality of the programs offered to young children, the state education department made an effort to write early-learning standards for Starting Right that are aligned with those of Head Start. Using the Head Start formula, it was believed, would help ensure consistency in their program and narrow the gap faced by low-income children when they enter school.

In other states, the Head Start program funds from the federal budget are supplemented by the state (Zehr, 2002). Ohio, for example, leads the nation in financial support for Head Start. Governor George V. Voinovich has guided the state to commit to breaking the cycle of poverty, drugs and crime by doing everything possible to ensure children from economically disadvantaged families succeed in school. Due to the additional state monies, Ohio is able to serve seventy percent of the eligible three - and four-year-olds. Using federal support alone there would be only enough classes for forty-five percent of the eligible children. The state of Ohio is establishing new, more rigorous

academic standards for all of the state's school programs, including Head Start. The economic downturn in 2002 caused some budget cuts and left the future configuration of this state's program in some doubt (Sandham, 2002). Other states, such as Montana, spend only the dollars that are required as matching funds to the federal funding to run Head Start programs.

At the time of its founding, Head Start's goal was to close the gap between economically disadvantaged children and those from more privileged families by providing a nurturing environment with a focus on academic stimulation and physical care. The present Bush administration is proposing that this focus change to one where the primary emphasis is on pre-literacy development. It is also being proposed that each child be assessed each year to make sure that the program is meeting its goals (Bush, 2002). Under the direction of the Department of Health and Human Services, this new plan would change the focus of all Head Start programs to one where early literacy and early reading skills would dominate the program (Koffler & Fulton, 2002).

Evaluation of Head Start's Effectiveness

Programs for young children, especially Head Start, have long been touted as helping students be better prepared for school. Early in 2002, The Department of Health and Human Services released a seven-year study that shows that Head Start (for four-year-olds) and Early Head Start (for three-year-olds) has had a positive effect on the students they serve (Neff, 2002). The study concluded that there is a more positive cognitive performance, better language development, and development of more positive behaviors for those children who participate in this program versus those who did not. The parents of students who participate in this program demonstrated more positive

parenting behaviors, report less physical punishment of they children and were more emotionally supportive of their children. It concluded that these parents were also more likely to assist their children in learning at home according to this study.

The National Head Start Association (NHSA) conducted a survey in 2000 and their findings agreed with the government's study. The Family and Child Experiences Survey (National Head Start Association, 2003a) made the following findings:

1. Head Start children are "ready to learn." In kindergarten, Head Start graduates made substantial gains in word knowledge, letter recognition, math skills, and writing skills relative to national norms
2. Head Start children showed as significant gains in vocabulary skills compared to the national norms in 2001 as they had in 1997-1998.
3. Head Start children showed modestly larger gains in letter recognition skills in 2000-2001 than they had in 1997-1998.
4. Minority children in Head Start showed significant gains in English vocabulary without declines in their native language vocabulary skills.
5. In contrast to other early childhood education programs, Head Start classroom quality remained in the "good" range from 1997 to 2000.
6. Head Start graduates showed gains in social skills, including improvements in interaction and play.
7. Teachers having a Bachelor of Arts or an Associates of Arts degree were not linked with greater achievement gains.
8. Higher teacher salaries were associated with modestly larger gains in letter recognition.
9. Achievement differences across programs seem to have more to do with socio-economic characteristics of the population served than with quality differences (National Head Start Association, 2003a, p. 1)

NHSA not only has conducted studies on how well students fair in school after attending Head Start, but they also collect testimonials from former students that they post on their web site. These are listed by state and one has to only click on a states name to read them. The following is just one example written by Clarissa Collins:

> I am a true product of the benefits of the Head Start program. I attended Head Start for two years in Bay City, Texas, and I also received the Head Start scholarship my senior year in high school. I am currently a senior at Spelman College in Atlanta, Georgia. During my years in college I have studied abroad in Cape Town, South Africa and London, England, been a member of the Philip

> Hubbard Law School Fellowship, and interned at the Georgia State Capitol just to name a few of my experiences. I will be graduating in May and receiving a Bachelor's Degree in Economics and a Bachelor's Degree in Political Science. After graduation, I will be participating in the fellowship Teach for America, and I also anticipate going to law school and participating in a joint degree for my law degree and a business degree. The early education I received from Head Start was the foundation for me to become the young lady I am today. I would like to say Thank You to Head Start for the opportunity (National Head Start Association, 2003b, p. 1).

The Administration for Children and Families (2003) is part of the United States Department of Health and Human Services. This department is in the process of putting together another longitudinal study with the goal of determining whether staff ratio, type of curriculum, and full-day versus half-day are factors in determining student success in the Head Start programs. The data collection for this study is scheduled to begin in the fall of 2002 and continue through 2006.

In a survey of studies by Jacobson (2003), it was concluded that Head Start is a very beneficial program and is accomplishing its goals. The Bush (2002) administration, on the other hand, has questioned the validity of existing studies in determining accurate accountability of the program, for they are proposing a system of standardized testing to evaluate the program on a yearly basis. This assessment system would form a new national reporting system that would determine whether each individual Head Start program is successfully meeting the new goals. Lewis (2003) has criticized the Bush Administration's plan saying that it only evaluates cognitive readiness. She believes that this plan will evaluate Head Start on just one of its goals forgetting the social, emotional and physical development objectives. She further states that the use of this test alone to decide which programs continue to receive support and which do not will be seen as threatening and will undermine the programs ability to develop trust with poor families.

At present there is a random sampling form of evaluation that this new system would replace. The new evaluation would primarily focus on literacy skills, not the growth of the child as a whole (Davis, 2003). The leaders of Head Start programs nationwide are concerned that this will change their programs, and not for the better. Robert D. Williamson, the executive director of the Economic Opportunity Committee of Clark County in Vancouver, has emphasized that Head Start is more than literacy. He stressed that the focus on literacy is distracting and is only one part of the development of children (Davis, 2003,).

Because of the very nature of young children, some professionals in the testing field believe that testing at only one time on one day will cause the data that will be collected not to be meaningful. Among those who question the validity of such testing is Samuel J. Meisels, an expert on assessment of young children and the president of the Erikson Institute, a graduate school for child development in Chicago (Jacobson, 2003). To try to alleviate these concerns, Wade F. Horn, Department of Health and Human Services' Assistant Secretary for Children and Families, has stated that the new evaluation system would not be used to penalize programs, would not become an entrance exam for kindergarten and would not replace locally developed assessment programs. "They shouldn't be afraid of this. They should embrace this," Horn said (Davis, 2003, p. 2).

The principal founder of Head Start, Yale University psychologist Edward Zigler, has stated that he has no opposition to strengthening the pre-school education component of the program (Wilson, 2001). He urges that it should not be forgotten that Head Start

has other purposes that range from identifying children who are malnourished or have other physical problems to providing emotional support to troubled kids.

Summary

Early childhood education programs have now been in existence for over a hundred years. They began in Europe and later were brought to the United States. These programs take many forms and have just as many different objectives, depending on the country, district and community in which the program is operated. The program called Head Start is the only national program in the United States. Mainly funded by the federal government, many states add additional funding to their Head Start programs. These programs have been assessed in a number of ways since its inception in 1965, but no national assessment has been proposed until now. The national evaluation plan proposed by the current Bush Administration has yet to be put in place; therefore, the outcome of this assessment and its effect on the program is yet to be determined.

Overview

High stakes testing has become a part of the process in every school in this nation. No Child Left Behind has made this a reality. Parents, politicians, educators and the public in general agree that the nation's schools need reform. The disagreement is the manner in which this is to be accomplished. Those who believe that testing is the answer state that by setting standards and holding the teachers accountable for teaching them will ensure that students are receiving the instruction that is needed (Patterson, 2000). They also believe that by giving parents the option of moving their students out of failing schools into more successful ones or to charter schools, parents will be more involved in their children's education (United States Government, 2002).

Some educational professionals question all this testing being based on standards that they believe have no real research or developmental basis (Zenger & Zenger, 2002). Others question putting so much emphasis on just one test, given on just one day, and the stress that it puts on students and teachers (Mesmer, 1997). Still others question the validity of giving tests that contain only multiple-choice items (Popham, 2001). These professionals believe that children whose learning styles do not fit this form of testing are at a great disadvantage and cannot be evaluated fairly.

Even if everyone cannot agree on all of this high-stakes testing and how to hold schools accountable for the success of their students, they do agree that young children who enter school from disadvantaged homes start the process behind their peers from higher economic homes (Caputo, 2003). Head Start was begun to help close this gap by the Johnson administration in 1965 (Singh, 2003). Since its inception Head Start has focused on developing the whole child, helping them develop in a balanced manner, not just focusing on the skills that are needed in school. President Bush has now proposed that Head Start change its focus so that students spend more time on pre-literacy skills with less emphasis on the other areas of development (Bush, 2002). He has also proposed the same kind of testing for these students as mandated by No Child Left Behind. This testing is to be used to evaluate if Head Start programs is meeting its goals.

All of the discussion concerning the holding of programs accountable has lead Popham (2001) to conclude that the knowledge of child development has become secondary to covering material and teaching to the state mandated high-stakes test. Exploration and experimentation, recess, art and music are being replaced in the curriculum with teacher directed instruction. All the activities in the classroom are not

being driven by developmentally appropriate practice, but by policy makers who are more focused on scores than on teaching children skills they will need to be successful in life.

Whether or not one agrees with standards based education programs or high-stakes mandated testing, the No Child Left Behind legislation is a reality and all the nation's schools are going to be affected by its mandates. The educational future of the nation's students is going to hang on the scores that they make on these tests. School districts, especially those with large numbers of students considered at risk, are looking for ways to ensure that students pass these tests. Not having passing scores has consequences for school systems as well as students. If a school's scores do not meet the goals set by NCLB, the students will be allowed to transfer to higher-achieving schools with a loss of funding as well as the possibility of being taken over by a state agency.

From the very beginning Head Start Programs were intended to help children from low-income families build the background they would need to be successful in schools. Research has shown that early childhood programs have helped close the gap faced by economically disadvantaged children. But with high-stakes testing schools teaching goals have changed; the question now is do these early childhood programs, including Head Start, help students be successful on these state-mandated tests? The purpose of this study is to explore this question.

CHAPTER 3

Methodology

Introduction

This study was designed to explore the relationship among the achievement of economically disadvantaged students who attended Head Start, those who attended a preschool program operated by the independent school district, and those from low-income families who did not attend any pre-school program. A comparison was also made between the scores of the disadvantaged children who attended pre-school and the other students in grade three. Their achievement was evaluated using the scores of the grade three tests mandated by the state of Texas. This chapter discusses the methodology that was used to accomplish the goals of this study. Included is a description of the population, the variables investigated and the data collection and analysis procedures. The reliability and validity of the state test are also discussed.

The No Child Left Behind (NCLB) (United States Government, 2002) legislation requires that after the 2012-2003 school year all students will be reading on grade level by the end of grade three. This has caused districts to look for ways to reach this goal. Head Start was designed to help economically disadvantaged students have a better chance of succeeding in school (Singh, 2003). Now that school success is being determined by state-mandated testing, it is important to explore whether or not Head Start and other early childhood programs designed for children from low income families do, in fact, help these students achieve academic success.

This study was designed to look at the scores from a school district in East Texas that has both a Head Start program and a district operated pre-school program for economically disadvantaged students. The student population of this district is made up of a majority of economically disadvantaged students and is very similar to many others in the area. The Texas Education Agency compares districts by the economic level of their students and their demographic groups. According to these criteria, there are more than forty districts in the state that are similar to the district studied (Texas Education Agency, 2002).

When Head Start programs were started in Texas, they were not part of the public school systems. These programs were operated by independent nonprofit local agencies, as is the case of the school district used in the study. Since 1998, many of the local school districts have taken over the operation of the Head Start programs. The third grade classes of 2004 contains the first group of students that attended Head Start programs operated by the school district in the study to take the TAKS.

The results of this study adds information for educators as they plan to reach the NCLB goals (Texas Education Agency, 2003). This study was designed to answer the following questions:

1. Do students who were enrolled in Head Start score as well as or better on the state mandated tests in grade three as those students from low economic families who did not attend Head Start?
2. Do students who were enrolled in Head Start score as well as or better on the state mandated tests in grade three as those students who attended the district operated pre-school for low income students?

3. How do the students who were enrolled in Head Start compare with the students in the third grade who were not enrolled in Head Start and were not low income on the state mandated tests?
4. How do the students who were enrolled in the school district's preschool compare with the students in the third grade who were not low income and were not enrolled in a pre-school program on the state mandated tests?

Null Hypotheses

For the purpose of this study, the following null hypotheses will be tested:

H1. There was no significant difference between the scores on the Texas Assessment of Academic Skills and/or the Texas Assessment of Knowledge and Skills of children who attended Head Start and those of children of socio-economically disadvantaged status who did not attend any form of early childhood program.

H2. There was no significant difference between the scores on the Texas Assessment of Academic Skills and/or the Texas Assessment of Knowledge and Skills of children who attended Head Start and students who were enrolled in the school district operated pre-school program.

H3. There was no significant difference between the scores on the Texas Assessment of Academic Skills and/or the Texas Assessment of Knowledge and Skills of children who attended Head Start at grade three and those of the advantaged children in the third grade.

H4. There was no significance difference between the scores on the Texas Assessment of Academic Skills and/or the Texas Assessments of Knowledge and Skills of children who attended the district operated pre-school and those of the advantaged children in the third grade.

Research Design

There is a proven relationship between socio-economic status and academic achievement (Solorzan & Yosso, 2001). With the mandate of NCLB, it is now important to determine what programs will help students from economically disadvantaged homes to be successful in their academic pursuits. To make this determination, the researcher used a one-way analysis of variance to make the comparisons. This method was used instead of a t test because the results are more reliable when comparing more than two groups where the independent variable is categorical and the dependent variable is a continuous one (Pyrczak, 2001; Urdan, 2001) The scores of students who attended Head Start, the disadvantaged students who attended the district operated pre-school, and those of the advantaged third grade students were compared. The independent variable was the attendance of Head Start or pre-school during the 1997-1998 and the 1998-1999 school years, and the dependent variable was the scores on the Texas state mandated test (TAAS) during the 2000-2001 school year and TAKS during the 2001-2002 school year.

Population and Sample

Grade three is the first grade in which students must, by law, take the state-mandated test in Texas. Therefore, the population for this study was the set of all students who entered Head Start or the school district operated pre-school program during the 1997-1998 and 1998-1999 school years and completed third grade during the 2001-2002

and 2002-2003 school years. Table 1 shows the numerical totals for the population of this study.

Table 2: Total Number of Students by Years

Number of students attending grade three 2001-2002	308
Number of students attending grade three 2002-2003	429
Number of students attending Head Start 1997-1998, 1998-1999	40
Number of students attending district pre-school 1997-1998, 1998-1999	192

There were 308 students in the third grade class of 2001-2002 and 429 students in the third grade class of 2002-2003. Students who began school in the district during 1997-1998 and 1998-1999 and were not enrolled in the district during the 2001-2002 and 2002-2003 school years were not included in this study. Also the students who were enrolled in 2001-2002 and 2002-2003, but were not attending school in this district during 1997-1998 and 1998-1999, were not included in this study.

The school district is located in East Texas, and although it consists of one of the larger cities in the area, it is still considered rural. During the 2001-2002 school year the school district was composed of 42.6 percent African American students, 44 percent white students, 12.5 percent Hispanic students and .9 percent of students from other ethnic backgrounds, as illustrated in Figure 3. The bulk of the economy of the county where this school district is located is composed of light industry, cattle ranching and tourism. The light industry work force is largely blue-collar workers without highly sophisticated skills. These workers usually earn minimum wages, which is reflected in

the fact that 56.8 percent (Figure 4) of the students enrolled in the district's schools are economically disadvantaged. A student is considered from an economically disadvantaged home if he/she receives free or reduced price for their meals at school.

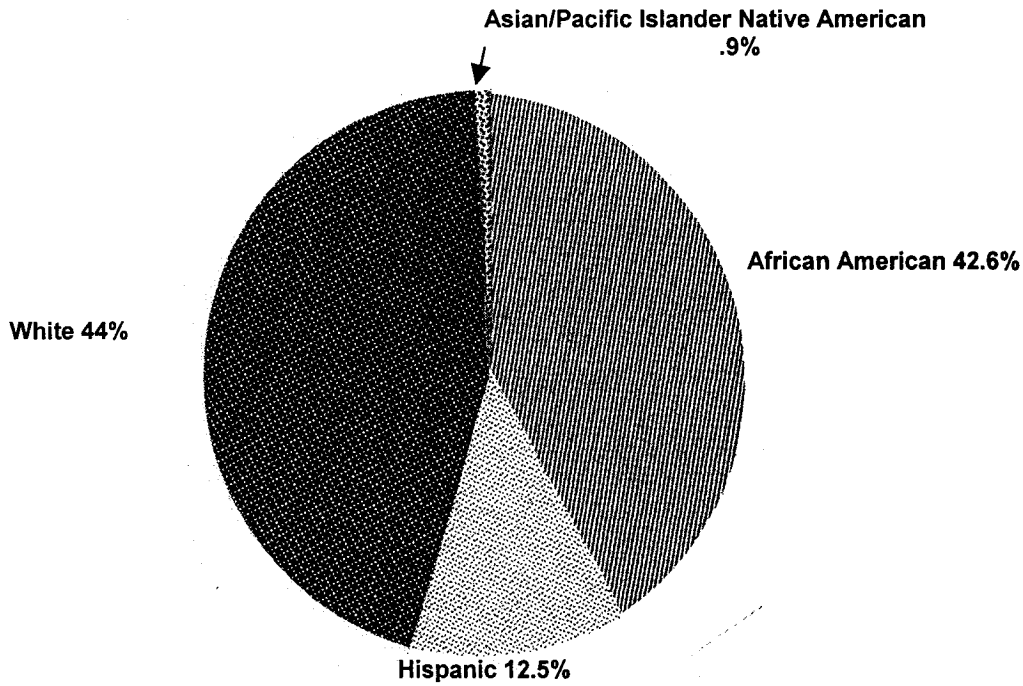


Figure 3: School District's Ethnic Make Up 2001-2002 School Year

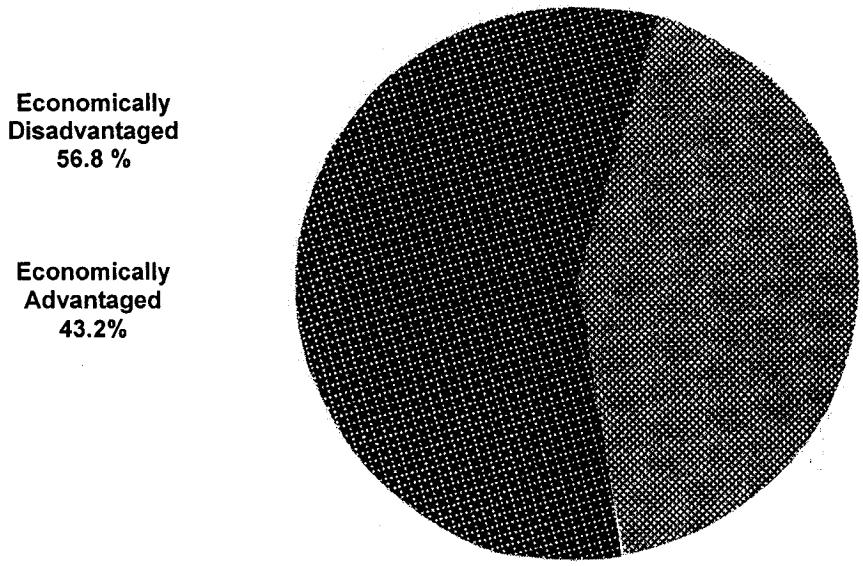


Figure 4: School District's Economic Make Up 2001-2002 School Year

When Head Start was established in 1965, the programs were operated by independent non-profit organizations and were not attached to the local school districts. During the 1997-1998 and 1998-1999 school years the Head Start program in this county was also operated by an independent nonprofit organization, run by its own governing board. It was not associated with the local school district in any way. The director hired the teachers, supervised the program and answered to the board. As was the requirement for other area programs, teachers were not required to have teacher certification or to have a university degree, but they were required to have a high school diploma. The teachers were given on-site training in the use of appropriate methods and activities for three and four-year-olds. It was considered to be a full-day program, with the students arriving at school between 7:30 and 8:00 a.m. and leaving around 2:30 p.m. The federal funding provided adequate supplies and materials for conducting appropriate activities.

To be considered for these classes the parents had to provide proof of residency and income. To verify residency the parents or guardian were required to show proof of residency by presenting utility bills. Copies of income tax returns or other documents were needed to prove amount of income. Students whose family income was within the limits set for free lunch on the Federal Income Chart were considered economically disadvantaged and were considered eligible for the program. Class size was limited; therefore, many times there were more applicants than there were spaces for students.

At the same time, the school district operated half-day pre-school classes for four-year-olds. Teachers of the half-day classes held state certification in early childhood education. Each teacher taught two sessions per day, one morning and one afternoon class. The program received funding from the school district and the state, with additional funding provided by grants and fund-raisers conducted by the school. This program also gave priority to children from economically disadvantaged families. A student from an economically disadvantaged family is considered at risk of not being successful in school. Students with limited use of English are also considered at risk and were given priority for placement in one of these classes. To be considered for these classes the parents also had to provide proof of residency and income.

Procedural Details

The researcher met with appropriate school district personnel to gain access to needed data. This included the enrollment data for the district's pre-school program for the school years of 1997-1998 and 1998-1999 and grade three for 2001-2002 and 2002-2003. The TAAS scores for 2001-2002 as well as the TAKS scores for 2002-2003 were also on file with the district and access was arranged. The school district's overall

scores by grade level and subgroups were obtained by accessing the state education agency on the Internet. No permission was needed to access these scores since they are a matter of public record.

The report listing the TAAS and TAKS scores also indicates whether each student receives free or reduced lunch, as well as student ethnicity. It also gives information as to whether or not the child's first language is English. Each student was assigned a number that was not their social security or school identification number in order to ensure their privacy. The list of students in Head Start for 1997-1998 and 1998-1999 was compared to the third grade enrollment of 2001-2002 and 2002-2003 and test scores.

Prior to 1999, the Head Start program in this district was under the direction of a private non-profit organization whose records were housed in the Regional Educational Service Center. Permission from the area supervisor was received in order to access these records. The proper human use forms were also obtained from the appropriate university committee.

Data Collection Procedures

TAAS and TAKS scores, divided by subgroup for the school years 2001-2002 and 2002-2003, were obtained from the Texas Education Agency. The records of attendance for the district's pre-school program for 1997-1998 and 1998-1999 were received. The district's TAAS and TAKS scores for the 2001-2002 and 2002-2003 school years were obtained from the district's Office of Special Services. The enrollment information for the school years 1997-1998 and 1998-1999 for the Head State program were obtained from the archives of the Regional Service Center.

Instrumentation - Texas Test

State-wide testing began in Texas in the 1980s with the assessment of minimum basic skills in reading and math (Texas Education Agency, 2003). In 1990 with a change in state law, the Texas Assessment of Academic Skills (TAAS) was implemented. This new criterion-referenced test was last used in the spring of 2002. In the spring of 2002 TAAS was replaced with the Texas Assessment of Knowledge and Skills (TEKS) which, according to the state, is more in line with the state curriculum. The explanation, which follows, of how the tests were developed was taken from the Texas Education Agency web site (2003).

Table 3: Texas Education Agency Test Development Procedures

Texas Test Development Process

Texas educators-classroom teachers, curriculum specialists, administrators, and education service center staff played a vital role in all phases of the test development process. Since the implementation of the Texas Assessment of Academic (TAAS) program, thousands of Texas educators have served on one or more of the educator committees involved in the development of the state assessments. These committees represented the state geographically, ethnically, by gender, and by type and size of school district. The procedures described below outline the process used to develop a framework for the tests and provide for ongoing development of test items.

1. Committees of Texas educators reviewed the state-mandated curriculum to develop appropriate assessment objectives for a specific grade and/or subject test. Educators provided advice on a model or structure for assessing the particular subject that aligns with good classroom instruction.

2. Educator committees worked with the Texas Education Agency (TEA) to prepare draft objectives, which were distributed for review by teachers, curriculum specialists, assessment specialists, and administrators.

3. Drafted objectives and proposed skills were defined based on input from Texas educators.

4. Sample test items were written to measure each objective and, when necessary were piloted by Texas students from volunteer classrooms.

5. Educator committees assisted in developing guidelines for assessing each objective. These guidelines outlined the eligible test content and test item formats and included sample items.

6. With educator input, a preliminary test blueprint was developed to set the length of the test and the number of test items measuring each objective.

*7. Professional item writers, many of whom were former or current Texas teachers, developed items based on the objectives and the item guidelines.

*8. TEA curriculum and assessment specialists reviewed and revised the proposed test items.

*9. Item-review committees composed of Texas educators reviewed the revised items to judge the appropriateness of item content and difficulty and to eliminate potential bias.

*10. Items were revised again based on input from Texas educator committee meetings and were field-tested with large representative samples of Texas students.

*11. Field-test data were analyzed for reliability, validity, and possible bias.

*12. Data-review committees composed of Texas educators were trained to do statistical analysis for field-test data and reviewed each item and its associated data. The committees determined whether items were appropriate for inclusion in the bank of items from which test forms were built.

13. A final blueprint was developed that established the length of the test and the number of test items measuring each objective.

*14. All field-tested items and data are entered into a computerized item bank. Tests were built from the item bank and were designed to be equivalent in difficulty from one administration to the next.

*15. Tests were administered to Texas students, and results were reported at the student, campus, district, regional, and state levels.

*16. Stringent quality control measures were applied to all stages of printing , scanning, scoring, and reporting.

*17. All TAAS and end-of-course tests were released to the public at the end of each school year.

18. The state Board of Education established a procedure for setting a passing standard, or benchmarking, for each new assessment. New assessments are

benchmarked and evaluated prior to being used for district and campus accountability. During a benchmark administration, all eligible students test and received a numerical score for each objective and for the entire test. Districts can use benchmark information to evaluate the need for changes in programs and instruction.

19. The State Board of Education used data from the benchmark test administration and other adequacy-of-student-preparation information to set a passing standard for each new test.

*20. A technical digest that provides verified technical information about the test to schools and the public is developed annually.

*These steps are repeated annually to ensure that tests of the highest quality are developed.

The Texas Education Agency (TEA) has the primary responsibility for planning, scheduling and implementing all activities for concurrent test administration and data collecting (Texas Education Agency, 2003). The agency contracted with several commercial firms to perform tasks requiring specialized expertise. The most current information is for the 2001-2002 school year. It lists the major contractor as NCS Pearson with sub-contractors as Harcourt Educational Measurement (HEM) for test development, BETA, Inc. for the development of Reading Proficiency Tests in English (RPTE) and reading and mathematics items for the State-Developed Alternative Assessment (SDAA) and Publisher's Resource Group (PRG) for the development of study guides.

Data Analysis Procedures

The scores were compared using a one-way analysis of variance (ANOVA) to compare the groups. After obtaining the overall F value from the ANOVA, a post-hoc Tukey test was administered to examine whether each groups mean differed significantly from each of the other group means.

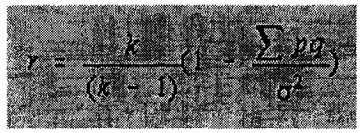
Data analysis was accomplished by using *Statistical Package for Social Sciences* computer program. The scores of the students who were from economically disadvantaged families and who did not attend Head Start were compared first to those students who did attend Head Start, then to those who attended the district operated pre-school. The scores of the students who did attend Head Start were likewise compared to the students who attended the pre-school operated by the district and to the rest of the third grade population. Finally, the scores of the students who attended the district operated pre-school were compared to the advantaged third grade scores. This was done with the classes that entered Head Start during the 1997-1998 and 1998-1999 school years.

Reliability and Validity

The Kuder-Richardson Formula 20 (KR-20) was used to measure the reliability of the Texas mandated test. These test reliabilities were in the high .80s and .90s depending on the test, according to TEA (2003). The content of the test has been fully integrated with the state's curriculum. To ensure validity, each item on the tests was checked by committees of educators and the testing company against the objectives and the items to be measured (Texas Education Agency, 2003).

Kuder and Richardson developed this procedure for estimating the reliability of a test in 1937 (Mervis, 1995). It has now become the standard for estimating reliability for single administration of a single test form. The Kuder-Richardson Formula 20 (KR-20) measures inter-item consistency and is tantamount to doing a split-half reliability on all combinations of items resulting from different splitting of the test (Statistical Analysis of Multiple Choice Exams, 2003). The KR-20 calculates a reliability coefficient based on

the number of test items (k), the proportion of the responses to an item that are correct (p), the proportion of responses that are incorrect (Q) and the variance (σ^2).



This formula requires a detailed item analysis and cannot be used with validity when answers to multiple-choice questions are given partial credit.

Limitations

The study includes all the students that were enrolled in Head Start and the school district operated pre-school at the end 1997-1998 and 1998-1999 academic years. Students who were enrolled at the beginning of the year and moved to another district were not included. Students who have not completed all of their schooling in grades pre-K through three in this district were not included in the study as well. Children from economically disadvantaged families and who have been enrolled in the districts schools from Kindergarten through grade three were considered as not having attended any form of pre-school. Head Start and the districts pre-school program are the only ones available in this school district for economically disadvantaged families.

CHAPTER 4

Results

This investigation looked for a relationship between Head Start and pre-school attendance of economically disadvantaged students and their scores on the Texas mandated test in third grade. The study used the group of students who attended Head Start and pre-school in a rural East Texas independent school district during the school years of 1997-1998 and 1998-1999. These students took the state mandated test, TAAS, in 2000-2001 and TAKS in 2001-2002.

The enrollment in the two classes totaled 736. There were 308 students in grade three during the 2001-2002 school year and 429 during the 2002-2003 school year. The students who were in grade three during the 2001-2002 school year took the TAAS test and the third grade class of 2002-2003 took the TAKS tests. There were 217 students whose records did not record pre-school attendance and who were classified as economically disadvantaged. There were 40 students who attended the Head Start program during the years of 1997-1998 and 1998-1999 still attending school in the district, and 192 who attended the district pre-school for a total of 232. There were 288 students considered not disadvantaged.

The scores for the TAKS test were reported to the district in the form of percentages, but the scores of the TAKS taken by the class of 2002-2003 were reported as scale scores. To be able to compare the two sets of scores the scale scores had to be converted to percentages.

The state testing agency gave instructions for making the conversion (Appendix C).

The formula for converting the scale score to a percentile rank was

$PR(x) = [(f/2 + L) / N)\ 100.$

x = scale score of interest

f = frequency of the scale score of interest

L = cumulative frequency associated with the next lowest scale score

N = population size (number of persons tested)

The frequency table was obtained from the state web page (Appendix C). Once the scores were converted they were entered into the computer using SPSS.

Each student's information was coded so that they could be sorted by the year they were in the third grade, if they were learning English as a second language (ESL), ethnicity, and economic group. The students who were from the economically disadvantaged group were also sorted into subgroups. These subgroups were determined by who had attended Head Start, the school district operated pre-school program or no program at all.

The groups of students who fell under the ethnic category of Other in Table 4 consisted of Asians, Pacific Islanders and Native Americans. The percentage of students in this group was 2 percentage points lower than the rest of the district but only .2 percent lower than the state. The percentage of Hispanics in the third grade during the 2001-2002 and 2002-2003 school years was higher than the percentage in the district but far lower than that of the state. The percentage of African Americans was lower than the district overall but almost double that of the state as a whole. The percentage of whites in the two third grade classes used in the study was almost the same as the rest of the district and four percentage points

lower than the state as shown in Table 4. Therefore these two classes were not representative of the state as a whole but do match more than forty other districts in the region (Texas Education Agency, 2003).

Table 4: Student Ethnicity

Ethnicity	Number of students in third grade	Percentage in third grade	Percentage in the district	Percentage in the state
Other	3	.40	.50	3.2
Hispanic	111	15.06	12.50	43.0
African American	293	39.76	42.60	14.0
White	330	44.78	44.00	40.0

Figure 5 gives a graphic representation of the ethnicity of the two classes broken out by years. This graph shows that the numbers in each ethnic group increased from the 2001-2002 school year to the 2002-2003 school year. The number of African Americans and Hispanics increased more than Whites or the Missing Group (Asians, Pacific Islanders, Native Americans). The number of Hispanics almost doubled during the 2002-2003 school year. The number of African Americans increased to the point that by 2002-2003 school year the number of Whites and African Americans was equal.

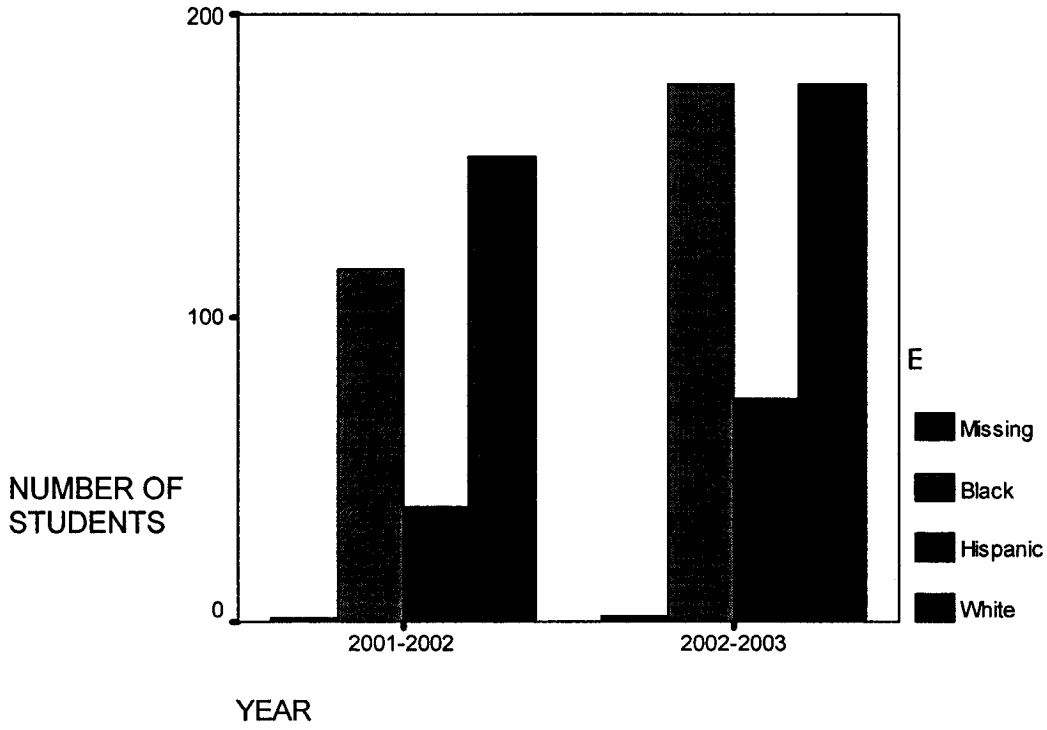


Figure 5: Ethnicity of Study Population by Years

Table 5 shows that the two third grade classes used in this study had 4.2 percentage points more disadvantaged students than the school district as a whole and 9.13 percentage points more disadvantaged students than the state. This also means that these two classes had less advantaged students than the district (4.12 percentage points) or the state (9.09 percentage points), but according to the TEA were closely representative of more than forty districts in the region (Texas Education Agency, 2003).

Table 5: Percentages of Disadvantaged and Advantaged Students 2001-2002 and 2002-2003 School Years

Disadvantaged Students			Advantaged Students		
Third grade in study	District	State	Third grade in study	District	State
61.0	56.8	51.83	39.08	43.2	48.17

The data were compared using an Analysis of Variance (ANOVA) as shown in Table 6. In this table the between groups sum of squares was 28994.307 with 3 degrees of freedom. The sum of squares for the within groups was 816377.04 with 733 degrees of freedom with .000 significance. The total for the sum of squares was 84537.35 with 736 degrees of freedom.

Table 6: Analysis of Variance Results

SCORE

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	28994.307	3	9664.769	8.678	.000
Within Groups	816377.04	733	1113.748		
Total	845371.35	736			

A post hoc Tukey Honestly Significantly Different (Tukey HSD) test was used to compare the means. The Tukey test was proposed by statistician John Tukey and was based on the "studentized range distribution." This post hoc test is used when the number of members in each group is not the same (Lane, 2004). Table 7 shows the group means, standard deviation and the standard error of the different groups that were included in the study. There were 40 students in the group of students who attended Head Start. The Head

Start student group had a mean of 58.15, a standard deviation of 31.305 and a standard error of 4.950. The second group was comprised of disadvantaged students who attended the district operated pre-school. There were 192 disadvantaged students in this group with a mean of 57.78, a standard deviation of 34.504 and a standard error or 2.490. Group three was made up of disadvantaged students who attended no pre-school program. There were 217 students in this group with a mean of 55.93, a standard deviation of 35.212, and a standard error of 2.390. The fourth group was comprised of 288 students who were not disadvantaged (advantaged). The mean for the advantaged group was 69.68 with a standard deviation of 31.399 and a standard error of 1.850.

Table 7: Descriptives Used

SCORE

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean	
					Lower Bound	Upper Bound
1 head start	40	58.15	31.305	4.950	48.14	68.16
2 district	192	57.78	34.504	2.490	52.86	62.69
3 disadvantaged	217	55.93	35.212	2.390	51.22	60.64
4 not disadvantaged	288	69.68	31.399	1.850	66.04	73.32
Total	737	61.91	33.891	1.248	59.45	64.36

Table 8 shows the comparison of the different groups. The tests means of the economically disadvantaged group of students that attended no pre-school were compared to the economically disadvantaged students who had attended Head Start, those who attended the school district's pre-school and to those students who were advantaged. There was no significant difference between the means of the students from economically disadvantaged homes who attended Head Start or the district operated pre-school program and those who did not participate in a pre-school program. It also shows that the difference between the means of economically disadvantaged students and advantaged students still remains whether or not the economically disadvantaged students attended a preschool program.

Table 8: Results of Group Comparisons

		Subset for alpha = .05	
Group	N	1	2
Disadvantaged Students	217	55.93	
District pre-school Students	192	57.78	
Head Start Students	40	58.15	58.15
Not disadvantaged Students	288		69.68
Sig.		.963	.060

Table 9 shows how the groups were compared and the differences in their means. When the means of the students who attended Head Start were compared to those who attended the district pre-school (.37), the disadvantaged students who attended no pre-school (2.22) and those who were not disadvantaged (-11.53) there were no significant differences. When means of the students who attended the district operated pre-school were compared to the three remaining groups the differences in the means of the Head Start group was -.37, the disadvantaged group was 1.85, and the not disadvantaged group was –11.90. There was a significant difference between the means of the students who attended the district operated pre-school and the means of the not disadvantaged group. When the disadvantaged group means were compared to the Head Start group (-2.22), the group who attended the district operated pre-school (-1.85) and the not disadvantaged group (-13.75) the only significant difference was between the disadvantaged group and the not disadvantaged group. The not disadvantaged group was also compared to all three of the other groups and the means for

Head Start groups of students (11.53), the groups that attended the district pre-school (11.90) and the groups of disadvantaged students (13.75). There was a significance difference between the means of the not advantaged group of students and the district pre-school students means as well as the disadvantaged group.

Table 9: Comparisons of Group Means Using Tukey HSD

(I) SCHOOL	(J) SCHOOL	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
head start	district	.37	5.80	1.000	-14.53	15.28
	disadvantaged	2.22	5.74	.980	-12.53	16.97
	not disadvantaged	-11.53	5.63	.171	-26.00	2.94
district	head start	-.37	5.80	1.000	-15.28	14.53
	disadvantaged	1.85	3.31	.944	-6.65	10.34
	not disadvantaged	-11.90*	3.11	.001	-19.89	-3.92
disadvantaged	head start	-2.22	5.74	.980	-16.97	12.53
	district	-1.85	3.31	.944	-10.34	6.65
	not disadvantaged	-13.75*	3.00	.000	-21.46	-6.04
not disadvantaged	head start	11.53	5.63	.171	-2.94	26.00
	district	11.90*	3.11	.001	3.92	19.89
	disadvantaged	13.75*	3.00	.000	6.04	21.46

*. The mean difference is significant at the .05 level.

The table of frequency in Table 10 shows that the number of students who fell at 0 percent was larger than might be expected, with 69 students scoring at this level. By looking at Figure 6, it can be seen that all of these students were in the third grade class of 2002-2003. It also corresponds with the larger number of Hispanic students who had entered the district schools and were second language learners. These students were not enrolled in the district during the 1998-1999 school year and did not affect the outcome of this study.

Table10: Table of Frequency of TAAS and TAKS Scores

SCORE

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	69	9.4	9.4	9.4
	1	8	1.1	1.1	10.4
	2	2	.3	.3	10.7
	3	6	.8	.8	11.5
	4	6	.8	.8	12.3
	5	2	.3	.3	12.6
	6	7	.9	.9	13.6
	7	4	.5	.5	14.1
	8	4	.5	.5	14.7
	10	3	.4	.4	15.1
	12	5	.7	.7	15.7
	13	4	.5	.5	16.3
	15	5	.7	.7	17.0
	18	13	1.8	1.8	18.7
	20	7	.9	.9	19.7
	23	12	1.6	1.6	21.3
	26	13	1.8	1.8	23.1
	30	13	1.8	1.8	24.8
	34	12	1.6	1.6	26.5
	39	17	2.3	2.3	28.8
	45	19	2.6	2.6	31.3
	52	27	3.7	3.7	35.0
	60	27	3.7	3.7	38.7
	69	42	5.7	5.7	44.4
	71	8	1.1	1.1	45.5
	73	4	.5	.5	46.0
	75	8	1.1	1.1	47.1
	77	12	1.6	1.6	48.7
	79	42	5.7	5.7	54.4
	81	17	2.3	2.3	56.7
	83	23	3.1	3.1	59.8
	84	1	.1	.1	60.0
	85	23	3.1	3.1	63.1
	86	35	4.7	4.7	67.8
	89	76	10.3	10.3	78.2
	91	37	5.0	5.0	83.2
	93	47	6.4	6.4	89.6
	94	40	5.4	5.4	95.0
	98	19	2.6	2.6	97.6
	103	18	2.4	2.4	100.0
	Total	737	100.0	100.0	

Figure 6 shows the distribution of the scores by percentile according to years. From this table it can be seen that scores for the school year 2001-2002 are clustered together much more that the 2002-2003 school year. The 2002-2003 school year has some outliers but this did not affect the outcome of this study.

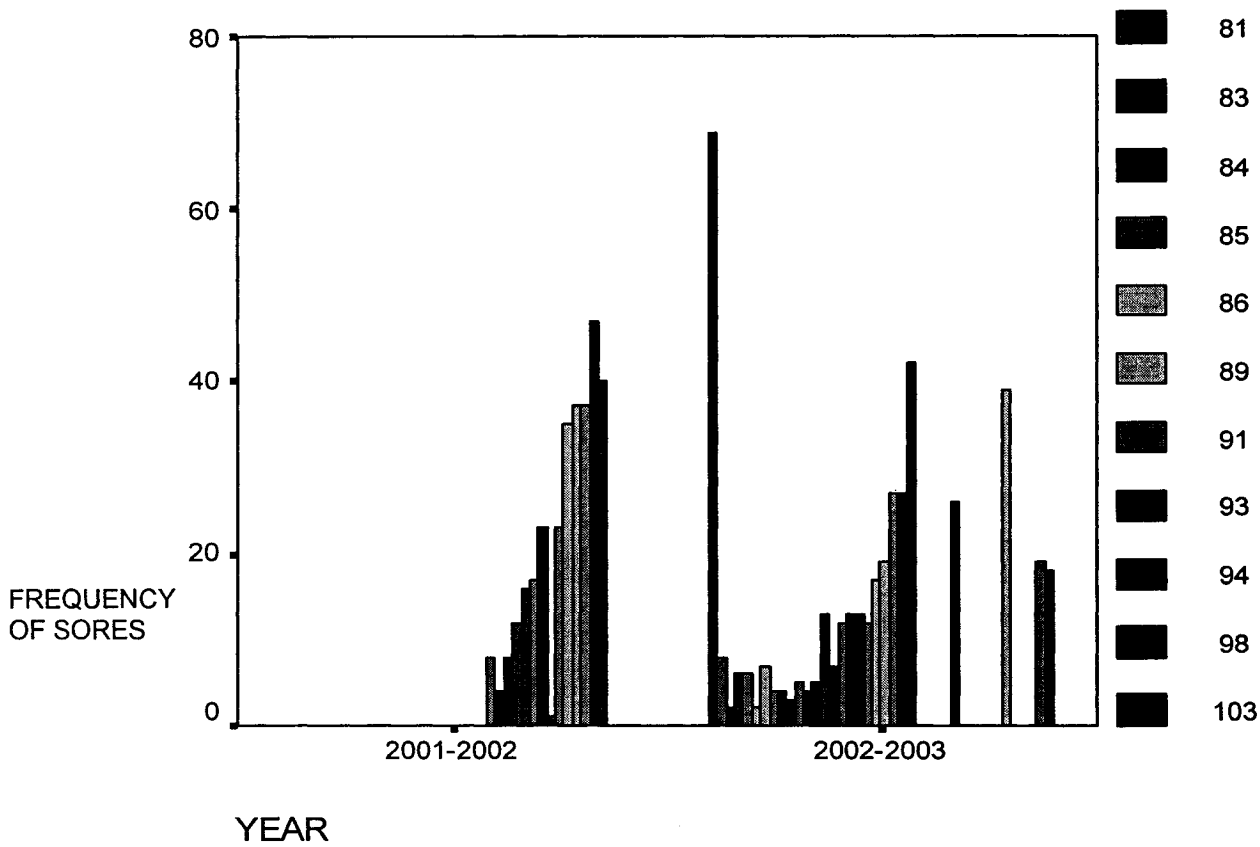


Figure 6: Distribution of Scores by Years

CHAPTER 5

Findings and Recommendations

Introduction

The purpose of this study was to investigate the relationship between scores on a state mandated test of economically disadvantaged students who attended Head Start or a pre-school and those economically disadvantaged students who did not attend pre-school. The investigation was intended to see if students who attended Head Start or pre-school scored better on the state mandated third grade tests than those economically disadvantaged students who did not attend any form of pre-school. The study also looked at the relationship between scores of economically disadvantaged students who attended Head Start or pre-school and scores of advantaged students. With the mandates of the No Child Left Behind legislation, this study was intended to investigate if pre-school programs for the economically disadvantaged are decreasing the difference between the scores of advantaged students and disadvantaged students.

Findings

The general findings of this study showed that there was no significant difference among the groups in the means of test scores at grade three of economically disadvantaged students who attended Head Start or pre-school and those economically disadvantaged students who did not attend pre-school in this East Texas school district. It also showed that attending pre-school did not help the economically disadvantaged students close the achievement gap between them and economically advantaged students

on the third grade test. The result of this study verifies preceding investigations that came to the same conclusions.

Research Questions

The first of the questions that this study proposed to answer asked, do students who attended Head Start score as well as or better on the state mandated test at grade three as socio-economically disadvantaged students who did not attend Head Start? According to the results of this study the economically disadvantaged students mean (55.93) is not as high as the economically disadvantaged who did attend Head Start (58.15). The differences between these two groups are not enough to be statistically significant, however.

The second question asked, do students who attended Head Start score as well as or better on the state mandated tests in grade three as those socio-economically disadvantaged students who attended school district operated pre-schools? The mean for the group of students that attended the district operated pre-school (57.78) was also lower than the students who attended Head Start (58.15). There was not enough difference to be statistically significant.

How do the students who attended Head Start compare with other students in grade three on the state mandated test was the third of the research questions. The economically disadvantaged students who attended Head Start group mean (58.15) was significantly lower than the mean of the students who were not disadvantaged (69.68). The mean of the group attending Head Start was not significantly different from those economically disadvantaged students who attended no pre-school program (55.93).

The fourth question asked, how do the scores of the students who were enrolled in the school district's pre-school compare with advantaged students in the third grade on the state mandated test? The mean for the groups of economically disadvantaged students who attended the pre-school score are significantly lower than the mean for the economically advantaged students.

Null Hypotheses

The hypotheses used in this study were as follows:

H1. There was no significant difference between the scores on the Texas Assessment of Academic Skills and/or the Texas Assessments of Knowledge and Skills of children who attended Head Start and those of children of socio-economically disadvantaged status who did not attend any form of early childhood program. This hypothesis was accepted because there was no significant difference between the means of the two groups.

H2. There was no significant difference between the scores on the Texas Assessment of Academic Skills and/or the Texas Assessments of Knowledge and Skills of children who attended Head Start and students enrolled in the district operated pre-school. This hypotheses was also accepted for there was no significant difference between the mean of the students enrolled in Head Start and the mean of the group of students who attended the district operated pre-school..

H3. There was no significant difference between the scores on the Texas Assessment of Academic Skills and/or the Texas Assessments of Knowledge and Skills of children at grade three who attended Head Start and the advantaged

group of students. This hypothesis was rejected for there was a significant difference between the group who attended Head Start and the economically advantaged group of students.

H4. There was no significance difference between the scores on the Texas Assessment of Academic Skills and/or the Texas Assessments of Knowledge and Skills of children who attended the district operated pre-school and the economically advantaged group of students. This hypotheses was rejected for there was a significant difference between these two groups.

Results

The results of this study showed that there was no significant difference between the scores on the Texas Assessment of Academic Skills and/or the Texas Assessments of Knowledge and Skills of those students who attended Head Start and those economically disadvantaged students who did not attend any type of early childhood programs. It also showed that there was no significant difference between the scores on the Texas Assessment of Academic Skills and/or the Texas Assessment of knowledge and Skills of children who attended Head Start and students enrolled in the district operated pre-school program for economically disadvantaged students. Therefore hypothesis one and two were accepted while hypothesis three and four were rejected, for there was significant difference between the means of the scores on the Texas Assessment of Academic Skills and/or the Texas Assessments of Knowledge and Skills of students in third grade who attended Head Start and economically advantaged children in the third grade. There were also significant differences between the means of the scores on the Texas Assessment of

Academic Skills and/or the Texas Assessments of Knowledge and Skills of students who attended the district operated pre-school and the advantaged children in the third grade.

Limitations

Limitations of this study included:

1. Certified teachers in the district operated pre-school program and non-certified teachers in Head Start program
2. Half-day program in the district operated pre-school program and full-day Head Start program

The teachers in the Head Start program were not certified but had been given training by the Regional Service Center in developmentally appropriate practice while all of the teachers in the district operated program held university degrees and were certified by the state. This factor was not considered in the interpretation of the data. The major factor was attendance of the district operated pre-school or Head Start.

The length of time the students were in school each day was also not considered. The full day program schedule in the afternoon was comprised of rest time and the opportunity for the students to have free-play time in learning centers. The half-day classes had no rest time. The learning centers were also used in the half–day program but the time the students participated in these activities was more limited than the full-day classes. In both programs, the mornings were spent in more structured academic type activities.

Discussion

Early childhood programs have been touted as a way to help break the cycle of poverty and give children from disadvantaged homes a better chance to be successful in

school. The results of this study called these conclusions into question. As a teacher in early childhood programs for more than two decades, this researcher has seen the advantages that attending a good pre-school program can give students when they enter Kindergarten and grade one. The questions that these results bring into focus are many. The most important of which is what can be done once a student gets into the primary grades to continue this success? With so much emphasis being placed on testing is there anything that could be done to enhance the pre-school curriculum that would improve these students testing abilities without destroying the whole child center bases for these programs?

Moving curriculum material that once was taught in grade one down into Kindergarten and with the strong push for children to be reading upon entering grade one has placed even more pressure on the pre-school curriculum. This has caused this researcher to speculate about the forces that are driving the content of instruction in pre-schools and Kindergartens in this country. The stages of development are given in age ranges and children do not all develop given abilities at the same time or at the same rate. Yet, the present day structuring of schools curricula do not take this into account. Standards are set for each grade level and children are tested on those skills. Then there is discussion about the children who "failed" and what the teacher is to do to bring that child up to standard. The question that should be asked is not why did this child not reach the goals we set but are the goals that we set reasonable for this child. In other words, was this skill developmentally appropriate at this child's stage of development.

In our university class we teach pre-service teachers the principles of child development and discuss the importance of meeting individual developmental needs.

When these new teachers enter the real world of the classroom and state mandated testing they are told that every child in their classroom must meet the same standards. The pressure is such that if their students do not meet the standards as judged by the test the teacher is blamed and the students are made to endure rigorous drill and practice of the skills they have not mastered and may not yet be developmentally ready to master.

According to Zenger and Zenger (2002), the only standards currently in use that were based on theories of child development are the ones set forth by the National Association of Social Studies Teachers. This makes one wonder if before we start to measure all children's success or failure in school on just one standards based test, if we should not first look at the standards these test are based on to see if they are truly developmentally appropriate and make accommodations for the ranges of development found in each and every classroom.

Recommendations for Further Study

In order to obtain additional meaningful information it is recommended that additional data be collected. This study only looked only at participation in a pre-school or Head Start program and its relationship to scores on the state mandated test given in grade three. As stated in Chapter Two of this study, Head Start as well as most other early childhood programs had as their purpose the education of the whole child. This means that these programs focus on the emotional, physical, and social development as well as the cognitive development of children. The intention of these programs is to prepare children in all aspects of development for school and life. There are several questions that need to be answered before the value or lack there of, of pre-school programs for economically disadvantaged students can be explained or fully understood.

1. Proponents of pre-school programs for economically disadvantaged students cite the progress these students make in Kindergarten and grade one (Caputo, 2003. Lunenburg, 2000, National Head Start Association, 2003a). Are these gains lost over time and if so is the curriculum too narrow?

2. Would a longitudinal study that includes both qualitative as well as quantitative information help discover the reason that there is still such a difference in the scores of advantaged students and disadvantaged students?

Recommendations for Practice

The National Association for the Education of Young Children (2003) recommends that curriculum for pre-school programs should be hands-on and emphasizes the growth and development of the whole child. According to their position statement there should be equal emphasis placed on all areas of development: emotional, social, physical cognitive.

1. In this East Texas district the early childhood programs are basically constructivist in nature while grade one through three are much more structured and pencil and paper orientated. Could the change in teaching methodology have an effect on the lack of progress of these students?

2. Does the lack of resources in socio-economically disadvantaged homes not help sustain the gains made by early childhood programs as the student progresses in school?

Summary

The results of this study does show that there is no significant difference in the scores of students who are economically disadvantaged and attended Head Start or the

pre-school program operated by the local district when they are compared to each other and with the advantaged students at the third grade level. Millions of dollars have been budgeted for these programs and studies have shown that pre-school experiences do make a difference in students success in Kindergarten and grade one, but the question remaining to be answered is why do these results not last and/or make a difference on grade three test.

REFERENCES

Administration for Children and Families, U.S. Department of Health and Human Services, (2003). ACF child outcomes research and evaluation, OPRE. Retrieved April 19. 2003 from http://www.acf.dhhs.gov.

Academic Excellence Indicator System (2001-2002). Marshall, ISD. Retrieved April 19. 2003 from http://www.acf.dhhs.gov.

Allington, R. L. (2000). How to improve high-stakes scores without really improving. *Issues in Education*. 6,12. Retrieved January 10, 2003 from http://web23.epnet.com/citation.

American Educational Research Association (2000). AERA position statement concerning high-stakes testing in pre-K-12 education. Retrieved December 5, 2003 from http://www.aera.net.

American Federation of Teachers (2001). AFT: State Standards better, but need coherence. *Education USA*, 11, 7.

American School Board Journal, (2002). You say: Wrong test, wrong tool. 189, 4. Retrieved January 20, 2003 from http://www.asbj.com.

Archer, J. (2002). Rhode Island. *Education Week, 21, 17*. Retrieved February 27, 2003 from http://web12.epnet.com/citation.asp.

Association for Supervision and Curriculum Development (2003). Glossary of Terms. Retrieved January 20, 2003 from http://asck.org/educationanews/pr/sylvan/glossary.html.

Bank Street College of Education, 2003. Bank Street school for children. Retrieved September 13, 2003 from http://bankstret.edu.

Bernal, E. M. and Valencia, R. R. (2000). The TAAS case: A recapitulation and beyond. *Hispanic Journal of Behavioral Science*, 22, 4. Retrieved January 10, 2003 from http://web23.epnet.com/citation.

Bracey, G. W., (2000). The 10th Bracey report on the condition of public education. *Phi Delta Kappan,* 82, 2. Retrieved December 19, 2002 from http://web5.epnet.com/citation.

Bush, G. W. (2002). Remarks on the ready to learn program week ending April 5, 2002. Weekly Compilation of Presidential Documents 38, 14. Retrieved February 27, 2003 from http://web12.epnet.com/citation.

Caputo, R. K. (2003). Head Start, other pre-school programs, & life success in a youth cohort. *Journal of Sociology and Social Welfare*, 30, 2.

Cimbriez, S. (2002). State-mandated testing and teacher's beliefs and practice. Education Policy Analysis Archives, 10. Retrieved January 18, 2003 from http://epaa.asu.edu/v10n2html.

Clarke, M. M., Madaus, G. F., Horn, C. L., & Ramos, M. A. (2000). Retrospective on educational testing assessment in the 20th century. *Journal of Curriculum Studies* 32, 159-181.

Cole, W. (2001). Feeling crushed by tests at age 11. *Time*, 157. Retrieved January 10, 2003 from hhtp://web23.epnet.com/citation.sap.

Cooper, P.A.(1993). Paradigm shifts in designed instruction: From behaviorism to cognitivism to constructivism. *Education Technology, #, 12-18.*

Davis, M. R. (2003). Administration addresses concerns about Head Start testing plan. *Education Week, 22, 18*. Retrieved February 27, 2003 from http://web12.epnet.com

DeKalb Public Schools (2003). Testing service assessment and accountability. Retrieved January 20, 2003 from http://www.dekalb.k12.ga.us/eservics/testing.

Education Research Foundation,(2003). All about High/Scope. Retrieved May 9, 2003 from http://www.highscorpe.org.

Figlio, D. (2000) What's in a grade? School report cards and house prices. National Bureau of Economic Research. Retrieved December 5, 2003 from http://papers.nber.org

Froebel Web, 2002. Surf Froebel Web, Retrieved December 12, 2002 from http://members.tripod.com.

Gallagher, C. (2000). A seat at the table. *Phi Delta Kappan*, 81. Retrieved January 10, 2003 from http://web23.epnet.com/citation.asp.

Gottlieb, S. S., (2001). A review of state reading and language arts standards. *ERIC Digest*, 161. Retrieved February 7, 2003 from *http://web17.epnet.com/citation.asp*.

Graves, D. H. (2002). When testing lowers standards. *Reading Today*, 19. Retrieved February 7, 2003 from http://web17.epnet.com/citation.asp.

Heubert, J. P. (2002). First, do no harm. *Education Leadership*. 26-30.

Hill, C. (2001).The pitfalls of annual testing. *Christian Science Monitor*, 94. Retrieved January 20, 2003 from http://web23.epnet.com/citation.asp.

Jacobson, L. (2003). White House plan for Head Start draws critics. *Education Week*, 22, 18. Retrieved February 27, 2003 from http://web12.epnet,com/citation.asp

Joftus, S. & Berman, Il (1998), Great expectations? Defining and assessing rigor in state standards for mathematics and English language arts. Washington, DC: Council for Basic Education, (ERIC Document Reproduction Services No. ED 416 080) Retrieved February 7, 2003 from http://web17.epnet.com/citation.

John Dewey Society, (2002). JDS home page. Retrieved December 30, 2002 from http://cuip.uchicago.edu/jds.

Judd, C. H. (1918). A look forward. In G. M. Whipple ed. *The Measurement of Education Products,* 17th Yearbook, Part 2 of the National Society for the Study of Education, Part II. Bloomington, Il. Public School Publishing Co. 152-160.

Karp, S. (2002). Let them eat tests, American Educational Journal, 16, 4. Retrieved January 20, 2003 from http://www.rethinkingschools.oreg/Archives

Koffler, K. & Fulton, A. (2002). Bush announces accountability proposal for Head State. Congress Daily. Retrieved February 27, 2003 from http://web12.epnet.com.

Kohn, Alfie. (2002). The 500-pound gorilla. *Phi Delta Kappa,* Retrieved October 21, 2002 from http://web11.epnet.com/citation.

Lewis, A. C. (2002). Who's left behind? *Education Digest. 67.* Retrieved January 10, 2003 from http://web23.epnet.com/citation.asp.

Lewis, A. C. (2003). Educating our youngest citizens. Phi Delta Kappan. Retrieved January 12, 2003 from http:/web11.epnet.com

Lunenburg, F. C. (2000). Early childhood education programs can make a difference in academic, economic, and social arenas. Education 120, 3. Retrieved February 27, 2003 from http://web12.epnet.com.

Martin, R. (1997). Theoretical overview & historic background – Constructivism. Retrieved December 30, 2002 from http://www.inspiredinside.com/learning/Construct/2-overviews.htm

Manzo, K. K., (2001). No state has a coordinated standards effort, AFT says. *Education Week,* 21. Retrieved November 7, 2003 from http://web17.epnet.com/citation.sap.

McBrien, J. L. & Brandt, R. S. (1997). The Language of Learning: A Guide to Education Terms. Alexandria, VA. Association for Supervision and Curriculum Development.

Mervis, L. chairperson (1995). Assessment Handbook: A Guide for Developing Assessment Programs in Illinois Schools. Retrieved August 19, 2003 from http://www.gower.k12.il.us.

Mesmer, H. A. (1997). What is the standard for the state standards? An investigation of the English language arts standards for Colorado, Florida, Michigan, and New Hampshire. *Reading Horizons,* 37, 281-198.

Mezirow, J. (1991). *Transformative Dimensions of Adult Learning*. San Francisco, Jossey-Bass Publishers

Nathan, L. (2002). The human face of the high-stakes testing story. *Phi Delta Kappan,* 83. Retrieved December 19, 2002 from http://web5.epnet.com/sitation.asp.

National Association for the Education of Young Children (2003). Position statements. Retrieved April 19, 2003 from http:/www.naeyc.org.

National Association for Multicultural Education (2002). Resolutions & Positions Papers 2002) Retrieved January 18, 2003 from http://www.nameorg.org/resolutions/standardezed.html.

National Head Start Association, (2003a). Legislative alerts, Governments study finds Head Start works. Retrieved April 19, 2003 from http://www.nhas.org.

National Head Start Association, (2003b). Advocacy: Head Start success stories – Collins, Clarissa. Retrieved April 19, 2003 from http://www.nhas.org.

National Research Council, A. Beatty, U. Neisser, W. Trent, & J.P. Heubert (eds) (2001). *Understanding dropouts: Statistics, Strategies, and High-stakes Testing,* Washington, DC. National Academy Press.

Neff, M. (2002). Study shows positive results from early Head Start program. *American Family Physician, 66, 2.* Retrieved February 27, 2003 from http://pweb12.epnet.com/citation.asp.

Olson, L. Testing (2001). *Education Week,* 22, 7. Retrieved December 19, 2003 from http://web5.epnet.com/citation.asp.

Patterson, J. C. (2000). Texas's TAAS miracle or mirage? *Curriculum Administrator*, 36. Retrieved December 19, 2002 from http://web5.epnet.som/citation.sap

Papert, S. (2002). Child psychologist Jean Piaget. Retrieved December 25, 2002 from http://www.time.com/time/time100/scientist/profile/piaget.html.

Popham, W. J. (2001). The truth about testing: An educator's call to action. Alexandria, VA, Association for Supervision and Curriculum Development.

Public Broadcasting Systems, (2002). The testing industry's big four. Retrieved December 17, 2002 from http://www.pbs.org/wgbh/pages/frontline/shows/schools/testing.

Pyrczak, F. (2001). *Making Sense of Statistics, A Conceptual Overview.* Los Angeles, CA. Pyrczak Publishing

Quigley, W. P. (2001). Due process rights of grade school students subjected to high-stakes testing. The *Boston Public Interest Law Journal,* Spring 2001, 10 B.U. Pub. Int. L.J. 284.

Samelson, F. (1987). Was early mental testing (a) racist inspired, (b) objective science, (c) a technology for democracy, (d) the origin of multiple-choice exams, (e) none of the above? In M.M. Sokal (ed), Psychological Testing and American Society, New Brunswick, NJ, Rutgers University Press.

Sandham, J. L. (2002). Ohio. *Education Week, 21, 17.* Retrieved February 27, 2003 from http://web12.epnet.com/citation.asp.

Santrock, J. W. (2000). Children (6th ed.). Boston: McGraw-Hill Higher Education.

Schrag, P., (2000). High stakes are for tomatoes. *The Atlantic Online.* Retrieved January 20, 2003 from http://www.theatlantic.com/issure/2000/08/schrag.html.

Schutz, R. (2002). Vygotsky & language acquisition, Retrieved December 31, 2002 from http://www.sk.com.br/sk-vygot.html.

Seldin, T. (2002). Maria Montessori: An historical perspective. retrieved December 30, 2002 from http://www.montessori.org/mariawho.htm.

Sinberbrand, R. (2002). Got a test? Eat up? *Newsweek,* 140. Retrieved December 19, 2002 from http://web5.epnet.com/citation.asp.

Singh, D. K. (2003), Families of Head Start children: A research connection. *Journal of Instructional Psychology, 30, 1. p77-83.*

Solorzano. D. & Yosso, S. (2001).From facial stereotyping and deficit discourse toward a critical race theory in teacher education. Multicultural Education, 9, 2-8.

Southwest Educational Development Laboratory, (2000). Insights: Retrieved January 20, 2003 from http://www.sedl.org/policy/insight/n11/9.html.

Stake, R. E. & Rugg, D. (1991). Impact on the classroom. In R. E. Stake (Ed.), Advances in program evaluation: Vol. I. Effects of mandated assessment on teaching (pp. 19-22). Greenwhich, CT, JAI Press Ltd.

Starr, A. (2002). Does universal pre-school pay? *Business Week, 3780.* Retrieved February 27, 2003.

Statistical Analysis of Multiple Choice Exams, (2003). Coefficients and reliability. Retrieved August 18, 2003 from http://www.tel.sunyit.edu.

Texas Education Agency (2002), 2002 Campus AEIS Report. Retrieved April 19, 2003 from http://www.tea.state.tx.us/cgi/sas8/broker?

Texas Education Agency (2003). Student Assessment Division-Research. Retrieved August 18, 2003 from http://www.tea.state.gov.

Tyler, R. W. (1934). *Constructing Achievement Tests*, Columbus, OH. Ohio State University, Bureau of Educational Research.

United States Government, (2002). Introduction: No child left behind. Retrieved December 17, 2002 from http://www.nochildleftbehind.gov/next/overview/index.html.

Urban, T. C. (2001). *Statistics in Plane English*, Mahwah, NJ. Lawrence Erlbaum Association. Publishers

Vinovskis, M. A. (1999). Do federal compensatory education programs really work? A brief historical analysis of Title I and Head Start. *American Journal of Education*, 107.

Vygotsky, L. (2002a). Tool and symbol in child development. Retrieved December 31, 2002 from http//:marxists.org/archive/vygotsky/works/mind/chap/htm.

Vygotsky, L. (2002b). Interaction between learning and development. Retrieved December 31, 2002 from http//:marxists.org/archive/vygotsky/works/mind/chap/htm.

Wilson (Wilson Quarterly, 2001). The magic of Head Start. Wilson Quarterly, 25, 4. Retrieved February 27, 2003 from Academic Search Premier data base.

Wixon, K. K. & Dutro, E. (1998). Standards for primary-grade reading: An analysis of state frameworks (Gottieb, 2001).

Wortham, S. C. (1998). Early Childhood Curriculum Developmental Bases for Learning and Teaching, Upper Saddle River, NJ: Merrill.

Zancanella, D. (1992). The influence of state-mandated testing on teachers of literature. *Educational Evaluation and Policy Analysis*, 12 (14), 283-295.

Zehr, M. A. (2002). Montana. *Education Week*, 21, 7. Retrieved February 27, 2003 from http://web12.epnet.com/citation.asp.

Zenger, W. F. & Zenger, S. K. (2002). Why teach certain material at specific grade levels? *Phi Delta Kappan*, 84. Retrieved February 7, 2003 from http://web17.epnet.com/citation,asp.

APPENDIX A
STUDY/PROJECT INFORMATION FOR HUMAN SUBJECTS COMMITTEE

STUDY/PROJECT INFORMATION FOR HUMAN SUBJECT COMMITTEE

TITLE: The Influence of Head Start and Other Pre-School Programs on the Scores of the Texas State Mandated Test Given in the Third Grade

PROJECT DIRECTORS: Dr. Kim Kimbell-Lopez Major Professor
Donna Harrell Lubcker, LEC Doctoral Student

DEPARTMENT: College of Education

PURPOSE OF STUDY/PROJECT: To identify the relationship between Head Start and other pre-school programs on the scores of the Texas mandated test that is given in third grade.

SUBJECTS: Students who entered a selected East Texas independent school district pre-school and the area Head Start program during the 1997-1998 and1998-1999 school years and took the state mandated test in grade three during the 2001-2002 and 2002-2003 school years.

PROCEDURE: Permission to review the records of attendance for the pre-school program operated by the Marshall Independent School District during the 1997-1998 and the 1998-1999 school years will need to be obtained from the director of special population. The attendance records as well as the TAAS scores for 2001-2002 and the TAKS scores for 2002-2003 will need to be obtained from the same source. The Head Start records for the 1997-1998 and the 1998-1999 school years are currently housed in the Region VII Service Center. Permission to review these records will need to be obtained. Once all the data is obtained it will be coded and analyzed.

INSTRUMENTS AND MEASURES TO INSURE PROTECTION OF CONFIDENTIALITY, ANONYMITY: All of the participant's names will be coded with a number. The data will be analyzed and reported without disclosing any identifiers of the participants. The name and location of the independent school district will not be revealed in the report.

RISK/ALTERNATIVE TREATMENTS: There are no risks associated with participation in this study.

BENFITS/COMPENSATION: None

SAFEGUARDS OF PHYSICAL AND EMOTIONAL WELL-BEING: There will be no potential hazards for participants.

APPENDIX B
PERMISSION TO OBTAIN DATA

PERMISSION FROM THE DIRECTOR OF POPULATIONS AND TESTING

Dear Mrs. Hoffman,

I am requesting permission to review the attendance records of students who were enrolled in the districts early childhood program during the 1997-1998 and 1998-1999 as well as the third grade attendance records for the 2001-2002 and 2002-2003 school years. I am also requesting the TAAS records for the 2001-2002 school year and the TAKS records for the 2002-2003 school year. Information pertaining to the study is listed below:

TITLE: The Influence of Head Start and Other Pre-School Programs on the Scores of the Texas State Mandated Test Given in the Third Grade

RESEARCH DIRECTOR: Donna Harrell Lubcker

DEPARTMENT: Louisiana Education Consortium/Director Proposal

PURPOSE OF STUDY/PROJECT: To identify the relationship between Head Start and other pre-school programs on the scores of the Texas mandated test that is given in third grade.

SUBJECTS: Students of the Marshall Independent School District's pre-school and the area Head Start program during the 1997-1998 and1998-1999 school years and those who took TAAS during the 2001-2002 and TEKS during the 2002-2003 school year.

PROCEDURE: Permission to review the records of attendance for the pre-school program operated by the Marshall Independent School District during the 1997-1998 and the 1998-1999 school years will need to be obtained from the director of special population. The attendance records as well as the TAAS scores for 2001-2002 and the TEKS scores fro 2002-2003 will need to be obtained from the same source. The Head State records for the 1997-1998 and the 1998-1999 school years are currently housed in the Region Seven Service Center. Permission to review these records will need to be obtained. Once all the data is obtained it will be coded and analyzed.

INSTURMENTS AND MEASURES TO INSURE PROTECTION OF CONFIDENTIALITY, ANONYMITY: All of the participant's names will be code with a number. The data will be analyzed and reported without disclosing any identifiers of the participants. The name and location of the independent school district and the Head Start program will not be revealed in the report.

RISK/ALTERNATIVE TREATMENTS: There is no risks associated with participation in this study.

BENFITS/COMPENSATION: None

SAFEGUARDS OF PHYSICAL AND EMOTIONAL WELL-BEING: Data will not be collected until permission is secured from the Human Use Committee of Louisiana Tech University. Any individual who has questions about this study will have the opportunity to pose them to the researcher or the Human Use Review committee. No penalty will be imposed for any participant who wishes to withdraw from the investigation.

CONTACT:
The principal investigator listed below may be contacted to answer any questions you may have about the research, participants' rights, or related matters.

Donna Harrell Lubcker 903-923-2275

The Human use Committee may also be contacted if a problem cannot be discussed with the researcher.

Dr. Mary Livingston	318-257-4315
Dr. Terry McConathy	318-257-2924
Mrs. Margaret Nolan	318-257-5075

I. Carla Huffman, attest with my signature that I have read and understood the description of this study and its purpose and methods. I understand that my districts participation in the research is strictly voluntary. Further, I understand that we may withdraw our participation at any time or refuse to answer questions without penalty. Upon completion of the study, I understand that the results will be freely accessible only to the director, a legally appointed representative, or myself. I have not been requested to waive, not do I waive any of my rights related to participating in this study.

Carla Huffman
Director's Signature

December 16, 2003
Date

PERMISSION FROM REGION SEVEN SERVICE CENTER

Dear Julie Ray,

I am requesting permission to review the attendance records of students who were enrolled in the Head Start program operated in Marshall Texas during the 1997-1998 and 1998-1999 school years. Information pertaining to the study is listed below:

TITLE: The Influence of Head Start and Other Pre-School Programs on the Scores of the Texas State Mandated Test Given in the Third Grade

RESEARCH DIRECTOR: Donna Harrell Lubcker

DEPARTMENT: Louisiana Education Consortium/Director Proposal

PURPOSE OF STUDY/PROJECT: To identify the relationship between Head Start and other pre-school programs on the scores of the Texas mandated test that is given in third grade.

SUBJECTS: Students of the Marshall Independent School District's pre-school and the area Head Start program during the 1997-1998 and1998-1999 school years and those who took TAAS during the 2001-2002 and TEKS during the 2002-2003 school year.

PROCEDURE: Permission to review the records of attendance for the pre-school program operated by the Marshall Independent School District during the 1997-1998 and the 1998-1999 school years will need to be obtained from the director of special population. The attendance records as well as the TAAS scores for 2001-2002 and the TEKS scores fro 2002-2003 will need to be obtained from the same source. The Head State records for the 1997-1998 and the 1998-1999 school years are currently housed in the Region Seven Service Center. Permission to review these records will need to be obtained. Once all the data is obtained it will be coded and analyzed.

INSTURMENTS AND MEASURES TO INSURE PROTECTION OF CONFIDENTIALITY, ANONYMITY: All of the participant's names will be code with a number. The data will be analyzed and reported without disclosing any identifiers of the participants. The name and location of the independent school district and the Head Start program will not be revealed in the report.

RISK/ALTERNATIVE TREATMENTS: There is no risks associated with participation in this study.

BENFITS/COMPENSATION: None

SAFEGUARDS OF PHYSICAL AND EMOTIONAL WELL-BEING: Data will not be collected until permission is secured from the Human Use Committee of Louisiana Tech

University. Any individual who has questions about this study will have the opportunity to pose them to the researcher or the Human Use Review committee. No penalty will be imposed for any participant who wishes to withdraw from the investigation.

CONTACT:
The principal investigator listed below may be contacted to answer any questions you may have about the research, participants' rights, or related matters.

Donna Harrell Lubcker 903-923-2275

The Human use Committee may also be contacted if a problem cannot be discussed with the researcher.

Dr. Mary Livingston	318-257-4315
Dr. Terry McConathy	318-257-2924
Mrs. Margaret Nolan	318-257-5075

I. Julie J. Ray, attest with my signature that I have read and understood the description of this study and its purpose and methods. I understand that my districts participation in the research is strictly voluntary. Further, I understand that we may withdraw our participation at any time or refuse to answer questions without penalty. Upon completion of the study, I understand that the results will be freely accessible only to the director, a legally appointed representative, or myself. I have not been requested to waive, not do I waive any of my rights related to participating in this study.

Julie J Ray
For Region Seven Signature

1/29/04
Date

APPENDIX C
TEST SCORE CONVERSION DATA

Converting a TAKS Scale Score to a Percentile Rank

To convert a TAKS scale score to a percentile rank, you must first have access to the appropriate TAKS scale score frequency distribution. Then a simple formula can be used to find the percentile rank of any TAKS scale score value.

The formula for the percentile rank is as follows:

$$PR(x) = ((f/2 + L)/N)100$$

where

x = scale score of interest
f = frequency of the scale score of interest
L = cumulative frequency associated with the next lowest scale score
N = population size (number of persons tested).

Example:

Below is a worked out example using the spring 2003 grade 11 mathematics TAKS. (You will need to look at the spring 2003 grade 11 mathematics TAKS frequency distribution on the next page to follow this example). Suppose we wish to find the percentile rank for the scale score of 2314. Looking at the frequency distribution on the next page, it can be verified that

x = 2314
f = 2887
L = 176201
N = 198622

and, thus,

$$PR(2314) = ((2887 / 2 + 176201) / 198622) 100 = 89.44 .$$

Usually, percentile ranks are expressed as whole numbers; in this case,

$$PR(2314) = 89.$$

TEXAS ASSESSMENT OF KNOWLEDGE AND SKILLS
SCALE SCORE FREQUENCIES
TAKS READING TEST
ALL STUDENTS
GRADE 3
-+- MARCH 2003 -+-

The FREQ Procedure

R_SSC	Frequency	Percent	Cumulative Frequency	Cumulative Percent
1353	44	0.02	44	0.02
1577	6	0.00	50	0.02
1637	13	0.00	63	0.02
1682	24	0.01	87	0.03
1718	82	0.03	169	0.06
1750	156	0.06	325	0.12
1778	272	0.10	597	0.23
1803	532	0.20	1129	0.43
1826	805	0.31	1934	0.73
1848	1123	0.43	3057	1.16
1868	1477	0.56	4534	1.72
1888	1779	0.68	6313	2.40
1907	2217	0.84	8530	3.24
1925	2412	0.92	10942	4.15
1943	2837	1.08	13779	5.23
1960	3205	1.22	16984	6.45
1978	3272	1.24	20256	7.69
1995	3845	1.46	24101	9.15
2012	4125	1.57	28226	10.72
2029	4552	1.73	32778	12.45
2046	4944	1.88	37722	14.32
2064	5609	2.13	43331	16.45
2082	6359	2.41	49690	18.87
2100	7018	2.66	56708	21.53
2119	7822	2.97	64530	24.50
2139	9143	3.47	73673	27.97
2160	10787	4.10	84460	32.07
2182	12388	4.70	96848	36.77
2207	14362	5.45	111210	42.23
2233	16870	6.41	128080	48.63
2263	19567	7.43	147647	56.06
2299	22714	8.62	170361	64.68
2342	25125	9.54	195486	74.22
2400	26429	10.03	221915	84.26
2494	24869	9.44	246784	93.70
2623	16587	6.30	263371	100.00

Frequency Missing = 29499

TEXAS ASSESSMENT OF KNOWLEDGE AND SKILLS
SCALE SCORE FREQUENCIES