The Effect of Mobility on Texas Assessment of Knowledge and Skills Test Scores

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By

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WE, THE UNDERSIGNED MEMBERS OF THE COMMITTEE,

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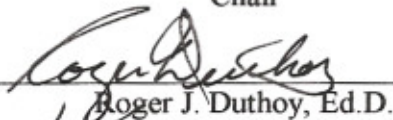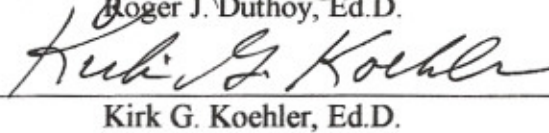
KNOWLEDGE AND SKILLS TEST SCORES

By

Ray Alvarez

ACCEPTED AND APPROVED ON BEHALF OF

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Dedication

I wish to dedicate this work to my parents, Mr. And Mrs. Santiago and Eulalia Alvarez, who, from humble beginnings, raised six children to become teachers; one died a federal agent. My father had a six-week's education and my mother achieved the seventh grade. However, they always valued and stressed the importance of a good education.

Abstract

This research studies the effects of mobility on the high-stakes test scores of a Title I South Central Texas school district. The study involved 10, 5th-grade elementary feeder school populations graduating to the 6th grade in 3 middle schools. The researcher compared the 1st administration scores of the Texas Assessment of Knowledge and Skills test scores in spring 2003 with the scores of spring 2004. The purpose was to understand how, if at all, mobility affected the scores.

This study uses all of the 5th-grade population scores ($N = 739$) in the district. The comparison between the TAKS scores of 2003 and 2004 was done on students who left and remained in the district.

The group that left the schools affected the achievement scores of the district; however, the effect depended on whether the group leaving had scores above or below the respective group district average. The data do not support the null hypothesis. There is a significant difference in the student achievement data in the TAKS between 5th and 6th grade in a student group that is highly mobile.

Chapter 1

Background of the Problem

Introduction

This dissertation investigates the following research question: Does mobility (the ability to change one's environment) affect the performance of students on Texas Assessment of Knowledge and Skills (TAKS), the current standardized test in Texas?

The education environment is filled with discussion about the validity of the standardized test imposed on school districts by the No Child Left Behind Act of 2001 (NCLB). President George W. Bush strongly backs the act, which is an amended version of the Elementary and Secondary Education Acts (ESEA) of 1965 and 1994. The NCLB Act is designed to improve the academic scores of disadvantaged students.

Federal law defines disadvantaged students as those belonging to small, ethnic populations. That includes the economically disadvantaged. It is worth nothing that the term can be misleading. For example, Texas identifies 2,277,901 students, 52% of the total population, as economically disadvantaged, though that is considered a small population (Texas Education Agency, 2004c). However, those small populations are growing, and in many places they have become the dominant population. In short, around the country in many areas, the white, affluent student has become the minority student.

NCLB requires the personnel running the public schools to be accountable to their school district and their states for the test scores of disadvantaged students. More than ever, the special techniques of educating the at-risk student have become the norm in schools. Plainly put, schools must evaluate many students who, for years, were exempted from the standardized test for what were considered educationally sound reasons.

History of Texas' Standardized Tests

While many states are just beginning to define the path to standardizing their student populations, Texas has been at the same task for 25 years. (TEA, 2004a) According to Sherman and Jones (2005), the legislature in 1979 directed TEA to, "adopt and administer criterion-referenced assessment instruments that would measure minimum basic skills competencies in reading, writing and math" (p. 1). The measurement of the success of that curriculum began in the 1980–1981 school year with the Texas Academic Basic Skills test (TABS). Here is a short outline of the evolution of those assessments:

- 1985–1986: TABS became the Texas Educational Assessment of Minimum Skills (TEAMS).

- 1990–1991: TEAMS became the Texas Assessment of Academic Skills (TAAS).

- 2002–2003: TAAS became the Texas Assessment of Knowledge and Skills (TAKS).

In every instance the test norms were raised, with the resulting examination becoming increasingly difficult.

The Texas legislature mandated, and the Texas Education Agency created, the curriculum for TAKS. George W. Bush, while Governor of Texas, was the force behind those legislative developments. As the President, he is charging the Department of Education with expanding the instrument that measures educational achievement by requiring accountability in specific subject core areas throughout the country.

Validity of Standards-Based Education

While the academic debates continue over the validity of standards-based

education, the NCLB marches on in every public school district receiving federal funds. As demographics have changed, in an increasing number of schools around the country the classroom populations are now multicolored and multicultural, with more than a sprinkling of the economically disadvantaged thrown into the pot. Small-population groups are being measured and challenged to score as well as the dominant white population. Schools that do not measure up to the task may be labeled inadequate. Such underachieving schools risk being taken over by the state or even disbanded.

Research published in September 2005 supports the findings outlined here. Sharon L. Nichols, David C. Berliner, and David V. Glass for the Education Policy Studies Laboratory at Arizona State University wrote the report of the research. Here is the final paragraph of their introduction: "The authors conclude that there is no convincing evidence that the pressure associated with high-stakes testing leads to any important benefits for students; achievement. They call for a moratorium on policies that force the public education system to rely on high-stakes testing"(p. 3)

Educators must have more research regarding the validity of the tests used to assess the achievement of the economically disadvantaged. A student's economic status is most readily defined by his lunch classification: (a) free—limited economic resources, (b) reduced—able to pay a portion of the cost of meals, and (c) paid—student and his family require no assistance. Using those criteria, the researcher can investigate the effect of economics on test results.

Conflicts Between NCLB and Texas Law

NCLB requires all states to formulate their own tests to show the progress of their students. Schools that fail to do so may receive sanctions stronger than those imposed by

the state. Texas law meets the minimum NCLB standards.

Even so, Texas schools face the demanding criteria of the NCLB as well as the Texas education standards. The two sometimes conflict (LaCoste-Caputo, 2005). The accountability sanctions imposed by both systems include placing the school district or individual school on probation and notice the 1st year and publicly releasing the data showing the school's shortcomings. A low-scoring school district is allowed to attempt its own improvement the 1st year. According to Texas guidelines, following a 2nd consecutive year of low performance, as determined by the Commissioner of Education, sanctions may range from: (a) requiring a report on the condition of any facet of the school, (b) reorganizing the school, or (c) ordering the school closed (TEC 39.132, 2004, TEAc). Penalties match the severity of the Texas accountability criteria; although the federal guidelines require 4 years of unacceptable performance before external corrective action is taken.

The implementation of the NCLB guidelines was demanding. In Texas, 1,516 schools were labeled Not meeting Annual Yearly Progress or AYP. One requirement resisted by many, calls for 95% of the school's population to take the test on a specific date. Interestingly, many students chose to be absent on that day, which caused the ratings of schools labeled AYP to fall abnormally. That is, their scores appeared worse than the schools believed they should be. The states appealed and were granted a make-up date so the data would reach the 95% level.

Special Education Conflict

According to the Individual Disabilities Education Act of 1997, each Special Education student must have an Individual Education Plan (IEP) customized to his/her

abilities. The campus Admission Review and Dismissal (ARD) committee formulates the IEP. That committee is made up of the student's parents and current teachers. It determines the student's grade level through recognized tests and teacher assessment of his/her educational abilities and performance. Further, the ARD committee sets the grade level, at which time each Special Education student may attempt the State Developed Academic Assessment (SDAA) test. The conflict arises when ARD decides that the student may be tested below grade level. But NCLB requires all students to test on grade level (LaCoste-Caputo, 2005). In other words, the school may decide Johnny, already in the eighth grade, is ready for standardized testing when he achieves fourth-grade competence. But NCLB mandates he must take the SDAA on an eighth-grade level. That likely would ensure his failure on the standardized test.

NCLB also sets the Special Education population cap at 1% of the school's total population. Schools exceeding that may be labeled AYP on that basis alone. The lowest 1%, then, makes up the population exempted from the SDAA. The remaining Special Education students must pass the test at their grade level. Students not scoring at their grade level become artificial failures, and they do not count against the school. However, the school must apply for a waiver for the school year to avoid being labeled AYP. Texas applied to the U.S. Department of Education for waivers that would exempt more Special Education students (LaCoste-Caputo, 2005). The latest data available show that Texas has 1,041 school districts and 4,311,502 students. The Texas Special Education population is 11.6% of the above total, or 499,587 students (The State of Texas Children, 2005). Ninety-four school districts exceed the 11.6% average, with some Special Education populations reaching as high as 25% of the total school enrollment (The State

of Texas Children, 2005). Also, some districts have schools for students with a specific

handicap. One example is the Regional School for the Deaf, a part of the South San

Antonio Independent School District. Those schools automatically house more students

with disabilities; they are certain to have an overpopulation of Special Education

students. Yet those schools were labeled AYP as a result of the NCLB 1% cap. Among

others, Utah, Connecticut, Virginia, Michigan, and Vermont are suing the U.S.

Department of Education. Texas joined in, as did the National Education Association.

The basis of the lawsuits is found in the following part of the act

> Nothing in this Act shall be construed to authorize an officer or employee of the
>
> Federal Government to mandate, direct, or control a State, local educational
>
> agency, or school's curriculum, program of instruction, or allocation of State or
>
> local resources, or mandate a State or any subdivision thereof to spend any funds
>
> or incur any costs not paid for under this Act (NCLB Section 9527).

Perhaps as a result of the increasing resistance to NCLB, Education Secretary

Margaret Spellings announced a lessening of the Special Education requirements, tripling

(to 3%) the number of students who could be exempted.

Small Populations

As if federal guidelines were not enough, Texas has its own accountability system

for the schools to contend with; they must try to meet 36 target requirements (TCTA,

2004). In the middle school (grades 6, 7, 8), both Texas and federal standards require

students to pass tests in reading and math at any one of the three grades. They must pass

the writing test in the seventh grade; the social studies test, in the eighth.

A further conflict between NCLB and Texas law concerns the concept of small

population, which the Texas Legislature defines as a group of at least 30 students (or

10%) with like traits within one grade level or 50 students with like traits within the total

school population. Schools must meet mandated criteria for *each* of the small populations

in that school. If any one of those groups does not meet the established criteria, then the

score of the *whole* school defaults to AYP.

Limited English Proficiency (LEP) students are also considered a small

population. By definition, the primary language of LEP students is not English. For the

2003–2004 school year, Texas had 660,308 students, or 15% of the total school

population, classified as LEP. Under Texas law they are exempted from TAKS for three

years (TEA, 2004)(Letter designation.), but NCLB allows only a 1-year exemption (The

State of Texas Children, 2004).

Other examples of small populations are Hispanics and African Americans. Those

two groups count for the school's accountability; however, the American Indian, Alaskan

Native, Asian, and Pacific groups are not evaluated separately (TEA, 2004c) The minor

ethnic groups are not counted unless individual students are economically disadvantaged,

defined by TEA as those who receive a free or reduced-price lunch from the National

Free Lunch Program (TEA 2004c).

Curriculum and the Bell Curve

For the past 25 years, each of the Texas mandated tests requires 2 years to

introduce the curriculum and develop the bell-curve distribution. Each test is introduced

the 1st year, and student scores from that year are combined with those of the 2nd to

create the base-line passing average. It is in this 2nd year that the school districts in Texas

get their ratings according to their averages in relation to the base line.

The state used the Texas Learning Index as a guide to the results of the TAAS test. That was published as an aggregate of cumulative years' test scores. The 2004 Texas Accountability Manual announced the development of a new system called the TAKS Growth Index. Since this is only the 2nd year of the TAKS test, there are no comparisons between TAAS and TAKS.

Nevertheless, researchers continued to look for the relationship, if any, between economic data and standardized test scores. The results of the 2002 TAAS test were examined in detail. Linda Holman conducted one such study. Dr. Linda Holman analyzed data from middle schools in the El Paso border area, focusing on the relationship between TAAS scores and socioeconomic status of Hispanic students. They called for a similar study using African American students.

Their results were striking: For fifth and seventh graders, socioeconomic status was *positively predictive* (p < .0001). An earlier study in 1992 by the same researchers compared the scores of white students with those of Hispanics on two tests: TAAS and the Iowa Test of Basic Skills (ITBS). Scores on the TAAS of high socioeconomic students were more highly predictive (p < .0228) than the ITBS (Holman 1995).

Holman investigated socioeconomic status as a predictor of success on TAAS. The present study uses Dr. John Ogbu's classification of minorities as voluntary (students who may leave an economically drained area) or involuntary (those who must remain) as the predictor.

<div align="center">Statement of the Problem</div>

Although Holman (1995) found a positive predictor in socioeconomic status with the TAAS, she did not apply mobility factors as a variable.

John Ogbu and Herbert Simons (1994) found differences between voluntary and involuntary minorities. The minorities surveyed were African Americans paired with Chinese Americans and Mexican American/Latinos paired with Chinese Americans. The researchers described voluntary minorities as those who arrived in the U.S. freely, looking for an opportunity to succeed. Involuntary minorities, according to his definition, are those who were conquered or were here involuntarily. He included in that group Native Americans, Hispanics, African Americans, Intuits, and Hawaiians/Polynesians.

Ogbu and Simons theorized that the voluntary minorities were eager to incorporate the American culture and learning system into their culture. They further theorized that the involuntary minorities would rather stay within their own culture rather than assimilate with the dominant race. The qualitative study essentially revealed that the minority was more likely to succeed when members conformed to the mores of the dominant society and were supported at home with a structured environment. Involuntary minorities were not eager to incorporate the learning system, and the home environment was either vague or ambivalent (Ogbu and Simons, 1994).

Specifically, this dissertation reports results of the study of mobility as they affect scores between students who are voluntarily or involuntarily in an economically drained area.

Research Questions

To what degree, if any, does mobility impact student achievement data in math between the fifth- and sixth-grade test scores?

To what degree, if any, does mobility impact student achievement data in reading between the fifth- and sixth-grade test scores?

Research Hypotheses

The researcher based the investigation on three hypotheses:

1. There is no statistical difference in reading test scores represented by the transition from fifth to sixth grades.

2. There is no statistical difference in math test scores represented by the transition from fifth to sixth grades.

3. There is no statistical difference in test scores represented by the transition from fifth to sixth grades resulting from student mobility.

Transition

TAKS is structured based on the TEC requirements for the various grades. When a student completes the fifth grade, for example, the period between school years represents his transition from one grade to the next. Included in the concept are mental, physical, and psychological transformations affecting student attitude toward test taking. Transition, in other words, is the entire spectrum of change occurring between one test and the next.

Purpose of the Study

Simply put: Does mobility affect the test scores of students with low socioeconomic status (SES)? Data were collected from three consecutive years. The results will be presented to the U.S. Department of Education and the Texas Department of Education.

Importance of the Study

If it is determined there is a significant difference in the learning of students with low SES, legislation that takes that into consideration will facilitate progress toward the

goals of NCLB, that of bringing 100% of the students to proficiency level by the year

2014 (Rebora, 2004). If the third hypothesis is proved untrue, it would be obvious that

low-income students would require more teacher attention before they could reach the

mandated goals. That might mean additional funding to extend the school day, week, or

even year. The result might affect the entire allocation of resources for education.

Allocation of Resources

If the legislature is convinced that (a) low SES students score significantly below

the dominant, affluent group; and (b) additional appropriations could significantly lessen

the difference between the two groups, then a plan could be designed to make the best

use of additional resources. Possible uses of the money are:

1. Human resources might hire more teachers, lowering the teacher/student ratio.

2. More money might allow teachers to give more attention to the individual, at-
   risk student.

3. Resources could be allocated to provide additional tutoring for students who
   lagged behind.

4. Additional funding for low SES students might be used to train teachers in
   special techniques that have been proved to assist SES students' learning.

5. Raising the salaries of teachers working with small populations might attract
   more qualified applicants.

The course of study would be an individualized, objective-driven curriculum

divided into six, 6-week periods. At the end of each period students would take teacher-

designed tests on the objectives for that period. School administrators would monitor the

teachers, using classroom visits and analyses of tests scores, to gauge student progress.

The above design would require both vertical and horizontal communication among the district's educators. The vertical communication is necessary so that teachers in higher grades understand the individual problems of the students coming to them from lower grades. The horizontal communication is necessary, so that all teachers in one grade level approach the curriculum objectives in tandem. Additional in-service days may be required. One further advantage of horizontal communication is that teachers can assess accurately their grade-level needs for the following year.

<div align="center">Definition of Terms</div>

Admission Review and Dismissal (ARD): ARD is a committee that meets to assess the needs of a Special Education student. It uses that assessment to determine the student's placement in the least restrictive environment and the grade level at which he/she will be challenged by the state test.

Annual Yearly Progress (AYP): AYP is the criterion used by the U.S. Department of Education to rate schools. There are more than 30 ways in which a school may not meet the criteria (i.e., fewer than 95% of the school's population [or *any* small population] took the criterion-referenced, standardized test).

Economically Disadvantaged (EcoD): EcoD is a small population that receives the free or reduced lunch.

High-stakes test: A high-stakes test is any standardized instrument designed to measure student progress toward established educational goals. Schools are held accountable for students who do not progress adequately, according to test results. (See IEP).

Individual Education Plan (IEP): IEP is designed by the ARD to tailor an

education for the child at his/her level, addressing his/her individual needs rather than the needs of the class as a whole.

Involuntary minority: Members of this group were absorbed not of their own will or conquered; they are still resisting the American culture by preferring to identify with their own native culture. Those are generally African American, American Indian, Hispanic, and Hawaiians.

Limited English Proficient (LEP): LEP students are those whose primary language is not English and who, generally, have immigrated recently.

Metacognition: Metacognition is knowledge or awareness of cognitive processes and the ability to use self-regulatory mechanisms to control those processes (Eggen and Kauchak, 1997).

No Child Left Behind Act (NCLB): NCLB is a federal law passed in 2001 that aims to raise the standardized test scores of small populations. The goal is to bring 100% of those students to the level of the dominant population by 2014. (Texas law sets the deadline as 2007.)

School Performance Designations: Based on how well a school's population performs on the TAKS, the Texas Department of Education will label schools, from best to worst, as: Exemplary, Recognized, Academically Acceptable, or Academically not Acceptable.

Small Population: The Texas Legislature defines a small population as a group with like traits within the dominant school population. The group may be: (a) any set of 30 students in a single grade level (or 10% of a class, whichever number is the larger); or (b) any set of at least 50 students within the whole school. Examples of small populations

with like traits are: Hispanics, African Americans, and the EcoD.

Socio-Economic Status (SES): SES is characterized by the economic, social, and physical environments in which individuals live and work. Measures for SES include income and education.

South San Antonio Independent School District (South San): South San is a Title One district in San Antonio, Texas, where 91% of the students are Hispanic EcoD.

Student Mobility: Student mobility refers to students who have withdrawn from school and who have not reenrolled by the last Friday in October. (These students may also be labeled migrant if they leave the state with parents who are harvesting seasonal agricultural crops.) Mobile students' test performances are excluded from the school's accountability rating (TEA, 2004c).

Texas Assessment of Basic Skills (TABS): The TABS test was the first of the Texas accountability tests, mandated in 1979 and administered from 1980 to 1985.

Texas Assessment of Knowledge and Skills (TAKS) 2002 to current: The TAKS test is the current state-mandated instrument used to assess educational progress, first administered in 2002.

Texas Educational Assessment of Minimal Skills (TEAMS): The TEAMS test was the second of the Texas accountability tests, administered from 1986 to 1990.

Texas Assessment of Academic Skills (TAAS): The TAAS test was Texas' longest running, high-stakes test, administered from 1991 to 2001.

Texas Essential Elements of Knowledge and Skills (TEKS): TEKS is the state-mandated, legislature-produced, objectives-driven curriculum on which class instruction is based.

Transition: Transition encompasses the entire array of changes—physical, mental, psychological—that occurs from one grade level to the next.

Voluntary minority: Members of this group arrive in the United States anticipating that the American culture will be an unparalleled opportunity for success. Ogbu and Simons (1998) identifies them as primarily Oriental and Indian.

<div align="center">The Scope of the Study</div>

This investigation is a causal comparative/ex post facto study. The investigation scope will include a sample of the current seventh graders of a school district in South Central Texas. That population is important because it is composed of the students who have taken the TAKS test three times (spring 2003–2005).The students were instructed by teachers using TEKS and tested in reading and math. In addition, the teachers acquire parallel professional development as a district requirement to sustain the support of the state curriculum. The students were exposed to state-certified professors in their respective field—reading or math.

The states are in charge of education and must have comprehensive educational research regarding the testing validity of the economically disadvantaged. This research investigation was designed to determine if the mobility factor manifested itself through the fifth- and sixth-graders' transition from elementary to the middle school.

Table 1 summarizes the data created by the two research questions.

Note: The original Plan of Action called for using scores randomly obtained. As the research continued, it was determined that the entire population, 739, could be included. The study could be done comparing all group percentile differentials.

Table 1. Research Questions and Plan of Action for Research

To what degree, if any, does mobility impact student achievement data in math between the fifth- and sixth- grade test scores?	● TAKS 2003 Math Scores ● TAKS 2004 Math Scores ● Identification numbers of students who left the school district ● Identification numbers of students who remained in the school district ● Passing Standard for the Assessment	● Maximum Value ● Minimum Value ● Range ● Standard Deviation ● Mean ● Raw Data Counts ● Number of Students Passing the Test ● Number of Students Taking the Test ● Linear Regression ● % of Students Passing the Test
To what degree does mobility impact student achievement data in reading between the fifth- and sixth- grade test scores?	● TAKS 2003 Reading Scores ● TAKS 2004 Reading Scores ● Identification numbers of students who left the	● Maximum Value ● Minimum Value ● Range ● Standard Deviation/ ● Mean ● Raw Data Counts

school district	● Number of Students Passing the Test
● Identification numbers of students who remained in the school district	● Number of Students Taking the Test
	● Linear Regression
● Passing Standard for the Assessment	● % of Students Passing the Test

Summary

Chapter 1 introduces the research question that led to the study: Does mobility affect student performance on the TAKS test? It includes a history of Texas' Standardized Tests and a discussion of the validity of standards-based education. It points out conflicts between the No Child Left Behind Act and Texas law, particularly the differences in Special Education regulations. The chapter further explains small populations and their effect, under current law, on school populations. The chapter closes with a statement of the purpose of the study, explains how resources might be allocated, defines key terms, and outlines the scope (limitations) of the research.

Chapter 2 reviews the literature and provides a historical overview. It gives the reasoning for the development of assessment in the United States and the high-stakes test in Texas. Chapter 2 reviews how high-stakes testing affects on minority students and explains why some minorities are successful in assimilation and academics. It will summarize two Harvard University studies and take a closer look at the effects on socioeconomic status and gender in a study by Dr. Linda Holman.

Chapter 2

Review of the Literature

Introduction

The literature concerning education and the effects of standardized testing on it is large and varied. One cannot appreciate the current educational climate in Texas without an understanding of: (a) the influence of John Dewey and Franklin Bobbitt; (b) why testing is endemic in the American educational system; (c) a timeline of the Texas mandated tests, showing how they evolved; and (d) a study of the effect of standardized tests on minorities as they are affected by socioeconomic status (SES). With that background in hand, we will look closely into a research study of the effects of Texas testing procedures on a border school district.

Dewey and Bobbitt

John Dewey and Franklin Bobbitt epitomize the duality of educational philosophy in the United States.

Dewey believed in the pragmatic, democratization of education, where the curriculum grew out of what children needed to know to function in society and improve the general welfare. That led to the concept of progressive education: Students learn best by doing. Emphasis on critical-thinking skills, a broadened intellect, and problem solving: That was the goal of Dewey's curriculum. At its simplest, Deweyism is intellectual vocationalism (Dewey, 1916).

Bobbitt believed the curriculum should represent objectives that society decided children should know. That led to the idea of a core curriculum, a general education foundation from which the student would then specialize for further study. The education

process would introduce the student to language arts, science, math, music, and so on. Inherent in that philosophy is the concept of behavioral objectives (Bobbitt, 1918).

John Dewey. Dewey's book, *Education and Democracy*, had great influence on politicians and the media. Dewey stated that the values and cornerstones of a culture could be studied and found by analyzing its curriculum (Dewey, 1916). He began with the premise that a working-class family could not earn a living large enough to pay for the expensive schools teaching a curriculum modeled after the European style (Tanner and Tanner, 1995). But Dewey further believed that the industrial revolution made it possible to change the status quo. If the government provides practical education for the general population, the better-educated working class becomes self-supporting. Its members, in turn, could afford taxes that could be used to expand education further. The inevitable outcome would be a middle class.

Dewey believed that schools should concentrate on students being problem solvers and work on judgment rather than knowledge: Students should learn by doing. He believed in a renewal of democracy each generation with education as the guiding force. That allows students to grow and judge society's problems. (Dewey, 1916).

Franklin Bobbitt. Franklin Bobbitt's 1918 book is titled simply *The Curriculum*. The following epitomizes his philosophy:

The central theory [of curriculum] is simple. Human life, however varied, consists in the performance of specific activities. Education that prepares for life is one that prepares definitely and adequately for these specific activities. However numerous and diverse they may be for any social class, they can be discovered. This requires only that one go out into the world of affairs and discover the

particulars of which their affairs consist. These will show the abilities, attitudes, habits, appreciations, and forms of knowledge that men need. These will be the objectives of the curriculum. They will be numerous, definite, and particularized. The curriculum will then be that series of experiences which children and youth must have by way of obtaining those objectives. (p. 42)

Educational theorists have not overlooked Dewey's importance, as Table 2 shows.

Table 2. Three Landmark Theses by John Dewey

Book Title	Year Published	Importance
Democracy and Education	1916	Introduced the philosophy of education and advocated the education of the general population to formulate a middle class. (Meyers, 2001)
How We think	1926	Thoughtful process of cognition and production of action (Mead, 2006)
The Child and the Curriculum	1938	Dewey proposed the learning child is self-directed and the teacher should be a guide (Schugurensky, 2006)

Bobbitt, on the other hand, was clearly interested in creating a fundamental curriculum, ensuring an educational plan that would provide only the essential, core subjects. Students should be tested and measured to provide quantitative data. His ideas were in keeping with the latest scientific thinking of that time (Tanner and Tanner, 1995).

Governmental Action

The U.S. Congress borrowed from both philosophers: It appropriated money for general education (Dewey), but provided that students would be tested over the objectives of the curriculum (Bobbitt).

The idea of a democratic process to educate America was attractive to some politicians in the Congress. However, the comprehensive high school came under heavy attack by other politicians—for various reasons, whether it be a widening or narrowing of the curriculum or whether we should even extend education to everybody. Many thought it preposterous to expect to teach all students at the same time, even some with nonacademic, vocational ends (Tanner and Tanner, 1995).

This duality has taken on a life of its own, with one side enjoying a long run of development and then the other side gaining a political foothold and fighting back by swinging the pendulum to the other extreme. One example of this was the vast and wide curriculum choices and electives during the 1960s hippie era and the curtailment of those studies during the Ronald Reagan era. The curricular and elective choices widened to include what the opposition would call superfluous or frilly subjects, such as philosophy, in high school (Tanner and Tanner, 1995).

Each educational party looked for their ideas and perspectives to be included in the curriculum. One side (progressive) would provide for the expansion of the curriculum or the democratic ideal that would allow a wide variety of disciplines and electives to be studied. The other party (conservative) would ensure adherence to the fundamentalist curriculum that would allow for a retrenching to the core subjects of language arts, reading, and math (Tanner and Tanner, 1995).

The political party in power may generate research to fit its particular philosophy and use that research to promote its agenda. The congressional grinding forces may become heated. Sometimes, a valid research study would not be recognized for its truth by the opposing side. The opposition might bend its meaning through its resources and the media to fit its own agenda. Such is the work of the democratic education process, where each side may propose its conflicting perspectives (Tanner and Tanner, 1995).

However, it is interesting to note that at the time Dewey published *Democracy and Education*, the words government and education were seldom used in the same sentence. The biggest social problem for education was to teach everybody, including the poor, but the moment politicians decided that was a worthwhile goal, they discovered that money—big money—would be needed (Tanner and Tanner, 1995).

National Science Board

The National Science Board was established by Congress in 1950 and had the responsibility to ensure that the nation was going to be advised of the next history-changing ideas of national interest that would ensure global dominance in intelligence, science, economy, and strength. This advisory committee recommended the formulation of the National Science Foundation to award grants to entities that would ensure the next scientific advancement was going to be developed at the finest cutting edge and it would happen in the United States. Also, the advisory for the National Science Foundation would be the Science Advisory Board. Still further, the National Defense Education Act was passed in 1958 to reinsure (Assure means to convince.) the funding was to go to those licensed education agencies that agreed to the federal dictates and gave strong importance to science, math, and modern foreign languages (Tanner and Tanner, 1995).

Effects of Sputnik

The comprehensive high school came under heavy bombardment in the late 1950s and '60s. Perhaps only James Conant, a retiring West Germany Ambassador, could have saved it. In an unprecedented attack, members of the media assaulted the comprehensive flagship high school by claiming it needed to be converted to its predecessor, the European System, which would result in a school that would hand out education through study of the great books of the Western world (Conant, 1959).

The evolution of the high school in the United States had continued through the years, at times expanding its democratic curriculum, at others contracting on cue when the party in power found it necessary to lean on the educational establishment. However, whenever events affected the United States' position as a world power, one could be sure the media would exert ever-increasing influence on public opinion. Curriculum experts understood immediately on October 4, 1957, that education would be the national scapegoat for American failure. That was the day Russia launched Sputnik, which began sending telemetry to Earth. That meant our Cold War adversary would have the power to deploy missiles into space (Divine, 1993).

If the nation needed to react to the space race because Russia had gained the lead, then so be it: We would muster our mental troops to show the world that the United States was fighting back and would regain its position as the world's number-one power. The curriculum was rearranged to become more efficient in teaching the core curriculum: science, math, and language. Pressure caused educators to increase testing, so they could quantify the increase in learning (PBS On-Line Newsletter, 1997).

The grade levels evolved: The ninth grade was moved to the high school; the sixth

grade, to the middle school. All of the grade levels experienced an academic urgency to accelerate their curriculum. Kindergarten, a word borrowed from the German curriculum, was implemented for the first time for half a day and involved students at 5 years old. The children were taught singing, physical exercise, art, and play, but it was optional for the parents to enroll their children (Schools history, 2006). The trend toward departmentalization, rather than self-contained classrooms, effected the rearrangement of the ninth grade; overcrowding in the elementary schools seemed at the root of pushing out the sixth grade. The result became the national norm: an elementary school (grades 1 through 5), a middle school (grades 6 through 8), and a high school (grades 9 through 12) (Tanner and Tanner, 1995).

Whenever a global incident affects the United States, the media will cover the government's reaction by publicizing what amendments have been made to the schools' curriculum because that is believed to be the most important resource from which the nation draws its power.

Elementary and Secondary Education Act

A presidential attempt at helping the poor came from Lyndon B. Johnson's Elementary and Secondary Education Act of 1965 (ESEA), the goal of which was to assist the young at acquiring a better beginning in school through the Title I Head Start Program. The hypothesis was that children from low-income families did not come to school with as many resources as the children from a higher socioeconomic group. Obviously, the affluent could provide more enriching experiences and a more stimulating environment for their children. Such children arrived at school better prepared to meet the expectations of the school (Schugurensky, 2004).

When he decided to fund education, Johnson faced three choices: (a) provide general aid to the public schools; (b) provide general aid to public and private schools; or (c) provide general aid to poor children. The first choice (just public schools) would have brought an objection from the Catholic establishment; the National Education Association would have objected to the second choice (both public and private), who would argue that aiding private schools blurred the constitutional division between church and state. All groups would approve the last choice (aiding the poor) (Schugurensky, 2004).

President Johnson made ESEA part of his war on poverty, putting $1 billion into education through the Head Start Program for children of economically disadvantaged with the expectation that the money would help children make up what they had lost during their missing kindergarten years. He pointed out that the action Congress had taken was an effort that had been anticipated since 1870. To further his commitment to his belief in a democratic education, President Johnson stated: "For every one of the billion dollars that we spend on this program, [it] will come back tenfold as school dropouts change to school graduates" (Schugurensky, 2004, p. 1).

However, the amount of money put into education added urgency of attention to education, and that factor added to the accountability of education (Kahlert, 2004).

Limitations of ESEA

Even so, a research study seemed to turn the act into an ironic effort. James Coleman's report of 1966 involved a massive group of 600,000 students from 4,000 schools. It postulated that, although a richer education through more resources could be achieved by adding money on a per-pupil expenditure, there was a side effect, later

known as Metacognition, the effects of self-governing study and how it affects the student.

In Metacognition, students will become aware of their learning strengths and weaknesses and use that information to develop their own tools to incorporate new knowledge for application.

The report also proposed that the positive gains could be related to exposure to fellow students in an integrated environment and cautioned that the gains were probably a result of the massive variation in pupil characteristics (Coleman, 1966).

Although this study was an educational result that supporters of ESEA initially found encouraging, in the long run, the conclusions proved to be negative: The study was tactically interpreted as showing ESEA did not need additional funding. Nevertheless, the act was amended in 1968 to add Title VII, Bilingual Education, to assist those students with limited English-speaking abilities. More important, Title VII advocates later added aid for students with special disabilities (Schugurensky, 2004).

ESEA took another blow when Christopher Jencks concluded in a 1972 study that the characteristics of the children going to school were unaffected by the school environment. Simply put, poor children would not benefit from any expensive environment provided, and this further reduced the flow of federal money into education (Jencks, 1972). A United States study had findings similar to those of a British study of inner-city children: The environment had much to do with the success of the at-risk child (Edmunds, 1979).

The Nation at Risk

In 1983, a letter, "The Nation at Risk: The Imperative for Educational Reform,"

was addressed to the nation and the commissioner of education of the United States. It claimed the nation was in a state of jeopardy because the standards on which students' learning was based were deteriorating. The lessened scores of United States students compared to those abroad demonstrated that. Ronald Reagan, who appointed the commission, quickly added that school prayer, school vouchers, and the abolition of the Department of Education could solve the matter (Coeyman, 2003). The Commission also recommended the advancement of higher standards and professional growth for the teaching profession. Further, it also addressed giving more importance to the core subjects and the secondary and higher education schools so that students could concentrate more time on fewer subjects. In essence, it was a back-to-basics retrenchment, rationalized by the disparity in scores. The major recommendation for the students' minimum requirements was: 4 years of English; 3 years of math; 3 years of science; 3 years of social studies, and ½year of computer science (Tanner and Tanner, 1995).

In September 1989 President George H. W. Bush and the governors of all 50 states met in Charlottesville, Virginia, to set educational goals for the nation. The summit was co-chaired by Carroll Campbell (R, South Carolina) and Bill Clinton (D, Arkansas), and its recommendations were adopted by the National Governors Association (NGA) in 1990. The goals adopted there became the basis for the Goals 2000: Educate America Act, signed into law on March 31, 1994 by President Bill Clinton. Congress appropriated $105 million as seed money. The act identified ambitious goals based on the premise that when a child enters school, he/she will be ready to learn.

Goals of the Educate America Act

Here is a summary of that act:

By the year 2000:

1. The high school graduation rate will increase to at least 90%.

2. At the end of grades 4, 8, and 12, students on standardized tests will have demonstrated competency in English, math, science, foreign language, and other core subjects.

3. Students in the U.S. will be first in math and science.

4. All adults will be literate.

5. Schools will be free of drugs and violence.

6. Teachers will have access to in-service designed to increase professional development.

7. Schools will promote a partnership among parents, children, and schools, one designed to increase social, emotional, and academic growth (Paris, 1994).

From the above we can see that political policymakers have made their influence known in the classroom by establishing policy, or defining what success is for education, as in the Goals 2000: Educate America Act (Tanner and Tanner, 1995). Inasmuch as success is difficult to define, when the public is informed about the law, it tends to remember when it read about it in the newspapers or news magazines. Then, by publishing the accuracy of the test, the Scholastic Aptitude Test (SAT), for example, policymakers will, in effect, create a climate where educational change seems required. That would allow them to reward or sanction schools, as has become the case.

Evolution of Middle and Junior High Schools

The middle school evolved from the junior high school, and both came about

because of academic and practical reasons (Tanner and Tanner, 1995). The Committee of Ten in 1882 had attempted to solve the problem of which curriculum the high school was to teach. Would it be college preparatory, a goal pushed by the universities? Or would it teach pupils who came to be known as terminal students, those who would stop their education upon graduation? Those were the minority and economically challenged students. The National Education Association appointed the Committee of Ten, headed by Harvard University Professor Charles Elliot. They advised that students be grouped in elementary schools in grades 1 through 8, followed by 4 years of secondary education. Further, the secondary curriculum was to teach classical, practical, or vocational preparation as well as Latin-scientific, or preparation for college. The secondary curriculum was also to teach English, math, science, and history. The goal was to prepare students both for life and higher education. Breaking with tradition, the Committee of Ten came with their recommendation to replace Latin and Greek with modern languages (Ornstein and Levine, eds, 1993).

The junior high school was to provide an exploratory curriculum, but it failed to do so. It was expected to stem the rate of dropouts, provide vocational guidance, and establish a learning setting for the appropriate age and the high school years to come. However, the fact was that many of them were not offering the courses that supported the high school curriculum. The high school was feeling those forces that had become nationalized from the Sputnik scare that wanted the inclusion of more math and sciences (Kindred, 1968). They offered to adapt to their needs, and about 25 years later, ironically, the junior high schools were responding by becoming watered-down versions of the high school (Cuban, 1992). Also, in meeting their own needs, the middle schools developed

because of a need for space in overcrowded buildings (Tanner and Tanner, 1995).

Attacks on Education

An additional factor to consider in the evolution of education and the curriculum are the dualisms that Dewey said were of primary importance in producing a representative curriculum that would drive the culture by preserving its history and promoting the positive use of intellectual drives. A modern force to reckon with in the Western world is the media, as pointed out in the previous chapter. Dr. David C. Berliner, in his article "Scapegoating Schools Nothing New," states that targeting schools is easy; it is also a traditional and historical American pastime (Berliner, 1992). He argues that as early as the 1900s, the *Ladies Home Journal* was alerting its readers that $403 million in taxes were being spent on an ineffective school system. The magazine speculated that these children, without knowledge of work, would turn to bars and brothels to survive. The same publisher announced in 1946 that teachers were poorly trained and taught a nonstandard curriculum. That was joined by *Time* magazine in 1949, which stated that the teachers were not teaching traditional subject matter. In 1951 other publishers joining the ranks of finger-pointers were *Reader's Digest* and *Scientific Monthly*. Both wrote that students were poorly prepared for college work.

Still other attacks specifically directed against education caused even more negativism. One finds articles such as: "All Those Lies About Public Education— Disinformation Campaign," (Troy, 1992a); "Sandia Mystery Finally Solved," (Berliner, 1992); "School Reform in Perspective," by Dr. Ernest L. Boyer and "Buying Political Favors," by Dr. Frosty Troy, editor of the *Oklahoma Observer* (Troy, 1992b).

In that newspaper, Professor Richard D. Rogers (1992) wrote his article "Public

School Teacher Fires Back," claiming that in his 4 decades of teaching experience, he saw and experienced an anti-education sentiment that started in the 1950s. He further claims the American people's thinking that England's students' scores were better than those in the United States supported this. Dr. Rogers quotes journalist Andy McElroy from the *London Times*, who reported that only 20% of the students in England graduated from high school, with the rest becoming industry fodder. The United States' figure of 50% graduation contrasted very favorably with the British figures. Dr. Rogers reports that McElroy also states that the 20% of British youth who graduate are culturally advantaged, another reason they finish school. Dr. Rogers' main point is that readers should realize that when the anti-education media published results of this comparative study, it conveniently did not point out that the comparison was made on the 50% of the general population of the United States, as opposed to the 20% of culturally advantaged British youth. McElroy went on to state that Japan touted that 90% of their children moved to higher education. However, McElroy also claimed that various types of severe and illegal corporal punishment were claimed by 20% of some 2,654 students, saying they were beaten 11 or more times (Rogers, 1992). While that might serve as stimulus to learn, education attorneys in Texas do not advise the use of that, not even as consequences for students who violate school rules.

Frosty Troy wrote about the Education Department's plan for a "discredit-public-schools-and-pass-the-voucher" (Troyb, 1992, p. 1) initiative. Unfortunately for the department, the National Assessment Governing Board (NAGB) released an analysis of charter school performance on the 2003 National Assessment of Educational Progress (NAEP), also known as "The Nations Report Card." The National Education Association

(2004) pointed out that low socioeconomic and minority students score *higher* at public schools than they do at charter schools.

Perspectives on Education in America

Media suppression was the result of *Perspectives on Education in America*, a study performed for the Energy Department, headed by Admiral James D. Watkins. He also asked that they support his statements that education was in a sad decline (Troy, 1992a).The scientists, using the information from the U.S. Department of Education, as cited in Tanner and Tanner (1995), repudiated and corrected the arguments made by *A Nation at Risk, America 2000*, and *Goals 2000*:

1. An appreciable number of the claims were misusing data to present falsehoods and only hindered the corrections to education in K-12.

2. The education system was being blamed for national shortcomings in the industrial world market, as was previously the case in the Sputnik generation.

3. The education system was not to blame for the lack of interest in the sciences, as there were many scientists out of employment (*Time* magazine), and the real problem was a national lack of economic competition in the world.

4. Many measurements were ill-represented and were used to depict falling SAT scores, when in fact they were actually rising across the nation in all groups considered.

5. The blame was wrongly placed on the K-12 educators.

This study was so politically embarrassing that it was returned to the scientists at the Sandia Laboratories three times; they returned three drafts, but the numbers from the Albuquerque Laboratories did not change.

Education Secretaries Ted Bell and Lauro Cavazos recanted their stance, leaving William Bennett, Lamar Alexander, and White House Chief of Staff John Sununu stating the White House had manipulated them (Troy, 1993). The above implied that the Reagan-Bush agenda is to: "first discredit public schools, then demand that Congress fund private and parochial schools, one of the Republican Party's most important political constituencies" (Troy, 1993, p. 7). George H. W. Bush then asked Congress for $500 million for $1,000 vouchers to fund private schools (Troy, 1992b).

Cognitive Revolution

The cognitive revolution for teaching and curriculum occurred during the middle 20th century, marked by the shift away from the idea that learning was an actual change happening in the brain (Olson, 2004); before, it was believed that it was a series of learned, physical behaviors (Mayer, 1996). The thinking quickly turned to how that affected teaching. Inevitably, with teaching came testing for the content taught and the knowledge gained from the process (Tanner and Tanner, 1995).

The older forms of testing were for the purpose of assigning a grade, fulfilling the school-length periods successfully, and aggregating the credits, which were the real measures for promotion from grade level to grade level (Serow, 1983). In the 1970s, some came to believe that education should graduate students who were competent in at least three core subjects: reading, writing, and arithmetic (Beard, 1979). Educators called that minimum competency, and the minimum idea engendered a social controversy, with critics claiming that it was just another idea that grew out of the compulsory elementary school (Cohen and Haney, 1980).

Of course, the evolution of education was greatly affected by the content that was

to be offered (i.e., material that was sensible, useful, and knowledgeable) Ralph Tyler (1949) argued that those decisions were best left to a structure provided by the school in planning its instruction. The school would decide what knowledge is of most worth, with a strong emphasis on the word *worth*. That structure and its originating thoughts of measuring the teaching of the curriculum furthered the thinking that Franklin Bobbitt (1918) had posed many years earlier. In Bobbitt's context, it was for the purpose of accountability (Tanner and Tanner, 1995). By passing the research-based format, education was expected to promote ideas. That was strongly the case in the 1970s and '80s, when romantic radical reformers did not show any interest in testing their idea-generated theories.

The result was the pendulum swung toward the open classroom (Tanner and Tanner, 1995). State legislators were protecting the political security of narrow objectives and accountability through minimum competency testing as part of the retrenchment to "back to basics" (Stake, 1991). However, the flame of constructive thought and the thirst for research knowledge still prevailed in the following years by producing answers through action research.

Natriello and Pallas (1998), in studying the impact of high stakes testing in 1997, wrote that the growth of widespread testing is largely a result of: (a) the efficient method of expressing importance of academic learning to the students by tying a diploma to the results; (b) the influence of professional educators who published the results of their work; and (c) the influence of the test on the public, changing its perception of public school. Most important, he deemed that the testing could be used as a monitoring device to make its own education reform (Natriello and Pallas, 1998).

Natriello and Pallas (1998) also make a very interesting statement in relation to the possible reasons for policymakers favoring the expansion of widespread testing:

> In light of the rise of testing technology in the early part of the twentieth century and its use to respond to and control the perceived threat posed by massive immigration and the possible displacement of advantaged classes in American society (Kamin, 1974), it is at least worth considering whether the current boom in testing is more than coincidentally arising in the wake of both the civil rights movement which liberated millions of American blacks from strong social restrictions on their advancement in society and the massive movement of new immigrants into the U.S. over the last twenty years. Thus, the current test boom may be viewed both as an attempt to control the educational bureaucracies and to slow the rate at which new groups enter positions of power and influence in the U.S. society. (p. 1)

As pointed out in chapter 1, Texas began the run for accountability 12 years after the call from ESEA. The Texas Legislature mandated TABS in 1979, TEAMS in 1984, TAAS in 1990, and TAKS in 1999 (TEA, 1999a).

<center>Assessment and Accountability in Texas</center>

Governor Mark White began the political movement of accountability in Texas by appointing Ross Perot as the chair for the Select Committee on Public Education. His charge: Take us into the 21st century. Perot, in turn, appointed an attorney, Tom Luce (1995), author of *Now or Never: How We Can Save Our Public Schools*. According to Kahlert (2004), Luce, with Chris Tucker, strongly pushed the committee's agenda in his book.

Together, Perot and Luce moved the focus of curriculum writing by educators to testing by the business community. It was an easy transition since the business community is the eventual receiver of the graduates and is interested in knowledgeable, productive workers. The testing would occur in grades 1, 3, 5, 7, and 9.

There are two types of testing that should be recognized if one is to understand more clearly student assessment in Texas. The *standardized test* is administered under controlled conditions, specifying where, how, and how long the control group is to be tested. Further, the test must meet "standards for technical qualities in construction, administration and use" (Goodwin and Driscoll, 1980, p.36). The test will provide a systematic method of administration and scoring; the test questions are gleaned from previous tests; they have a set format and materials; they require the same responses from the same prompts; and they provide tables and norms for comparison of the testing group (Goodwin and Driscoll, 1980).

The second type is the *criterion-referenced* test. Although the criterion-referenced test resembles the standardized test in administration and protocol, this second instrument has specifically designed objectives on which the taker is being evaluated (Wildemuth, 1984). Texas administers a criterion-based test, with the standards being the grade level in TEKS (TEA, 2004c). Educational accountability can be defined as the assurance that degrees or certificates exist as evidence that proficiencies of a minimum standard have been achieved (Cohen and Brawer, 1982).

Texas Education Code: 1979

In 1979, with no state-wide curriculum in place, the Texas Legislature amended the Texas Education Code (TEC), with the intention of developing a series of criterion-

referenced tests to represent the basic skills competencies that the students were supposed to develop in grades 3, 5, and 9. The Texas Education Agency developed the standards and revised by groups composed of teachers, principals, and curriculum/psychometric specialists. They were then presented to the Texas State Board of Education for approval. High school graduates were not required to pass the test. However, they were required to retake the test each year until they graduated. In 1983 the legislature redesigned the TEC to include the publication of the campus and district results, marking the beginning of high-stakes testing in Texas, since the school districts would now be held accountable for students who did not do well.

TEAMS: 1984

In 1984, the Texas Legislature decided to measure minimum skills rather than basic skills and mandated TEAMS. The legislature also increased the rigor of the test, making it more difficult. Later, in 1987, the legislature added that to receive a diploma, students had to pass the test at the exit level in math and English Language Arts at the level established by the Texas State Board of Education. That high-stakes test was to be administered, as Perot's plan envisioned, in grades 1, 3, 5, 7, 9, and 11. Also in 1987, as part of accountability, the media published the number of students not awarded a diploma because of poor performance on TEAMS (TEA, 2004a).

TAAS: 1990

In 1990, the state board of education urged the TEA to adjust the test: (a) TEAMS would become TAAS; (b) the new instrument would expand the content measured and increase testing of problem-solving skills; and (c) attendance requirements would be added as part of the accountability for campuses and school districts.

The commissioner of education backed the move. Thus, the goal of collecting Texas' educational data (TABS) moved from the testing of specific academic minimum skills (TEAMS) to the testing of school accountability for student performance (TAAS). Traditionally, the testing had been scheduled in the fall, but alterations in the test's purpose caused TEA, in 1993, to move it to the spring. Additionally, tests for first graders were no longer required. TAAS was a multiple-choice test in all areas, supplemented by a writing sample. Also in 1993 the legislature mandated the creation of a new statewide-integrated accountability system that would include all districts and their campuses.

In 1994 grades 4, 6, and 8 were TEAMS-tested. In 1995 the writing portion, along with social studies and science, were given in the 4th grade. Writing was added to grade 8, at which time the students were also tested in reading, math, social studies, and science. The exit-level tests were moved to the 10th grade to provide more time for students to master the curriculum. Also added were, end-of-course tests in Algebra I, Biology, English II, and United States History. In essence, students were given an option: If they passed the end-of-course tests, they would not have to take the exit level TAAS. The TAAS test compiled data to include passing scores of small populations for African American, Hispanic, white, and economically disadvantaged; dropout rates and attendance were also included in the evaluation. The results were communicated to the public.

Texas Learning Index: 1995

The legislature created the Texas Learning Index (TLI), and the Texas Supreme Court validated it in 1995. The success of a school was based on the percentage of students at a campus scoring at a TLI of 70 (Scott, 2003).

The TLI was developed to meet the needs of school districts and students for better longitudinal comparability. A metric with two essential characteristics was sought. First, such a metric should provide an index of student achievement toward the goal of passing the exit-level TAAS test required for a Texas public high school diploma. Second, the metric should permit comparisons between administrations and between grades for use in the accountability system. The TLI provides a means for schools to demonstrate improvements in their instructional program, even in cases in which the passing standard has not yet been met or even if the passing standard has been exceeded. Likewise, with a derived score such as the TLI, individual students may show improvement regardless of their current achievement relative to the passing standard.

The schools would be rated Low Performing, Acceptable, Recognized, or—at the highest level—Exemplary. All of those stipulations made the TAAS the most high-stakes test in history (TEA, 2004c). The 2004 Texas Accountability Manual announced that it would develop the TAKS Growth Index, or Comparable Improvement scale (TEA, 2004c), which contains the process by which scores such as the TLI could be compared with other data. Since this is the 2nd year of the TAKS test, there have been no studies written to discover how effective this test is in relation to any other factors that have been identified with TAAS.

TAKS: 1999

As noted earlier, TAKS was born in 1999. Texas Education Code 39.024(a) charged the State Board of Education (SBOE) to establish the standards for passing the test. The 76th Legislature and TEA developed the new assessment to replace TAAS and bring a new level of rigor to TEKS. TEA called on a National Technical Advisory

Committee composed of educational testing specialists to advise the SBOE on how to accomplish its task, which both organizations provided in November 2002.

The new law stated that students in grades 3 (reading), 5, and 8 (reading and math) must demonstrate proficiency on a state assessment test and pass that test to be promoted. In grade 11 pupils must show proficiency in reading, writing, math, science, and social studies as well as gain their locally required credits if they wanted to graduate (TEA, 2004c).

The first TAKS baseline occurred in the spring of 2002–2003. All schools were allowed to keep the previous years' rating while the TAKS disaggregated the scores of the 1st and 2nd years. In 2003–2004, the first administration of the TAKS took place, and TEA extrapolated scores to determine the schools' ratings.

Time only increases the tension in schools because the Texas standards for rating schools conflict with the federal standards of Annual Yearly Progress, and TEA points out that, in general, federal officials refuse to relax their rules.

For example, Texas students with learning disabilities have been exempted in some instances through special meetings, such as the ARD committees, which design an Individual Education Plan for each student in Special Education. Other committees can exempt those who are limited in English. The personnel meets with the parent and discusses the progress expected of the student for the next academic year, which may be more than an academic year's progress, or—many times—less. That explains why such students are being given special treatment through the Individuals With Disabilities Education Act, signed by Bill Clinton in 1997 (Rhodes, 2002). Most Texas schools have more than 12% of their population in their Special Education programs, but the federal

Annual Yearly Progress regulations allow only 1% of the population to be in the exempted category. Already there are hundreds of schools that have exceeded the federal limit. Further, the LEP students have only 1 year to pass TAKS, according to the Annual Yearly Progress regulations, since that test is how the state assesses the progress of student population, especially the small populations' differential scores as compared to the white population. So, according to the Annual Yearly Progress rules, if a student arrives from Mexico speaking only Spanish, that student, in 1 year, must learn English and pass the abstract questions on the test. Texas went through very contentious litigation to go from a 1-year to a 3-year allowance.

<div align="center">Minority Students and High-Stakes Testing</div>

Students arrive at classrooms from differing ethnic, cultural, and behavioral backgrounds. Their behavior reflects their families' attire, play, beliefs, methods, and modes of approaching learning (Tanner and Tanner, 1995). The census bureau estimates there are 56 million immigrants (International information services, 2002). Of the total, 90% are from Latin America and Asia, and more than 25% of that number is from Mexico. Further, estimates are that Texas has 13 million illegal aliens (Feds undercount illegal aliens, 2001). *Time* magazine raises an alarm in its article, "Who Left the Door Open?" (Bartlett and Steele, 2004). This figure of 56 million is a staggering number, especially if we consider the children will have to be educated in the United States. Hispanic immigrants are coming here seeking jobs and trying to better their quality of life. They are taking jobs that Americans don't want, like landscaping and service-economy jobs. People in Mexico are paid so poorly that they will risk everything to come to the United States of the economically disadvantaged (USA Today, 2003).

Voluntary and Involuntary Minorities

Ogbu and Simons (1998) divided the minorities into two general categories to explain why so many fail to be assimilated into the American culture and why there are some successful exceptions. The two classifications are the voluntary and involuntary minorities. Voluntary are those minorities who arrive in the United States anticipating that the American culture will be an unparalleled opportunity for success. They have a better chance for success. The researchers identify them as primarily Oriental and Indian. But there are those other cultures who were involuntarily absorbed, or conquered; they are called involuntary and are still resisting the American culture by preferring to identify with their own native culture. Those are generally African American, American Indian, Hispanic, and Hawaiians.

The study outlined here extends the behaviors of the "resisting culture" to people not defined by Ogbu as minority students, specifically, to a category known as the economically disadvantaged.

Those students can also be from families in an area that has experienced an economic flight and who have remained because they lack the means to leave. Such students may be any color, any faith, and any ethnicity. If they fall below the poverty line, they will spend life locked in their own culture, unable to learn the survival skills of the dominant culture (Payne, 1995).

Those students defined by Ogbu and Simons (1998) who are still resisting the American culture are the students who prefer their own peers and mannerisms, their behaviors, and their language. That becomes a culture of resistance. It is that very resistance, abetted by unsuccessful attempts at risk taking in learning, which has not been

offset at home, it is argued, because both parents are working. An even worse situation occurs when there is but one parent, also absent a great deal of the time (Holman, 1995).

Other cultures raise their children quite differently. A study comparing fifth-grade Chinese and Japanese students to American-culture families showed that 95% of the time, the former group had a designated desk and a dedicated time, about 3 hours, devoted to study. Only 63% of American children had a desk and dedicated study time (Stevenson and Newman, 1986). The family practices of Laotian and Vietnamese students ensured a high rate of success. The Vietnamese experienced ritual family assistance, where they learned pride, autonomy, and perseverance (Caplan, Choy, and Whitmore, 1992).

The economically disadvantaged students lack the family assistance that has been provided to children who have high financial support from parents at home. The advantaged students were read to while in the womb or been part of reading time in the grandmothers' laps while being asked open-ended questions (Stevenson and Newman, 1986). Further, a study by the Rand Institute explored the relationships between academic performance and characteristics of the family, discovering that student test scores were influenced by the level of parental education, family size, family income, and the age of the mother when the child was born (Grissmer, Kirby, Berends, and Williamson, 1994).

The NCLB act was presumably written to close the gaps between the white students' scores and those of minorities. Minorities, according to the 2004 Accountability Book (TEA, 2004c), are the students who by virtue of their traits are American Indian or Alaskan Native; Asian or Pacific Islander; black, not of Hispanic origin; Hispanic; or white, not of Hispanic origin. Further, according to the same source, all students' results

are evaluated. However, if fewer than 30 students of like minority take the test, they will not count as a separate population; if the group is between 30 and 49, and its members make up at least 10% of the total population of the school, it is counted as a separate population. Finally, if there are 50 students in the group, they will count as a separate population. That implies that if there are more than 30 students with a common trait, they will count as a separate population. Still further, the lowest average score of this population will be the score for the whole school. If the total population of the school is 590 students, and the population includes 31 economically disadvantaged students, that group's average score is what the whole school will get as a state rating.

Minority students have been the center of much discussion on this question: Is a standardized test, which the student must pass to advance, a valid measure of the group's ability? Holman's (1995) research showed that high-stakes testing is trouble for minorities. Serow's and Davis' (1982) study supported Holman's general conclusion. Serow found that African-American students in North Carolina constituted 82.3% of those failing the test even though they were only 35.7% of the sample. Serow (1984) later found that African-American students have a marked lower success rate than whites in passing the minimum competency testing. Eckland (1980) and Jaeger (1989) found that, among states that record the characteristics of students who fail competency tests and do not graduate, the failures are 5 to 10 times higher in minority students than in the majority white students.

Two studies sponsored by the Harvard Civil Rights Project found unfavorable results for the minority students after being exposed to high-stakes testing. In a study involving TAAS, researchers concluded the high-stakes testing of minority students only

serves to mask the real problems in their education and redirects precious funds, organizational attention, and resources to the testing industry. Further, it found that TAAS harms the quality of education for the economically disadvantaged and other minorities (McNeil and Valenzuela, 2000). Natriello and Pallas (1999), performing another study involving high-stakes testing in K-12 in Texas, New York, and Minnesota, discovered minorities scoring less well than their majority group peers, with the high-stakes test having the potential to create additional and substantial disparity in school. The research reported in the Natriello and Pallas studies revealed key findings:

1. In years 1996–1998, compared to white students, more than twice the number of black and Hispanic students failed to complete the exit-level TAAS test required for graduation.

2. Large amounts of time were spent on teaching the students the test format: recognition of questions and finding the correct answers in multiple choice tests; bubbling in correctly; and becoming familiar with the computer-generated test.

3. The skills gained in taking the test were marked for extinction: They served the purpose of taking the test only, with not much acquired knowledge for application outside of the classroom. For example, only a small number of students were able to apply their reading skills to practical assignments and make connections to other parts of discussions or writing.

4. Teachers were often swayed to teach the topics that were being tested instead of the regular curriculum.

5. When a school gains a low-performing score, its resources are often diverted from education material to the state-mandated publications.

TAKS and Minorities

For the past 25 years, each of the Texas tests has taken a number of years to introduce the curriculum and develop the bell distribution systems. The test is introduced the 1st year and takes a baseline average of the state's student population. In the 2nd year the scores are combined. The state will formulate the data for extrapolation from the score average of both years. It is in this 2nd year that school districts get their ratings, based on their current averages in relation to the standards found by both aggregate years.

The search for the relationship between economic data and standardized test scores was performed using TAAS scores from the previous 2002 state testing system. Only one study (Dr. Linda Holman's report on border-area students in El Paso to determine their TAAS performance) was found that analyzed the relationship between economics and the standardized test scores, and also involved having higher- and lower-economics groupings in the middle-school grades. Note that border-area students are those living along the Rio Grande between Texas and Mexico.

Holman, Gonzalez, and McNeil (1993) and Ivory (1993) studied relationships between ethnicity and class for Hispanic students. They noted that the same characteristics and gender in relation with the TAAS had not been studied for African-American students. However, they found in the El Paso District that for fifth and seventh grade students, socioeconomic status was positively predictive ($p < .0001$). They also found in 1992, in comparing Hispanic and white students using TAAS scores and the

ITBS scores, that high socioeconomic status is more positively predictive of TAAS success (p < .0228) than the ITBS.

The Holman Study in El Paso: 1995

Holman (1995) set out again to discover if the characteristics of the child, gender, ethnicity, and socioeconomic status were predictive in the TAAS. Student characteristics she analyzed were gender, ethnicity, and socioeconomic status. She hypothesized in the research that some factors were highly predictive of scores on TAAS. She also hypothesized that there was interaction among all the variables.

She chose every 11th student from a total population of 4,700 fifth graders in the El Paso Independent School District and worked with 4,147 students, producing a sample of 363 who met the criteria of being the appropriate age as well as having taken TAAS in the fall of 1990. Of the 363 students, 172 mastered the TAAS while 191 failed in one or more areas. Ethnography and the gender of the child were gathered from district documents completed by the families at school registration, with the mother's ethnicity being dominant if there was a question of dual ethnicity. Each student was coded as white, Latino, African American, or Asian American.

The socioeconomic status of each student was gathered from the National Free Lunch Program. Students in the free or reduced groups were judged to be of lower socioeconomic status. Those paying were classified as having higher socioeconomic status.

The purpose of TAAS is to provide the school with data to review for student progress. Those data aid the schools and districts in formulating goals for the coming years. The TAAS scores are used by the state to categorize schools. That report card is

published so parents can have an objective measure of their school's quality of instruction (TEA, 1991). The students were tested on criterion-referenced instruments using the TEKS curriculum. The writing test is composed of two parts: an essay written according to specifications and multiple choice test to determine knowledge of capitalization, sentence structure, punctuation, and English usage. The reading test uses written passages and multiple-choice tests to evaluate the reading comprehension of the child. The math section uses multiple-choice questions to determine the students' knowledge of number, geometric, and measurement concepts. Addition, subtraction, division, and problem solving are included in the test (Holman, 1995).

Each student in the district receives a scale score and also a measure of how the student performed on specific objectives for future planning. That is where the information for this study was gathered. The student also receives a pass or fail indicator on a 60% standard, which rose to 70% in 1995. Their study classified every student as pass all or fail all, according to the pass-fail basis the TAAS uses.

Holman's study used the General Linear Models procedure to analyze the data. The population was quite large, and although an F ratio could have been used to check for statistical significance, its significance was not drastic. Holman's hypotheses of ethnicity, socioeconomic status, and gender were tested for positive prediction of TAAS status through additional subtests. Alpha level of .05 was used.

Holman's Results

Holman found a positive prediction of TAAS status on ethnicity on the testing subjects ($p < .0008$). Subtests verified results indicating there is a strong difference between the white students and the African Americans ($p < .0288$) and between white

and Latino students (p < .0001). White students and Asian Americans had no significant difference between groups (p > .7888), but both groups performed better than Hispanics and African Americans.

<p style="text-align:center">Socioeconomic Status in the Holman Study</p>

Socioeconomic status was positively predictive of the TAAS status on this population using the General Linear Model (p < .0001). The subtests revealed that there was a significant difference between the performance of lower- and higher-level socioeconomic groups of whites (p < .0403). Also, the same significant difference was revealed in performance between Latinos from lower to higher socioeconomic groups (p < .0009). This is an almost proportional difference (Holman, 1995).

It is interesting to note that the higher- and lower-level socioeconomic groups of African Americans did not show this difference (p > .3654), neither did the Asian-American students from a higher to a lower socioeconomic group (p > .7757) (Holman, 1995).

<p style="text-align:center">Gender in the Holman Study</p>

Note: Unless indicated otherwise, all data and conclusions in this section are from Holman (1995).

On the same fifth-grade population of students, gender was not predictive of the TAAS status (p > .7532). However, another very interesting relationship was found within the gender of the following groups: Males from higher and lower socioeconomic groups (p < .0004); females from lower and higher socioeconomic groups (p < .0001); males from lower socioeconomic groups and females from higher socioeconomic groups (p < .0001); and males from higher socioeconomic groups and females from lower

socioeconomic backgrounds (p < .0004). In examining the above, Holman found there was interaction between the variables of ethnicity and socioeconomic status (p < .0001), but there was no relationship of comparison between ethnicity and gender (p > .7660). Upon further examination, Holman found that there was interaction between the variables of ethnicity and socioeconomic status (p < .0001), but there was not a relationship of interaction between ethnicity and gender (p > .7660), and the variables of socioeconomic status and gender (p > .9519).

Using additional subtests, Holman found that when comparing groups' socioeconomic status within gender and ethnicity, it indicated a significant difference in performance, with the higher socioeconomic groups scoring better on the TAAS than those from the lower socioeconomic groups: Latino males from lower and higher SES groups (p < .0498); Latino females from lower to higher socioeconomic groups (p < .0068).

Further, there were no significant findings in the following groups when tested for gender and ethnicity: Male/female—whites, p > .3949; male/female Latinos—p > .6310; male/female African Americans—p > .6639; male/female Asian Americans—p > .4519.

Also, there was no relationship between gender and socioeconomic status in low SES males/low SES females—p > .8769; and high SES males/high SES females— p > .3896.

Still further, when comparing the following groups, there was no relationship, even though as an aggregate they did score higher as a higher socioeconomic group than the lower socioeconomic group: White males from lower and higher SES groups— p > .0591; white females from lower and higher SES groups—p > .1947; African-

American males from lower and higher SES groups—p > .1855; African-American females from lower and higher SES groups—p =1.000; Asian-American males from lower and higher SES groups—p > .3488.

The legislature generates the laws, regulations, and curriculum that the education community will follow in order to educate the citizenry. Those guidelines also formulate the tests that are used to measure how well the citizenry is learning the objective-driven curriculum and will also dictate how the tests will be rated. The media assist with accountability by publishing the lists of those successes and failures. Further, according to *Time* magazine (Bartlett and Steele, 2004), there is a large number of minorities that are entering the United States as immigrants and are taking the least-paying service jobs available. Many of these minorities are economically disadvantaged and constitute small populations in Texas and across the United States. Ogbu's and Simons' (1998) classification of all minorities into voluntary and involuntary groups helps in understanding the milieu of information regarding academically successful and unsuccessful economically disadvantaged populations. Natriello and Pallas (1999) in studying Texas, New York, and Minnesota found inequities in the standardized test when comparing minorities to the larger population; and Holman's (1995) study reveals that the SES is positively predictable in the Texas high-stakes TAAS test. This is both new and old information.

However, 56 million immigrants (International information programs, 2002) in the United States is a situation that will not go away, and the democratic education system is in crisis. The minorities and economically disadvantaged must be addressed educationally since they are the future of the United States. This investigation shows why

the present system should be reconsidered and redone before the democratic public

education system is dismantled by the present rating system.

Summary

Chapter 2 reviewed the relevant literature, beginning with a discussion of the

importance of Franklin Babbitt and John Dewey to 20th-century education in the United

States. Governmental action, spurred by attacks on education, is the basis for the

changing educational environment of the last half of the previous century, as evidenced

by the effects of the National Science Board (c. 1950) and Sputnik (c. 1957) as well as

the Elementary and Secondary School Act (c. 1965). Researchers point to the importance

of the "Nation at Risk" letter (c. 1983), which led to the Goals 2000: Educate America

Act (c. 1994) and the No Child Left Behind Act (c. 2001).

The focus of the review shifts from the national scene to Texas and includes a

discussion of assessment and accountability, minority students and high stakes testing,

the Texas Assessment of Knowledge and Skills, and the effects of minority testing on

school evaluations. Included is a discussion of the Holman Study in El Paso,

concentrating on the effects of socioeconomic status and gender.

Chapter 3 of this investigation will cover the methodology of the study and will

present an overview, the research design, a restatement of the research objectives, the

survey instrument, the validity of the instrument, the reliability of the instrument, the data

collection, the preparation of data, the population, and the sample.

Chapter 3

Research Method

Introduction

The Holman (1995) studies showed that socioeconomic status affected scores on TEAMS while gender did not. This research examines whether mobility of students affects their scores on the TAKS.

This portion of the study deals with the methods used to collect and analyze the data to complete the examination of the objectives. The population is the 2003 and 2004 fifth grades from 10 elementary schools in a school district located in South-Central Texas. The population is in transition between fifth and sixth grades (elementary to middle school), using Texas' new standardized instrument the Texas Assessment of Knowledge and Skills, known around the state by its acronym TAKS. A comparison of the scores on TAKS (spring 2003—fifth grade and spring 2004—sixth grade) is used to evaluate the change in performance from one year to the next in both math and reading.

Research Design

The study examined closely the effects of low-socioeconomic status on students with low or no mobility. That is, students who remain with the district for longer periods of time and do not change their economic status as they pass from grade to grade. The students who do leave are those whose parents are now able to improve their standard of living. Those students are highly mobile, and their flight affects the average scores of achievement district-wide.

The study focuses on whether the null hypothesis could be proved:

There is no significant difference in the student achievement data in the TAKS

between fifth and sixth grade in a student group that is highly mobile.

The following questions will help organize the truth of the hypotheses:

1. To what degree, if any, does mobility impact student achievement data in math between the fifth- and sixth-grade test scores?

2. To what degree, if any, does mobility impact student achievement data in reading between the fifth- and sixth-grade test scores?

Limitations of the Research

1. Data used for the study came from only one school district in South-Central Texas.

2. The school district is heavily populated by Hispanics, so there were few data relating to the dominant population.

3. Data were collected at the beginning of the TAKS cycle, so the effects of teachers' and administrators' experience with the test could not be investigated.

Restatement of Research Objectives

Previous researchers ignored mobility, specifically the lack thereof, when they assessed student achievement. There have been compelling arguments by researchers that new immigrants fail to assimilate into the dominant culture because they are economically disadvantaged when they enter the country (Ogbu and Simons, 1998). In addition, the areas in which they choose to reside may experience an economic flight, which affects the culture in the area even more (Payne, 1995). It is the intent of this research to establish the following:

There is no significant difference in the student achievement data in the TAKS

during a period of 3 years in a highly mobile student group. In short, if the hypothesis is correct, the scores of students who can move away from the low SES neighborhoods should not significantly affect the school district's average scores.

Furthermore, the objectives will address historical data from a cohort of students. Therefore, this research will, via a causal comparative/ex post facto study, answer the questions posed earlier.

It is intended that the search for the answers to the stated questions will fill gaps in the literature, such that educators could understand that one of the causal factors in student achievement could be the inability of those taking the test to raise their SES.

Instrumentation

The researcher used TAKS to measure the degree of manifestation of the mobility factor in student achievement. Teachers, curriculum specialists, administrators, and educational service-center content specialists from various backgrounds constructed TAKS to ensure equal representation from the state's different geographical regions and ethnicity (The State of Texas Children, 2005).

Validity

The TAKS is a criterion-referenced exam that measures students' achievement. More specifically, the assessments are standards-based tests that measure the students' mastery of the Texas Essential Knowledge and Skills (TEKS). The development of the assessments is an intricate process that begins with a team of developers who write test items. Those writers are educators, curriculum specialists, and administrators from throughout the state; they are masters in their content areas, which for purposes of this study were limited to math and reading.

A different team, also educators, curriculum specialists, and administrators, meets to revise those initial items; and the new team examines each item for clarity and its correlation to the Texas standards it was designated to measure. Once the items are revised, they become part of a test bank secured by National Computer Systems and Pearson Austin Operations Center. Harcourt Education Measurement conducts the psychometric procedures to ensure the validity and reliability of each test item.

The review process continues annually to ensure the highest quality assessments with the strongest validity. More than 10,000 trained educators have taken part in the cycle of revisions to ensure that the items are all based on the objectives of TEKS. Since Texas uses a multitude of talents from throughout the different geographical regions, it is impossible for the bias of any single constructor to skew the validity of an item. This procedure ensures the content validity of the items and the gestalt of the test.

In addition, TEA, HEM, NCS, and Pearson also have their content specialists review, revise, and edit the test items. That part of the procedure ensures the accuracy of measurement of the intended standards (TEKS) to be at the highest possible reliability quotient.

<div align="center">Reliability</div>

An intricate process described in the validity section established the reliability of the TAKS. Psychometricians with TEA establish consistency of measurement using the Kuder-Richardson Formula 20 (KR-20) for the TAKS. Most KR-20 reliability is within the high .80 and low .90 ranges, which means that the items consistently measure the content standard (The State of Texas Children, 2005).

One conclusion is evident: TAKS is both valid and reliable. You can depend that its scores reflect what the items were intended to test.

Data Collection Procedures

The study began as an attempt to resolve the achievement gap that exists between populations of a South-Central Texas school district and its counterparts within the same county. One not-so-startling conclusion was: Gaps in achievement were evident in both the reading and the math scores at all grade levels.

For the purpose of the study, the quantitative analysis required a unique identifier of a student's information; thus, a student identification number was set up to ensure confidentiality of each child in the data records. In addition, the student identification number made it possible to link the TAKS scores in math and reading on two consecutive tests. Table 3 identifies the data necessary for conducting the analysis.

Table 3. Mobility Effects on Student Achievement Data Elements

Data Elements With Nonnumerical Value	Data Elements With Numerical Value
● Student identification number	● TAKS 2003 Math Scale Score
● Federal Identifier for	● TAKS 2004 Math Scale Score
● Economically Disadvantaged	● TAKS 2003 Reading Scale Score
Coding	● TAKS 2004 Reading Scale Score

Once the key indicators for the analysis were identified, the researcher guaranteed student privacy and the confidentiality of the data. The school administrators gave their permission to obtain the necessary data for educational purposes. The data were prepared

in Excel format by the district's Department of Assessment and Evaluation.

During the implementation of the assessment instrument, Texas took special measures to ensure that all students are assessed with standardized instructions. To that end, all district coordinators are trained in the test speak for that instrument; they, in turn, train the campus coordinators, who train all faculty members who will administer the test. The chain of training goes from district coordinator to campus coordinator to faculty administration. Furthermore, at the time of each test, district personnel were assigned to each campus to ensure that the test would be administered in strict accordance with state requirements.

The researcher acquired all the data identified and compiled by district evaluation staff members and campus counselors. In addition, the researcher had to ensure consistency of the identification of the data.

Preparation of the Data and Data Analysis

Once the data were acquired and ensured of consistency, the information was organized to answer the hypothesis.

The following questions were established to address the null hypothesis:

To what degree does mobility, either upward or downward, manifest itself in the student achievement data in math between the fifth- and sixth-grade test scores?

To what degree, does mobility, either upward or downward, manifest itself in the student achievement data in reading between the fifth- and sixth-grade test scores?

The data were transferred from the electronic spreadsheet to two programs for the analysis process. First, the data were placed into Microsoft Access for group processing. Microsoft Access is a database program that allowed for the population sample of 600

students. The database was programmed to produce lists of all students who took math and reading portions of the TAKS in the spring of 2003 and 2004. The first list of fifth graders (from 2003) was divided into two subgroups: those students who did not continue with the district into the sixth grade and those who did. For purposes of the study, those two classifications will be referred to as Group A and Group B. The second list (from 2004) was also split in two, labeled Group C and Group D. Group C contained students who had tested with the district for the 2 consecutive years. Group D was composed of those students who tested for the first time in the identified district.

A special consideration connected with TAKS at the time of the research was that the state education panel had raised the passing score. Benchmark scale scores were raised from 2025 to 2044 in reading, and from 1978 to 2046 in math.

Once the data had been sorted into comparison groups, they were transferred into the Statistical Package for the Social Sciences (SPSS 10.1). The SPSS 10.1 program was used to analyze the raw data. Each student was assigned a case number to identify the unique student data set. That number included their student identification number, special population coding, and assessment scale scores for reading and math for the 2 years. Each group was analyzed for frequency distribution, range, maximum and minimum values, and mean scores for each assessment. Furthermore, a repeated measure analysis of variance (ANOVA) was performed for each of the groups, with the sixth grade TAKS as the factor. The ANOVA was used to test for a level of significance of 0.05 or less.

Numeric tables were used to organize and report the findings. The tables consisted of the descriptive statistics, which included minimum and maximum values to demonstrate the shift in the data as well as mean values for comparison from group to

group. The sorted data were organized to discover whether it could be proved that mobility, either upward or downward, had any effect on student achievement.

Population

The population is the current sixth graders from three middle schools of a school district, largely composed of Hispanic students, in South-Central Texas. The population contains students from the general populations, Special Education, limited English proficient, and migrant groups.

Sample

The convenience sample was the students (N = 600) of the targeted school district. While the middle schools had more than 200 sixth graders, the numbers had to be balanced to ensure that the groups' comparisons received equal treatment. All groups were exposed to the same standards-based curriculum and timeline in both reading and math. In addition, the district required teachers to acquire parallel professional development in supporting the state curriculum. Instructors who are state certified in either math or reading, taught the students. The point: Math teachers were teaching math; reading teachers, reading.

<div align="center">Summary</div>

The research design of this study was intended to combine the concepts of previous researchers—Ogbu, Payne, and Holman, to name but three who are prominent in such investigations. Chapter 3 combined the concepts of Ogbu and Payne to expand upon *flight or fight* (leave or stay) factors to discover how (or if) they affect student achievement. This chapter addressed the data for which the null hypothesis was to be verified. Chapter 4 explains the data as well as tests the null hypothesis.

Chapter 4

Results

Introduction

The data were gathered and organized as specified in chapter 3. The original plan

was to take a random sample of students from the district population that was targeted for

the study. The plan specified that only 600 randomly selected students be part of the data

set. the researcher decided to use all the data since the data of all the students from both

years were available and totaled 739 cases. Therefore, the groups were divided into

Group A, those students who left the district after spring 2003; Group B, those students

who tested in spring 2003 and continued with the district; Group C, those students who

tested in spring 2004 and continued from spring 2003; and Group D, those students who

tested with the district only in spring of 2004. For the purpose of the study, Group D was

not directly related to the hypothesized research questions.

Furthermore, Group B was equal to Group C in student cases. However, Group B

contained those students who started with the district and tested in spring 2003. Group C

are those students who continued with the district and contains the spring 2004 scores.

Findings

Group A consisted of 143 students who were tested in spring 2003, during their

fifth-grade year but who later left the district. Those students were organized for

descriptive statistics for content areas math and reading.

The top and bottom scores for math stretched across a range of 1,615 points, with

a minimum of 1,044 and a maximum of 2,659. The mean score for math was 1,952.

Likewise, in reading, the extremes ranged from 1,161 to 2,742, a difference of 1,581

points. The average of the reading scale scores was 1,940. During spring 2003, there were 101 students (70.6%) in Group A who met the passing standard of the state assessment in math, and 85 students (59.4%) who met the passing standard for reading. Of special note: The students scored higher in math in grade 5 when compared to the reading performance at the same level. Table 4 depicts those data.

Table 4. Group A: Students Who Left District (n = 143)

	Math	Reading
Maximum Value	2,659	2,742
Minimum Value	1,044	1,161
Range	1,615	1,581
Mean	1,952	1,940
Passing Standard for 2003	1,978	2,025
Number of Students Meeting Passing Standard	101	85
% of Students Who Met Passing Standard	70.6%	59.4%

The top and bottom scores for math stretched across a range of 1,615 points, with a minimum of 1,044 and a maximum of 2,659. The mean score for math was 1,952. Likewise, in reading, the extremes ranged from 1,161 to 2,742, a difference of 1,581 points. The average of the reading scale scores was 1,940. During spring 2003, there were 101 students (70.6%) in Group A who met the passing standard of the state assessment in math, and 85 students (59.4%) who met the passing standard for reading. Of special note: The students scored higher in math in grade 5 when compared to the reading performance at the same level.

Group A was divided into three subgroups: Cohort 1, which included those fifth graders who fed into Middle School 1; Cohort 2 included those who fed into Middle School 2; and Cohort 3 included those who fed into Middle School 3.

Cohort A1's results showed a maximum value of 2,457 and minimum value of 1,044. The math range was a 1,413-point differential between maximum and minimum values. Cohort A1 also revealed a mean of 2,026 for math. Cohort A1 had 52 students, or 82.5% of the cohort population, meet the state standard for passing math with a 1,978 scale score or greater. In reading, Cohort A1 revealed values of 1,161 minimum and 2,742 maximum, a range of 1,581 points. The mean for Cohort A1 in reading was 2,017. In addition, Cohort A1 had 40 students, or 61.9% of the cohort population, meet the state standard for passing reading with a 2,025 scale score or greater. A special note should be made that while it is well known that math and reading scores are correlated, when the linear regression tests were run, the Cohort A1 results revealed a correlation value of 0.936, which will be addressed at the end of the discussion of the three cohorts.

Cohort A2 revealed results that were not parallel with Cohort A1 in the extreme values, with a minimum of 1,044 and maximum of 2,221 in math, a range of 1,177. The math mean for Cohort A2 was 1,827, lower than Cohort A1. Cohort A2 had 20 students, or 45.4% of the cohort population, meet the passing state standard for math. In reading, Cohort A2 had extreme values of 1,161 minimum and 2,164 maximum, a range of 1,003. The reading mean for Cohort A2 was 1,836. Cohort A2 had 21 students, or 47.7% of the cohort population, meet the passing state standard for reading. The linear regression test concluded a correlation factor of 0.970.

Cohort A3 revealed extreme values of 1,044 minimum and 2,659 maximum for

math, a range of 1,615 points. That range was the greatest among the three Group A

cohorts. Cohort A3 had a math mean of 2,125, again greater than the other two. Cohort

A3 had 28 students, or 80% of the cohort population, meet the state standard for passing

math. In reading, Cohort A3 had values that paralleled Cohort A1, with a minimum of

1,161 and maximum of 2,742, which coincidentally proved the same range of 1,581.

Table 5 illustrates the outcomes of the same tests run for the entire Group.

Table 5. Group A: Students who left district (n=143)

	Cohort A1		Cohort A2		Cohort A3	
	Math	Reading	Math	Reading	Math	Reading
Maximum Value	2,457	2,742	2,221	2,164	2,659	2,742
Minimum Value	1,044	1,161	1,044	1,161	1,044	1,161
Range	1,413	1,581	1,177	1,003	1,615	1,581
Mean	2,026	2,017	1,827	1,836	2,125	2,035
Linear Regression (R)		0.936		0.970		0.779
Passing Standard for 2003	1,978	2,025	1,978	2,025	1,978	2,025
Number of Students at passing standard	52	40	20	21	28	24
% of students who met passing standard	82.5%	61.9%	45.4%	47.7%	80.0%	68.9%

However, the mean value 2,035 of Cohort A3 was the greatest of the three cohorts. Cohort A3 had 24 students, or 68.9% of the cohort population, meet the passing state standard for reading. Cohort A3 had a correlation factor of 0.779.

Similarly, the sample collection and organization of the data were conducted for Group B. It was determined that Group B would be those students with test results in spring 2003 and who continued study with the same district. Their results are reported in Table 6.

Table 6. Group B: Students Staying in District, Testing in Spring 2003 (n = 582)

	Math	Reading
Maximum Value	2,832	2,742
Minimum Value	899	1,161
Range	1,932	1,581
Mean	2,108	2,076
Number of Students Who Met Passing Standard	485	414
% of Students Who Met Passing Standard	83.3%	71.1%

The results for Group B showed a range of 1,932 for math, with a minimum value of 899 and a maximum value of 2,832. The mean for Group B was 2,108 for math. Furthermore, there were 485 students out of 582 cases who met the state standard for passing the assessment, which constituted 83.3% of Group B population. The reading results ranged 1,581 points, with measures of 1,161 (minimum) and 2,742 (maximum).

The mean score for Group B was 2,076, with 414 students of 582, or 71.1%, of the student cases passing the reading state assessments.

Once again, as with Group A, Group B was divided into cohorts to observe data by feeder patterns. Cohort B1 was the group of students who fed into Middle School 1. Cohort B2 was composed of those students who fed into Middle School 2. Cohort B3 was those students who fed into Middle School 3.

Cohort B1 had 224 students in the group. The values for math ranged 1,788 points, from a minimum of 1,044 to a maximum of 2,832. This cohort had a mean math score of 2,060, with a total of 183 students, or 81.7% of the cohort population, meeting the state standard for passing. Similarly, Cohort B1 reported a range in the reading scores of 1,581, with a minimum of 1,161 and a maximum of 2,742. The reported mean for reading achievement for this group was 2,042. This cohort contained 150 students, or 67% of the cohort population, who met the state passing standard for reading. When the linear regression was conducted for Cohort B1, the correlation factor was 0.796.

Cohort B2 contained 212 students, with math extreme values ranging 1,933 points between the minimum of 899 and maximum of 2,832. The cohort had a reported mean of 2,173. Furthermore, the group had 187 students, or 88.2% of the cohort population, meet the state standard for passing math. In reading, Cohort B2 showed a 1,581-point range between extreme values of 1,161 minimum and 2,742 maximum. The cohort had a 2,135 mean with 165 students, or 77.8% of the cohort population, meeting the state standard. This group reported a 0.496 regression correlation.

Cohort B3 had a population of 146 students. In math, Cohort B3 had a 1,615-point range, from a minimum of 1,044 to a maximum of 2,659. This cohort had a math mean of 2,088

with 115 students, or 78.8% of the cohort population, meeting the state standard for

passing math.

Table 7 illustrates the data produced by the three cohorts of Group B.

Table 7. Group B: Students Staying in District, Testing in Spring 2003 (n = 582)

	Cohort B1		Cohort B2		Cohort B3	
	Math	Reading	Math	Reading	Math	Reading
Maximum Value	2,832	2,742	2,832	2,742	2,659	2,742
Minimum Value	1,044	1,161	899	1,161	1,044	1,161
Range	1,788	1,581	1,933	1,581	1,615	1,581
Mean	2,060	2,042	2,173	2,135	2,088	2,044
Linear Regression (R)		0.796		0.496		0.716
Passing Standard for 2003	1,978	2,025	1,978	2,025	1,978	2,025
Number of Students Who Met Passing Standard	183	150	187	165	115	99
% of Students Who Met Passing Standard	81.7%	67.0%	88.2%	77.8%	78.8%	67.8%

In reading, Cohort B3 had a range of 1,581 points with the same extreme values

that the other two cohorts reported. The minimum and maximum values were 1,161 and

2,742 respectively. Cohort B3 had a mean of 2,044 with 99 students, or 67.8% of the

cohort population, meeting the state standard for passing the reading assessment.

Finally, Table 8 presents the findings for Group C, which represent the Spring

2004 score of the students.

Table 8. Group C: Students Staying in District, Testing in Spring 2003 (n = 582)

	Math	Reading
Maximum Value	2,897	2,649
Minimum Value	1,076	1,104
Range	1,821	1,545
Mean	2,066	2,106
Passing Standard for 2003	1,978	2,025
Number of Students Who Met Passing Standard for 2003	441	416
% of Students Who Met Passing Standard for 2003	75.8%	71.4%
Passing Standard for 2004	2,046	2,044
Number of Students Who Met Passing Standard for 2004	377	410
% of Students Who Met Passing Standard for 2004	64.7%	70.4%

Group C reported a range in math of 1,821 points, with 1,076 minimum and 2,897

maximum. The same group reported a mean score of 2,066, as 441 of 582 students met

the state passing standard during the sixth-grade year. That figure represents 75.8% of the

Group C population. Likewise, in reading during the spring 2004 examination, there was

a range of 1,545 points, with a maximum 2,649 and a minimum of 1,104. The results for

Group C also reported a mean score of 2,106 for reading, as 416 students, or 71.4%, of

the group, met the state passing standard for reading. The standards for passing in the state assessments shifted in 2004. Therefore, while the descriptive statistics do not change, the passing percentage was affected when the passing standard shifted. In math, there were 377 students who met the state standard after the shift, which represents 64.7% of the group population. In reading, there were 410 students who passed, judged by the shifted standards. That represents 70.4% of the Group C population.

Group C was also converted to the cohort feeder patterns, such that Cohort C1 included all the elementary students who fed into Middle School 1; Cohort C2 included all the elementary students who fed into Middle School 2; and Cohort C3 included all the elementary students who fed into Middle School 3.

In math, Cohort C1 showed a range of 1,788 points, with extreme values of 2,832 maximum, 1,044 minimum. The mean of this cohort was 2,062; 179 students, or 81.4% of the cohort population, met the state standard for passing math in 2003. However, the state standard for passing shifted for 2004, with the result of fewer students meeting the passing standard for math. There were 147 students, or 66.8% of the cohort population, who met the shifted 2004 standard for successful achievement in the math assessment.

In reading, Cohort C1 reported a range of 1,581 points: maximum, 2,742; minimum, 1,161. The cohort reported a mean of 2,044 for the reading scores. Again, Cohort C1 was measured against the passing standard for 2003 and reported 146 students, or 66.4% of the cohort population, who met the state standard for math. However, those students also experienced the shift in the passing standard and reported 63.6% passing, or 140 students, against the 2004 standard. The linear regression factor revealed a factor of 0.805 for this cohort. Table 9 shows the data for students who stayed in the district.

Table 9. Group C: Students Staying in the District (n = 582)

	Cohort C1		Cohort C2		Cohort C3	
	Math	Reading	Math	Reading	Math	Reading
Maximum Value	2,832	2,742	2,832	2,742	2,659	2,742
Minimum Value	1,044	1,161	899	1,161	1,044	1,161
Range	1,788	1,581	1,933	1,581	1,615	1,581
Mean	2,062	2,044	2,168	2,131	2,088	2,044
Linear Regression		0.805		0.497		0.716
Passing Standard for 2003	1,978	2,025	1,978	2,025	1,978	2,025
Number of Students Who Met 2003 Passing Standards	179	146	177	174	85	96
% of Students Who Met 2003 Passing Standards	81.4%	66.4%	81.9%	80.6%	58.2%	65.8%
Passing Standard for 2004	2,046	2,044	2,046	2,044	2,046	2,044
Number of Students Who Met 2004 Passing Standards	147	140	163	174	67	96
% of Students Who	66.8%	63.6%	75.4%	80.6%	45.9%	65.8%

Met 2004 Passing

Standards

Cohort C2 was investigated with parallel measures for the purpose of comparisons. In math, Cohort C2 revealed a maximum value of 2,832 and minimum value of 899, a 1,933-point range. This cohort revealed a 2,168 mean for math. There were 177 students in Cohort C2, or 81.9% of the cohort population, who met the 2003 state standard; however, the students experienced the shift in state standards, which resulted in only 163 students (75.4%) meeting the 2004 standard. In reading, the extreme values for the cohort reported a 1,581-point range, with a maximum value of 2,742 and minimum value of 1,161. Cohort C2 reported a mean of 2,131. This cohort was also measured against the passing standards, which resulted in the same number of students meeting the standards, even after the shift for 2004. There were 174 students, or 80.6% of the cohort population, meeting the state standard for passing in both 2003 and 2004. Cohort C2 presented an interesting aspect in the data when the linear regression test was conducted. The factor from the regression resulted as a 0.497, which required a closer look at the data. The investigation remained consistent through three random trials and, notably, the students' results revealed extreme outliers that included highly productive math students who were weak as readers or inversely, highly productive readers who were weak in math. Three of these cases tested in Cohort C3 in 2003 and moved to Cohort C2 during 2004 testing. These students present a unique case of mobility within the district.

In math, Cohort C3 reported a range of 1,615 points from maximum value of 2,659 and a minimum value of 1,044. The math mean for this cohort was 2,088. This

cohort reported 85 students, or 58.2% of the cohort population, who met the 2003 state

passing standard. Cohort C3 was measured against the 2004 standard and reported 67

students, or 45.9% of the cohort population, who met the math passing standard. In

reading, this cohort showed a 1,581-point range: maximum value, 2,742; minimum value,

1,161. The reading mean for Cohort C3 was 2044. The group experienced parallel results

when measured against the state passing standard for reading. Cohort C3 had 96 students,

or 65.8% of the cohort population, meet the state passing standard for 2003 and 2004.

The cohort revealed a correlation factor of 0.716.

Summary and Explanation of the Data

In this section, the data presented in the findings are summarized and explained in

a user-friendly methodology. Table 10 illustrates the summary by comparing the groups

by cohort to the district averages.

Table 10. Summary: Groups Compared by Cohort to District Averages

	Cohort 1		Cohort 2		Cohort 3	
	Math	Reading	Math	Reading	Math	Reading
Group A	A	A	B	B	A	A
Group B	B	B	A	A	B	B
Group C 2003 Standard	A	B	A	A	B	B
Group C 2004 Standard	A	B	A	A	B	B

A = above district average   B = below district average

Cohort 1 fluctuated between being above the district and being below the district when the students made the transition between the fifth and sixth grade in math. However, in reading, the students in Cohort 1 suffered the loss of the students from Group A, as the scores are impacted consistently. Cohort 2 was consistent in the transition between fifth-grade and sixth-grade results. The loss of the students from Group A affected the student achievement positively and consistently in the math and reading scores in Cohort 2. The students who left were those who scored below average. However, Cohort 3 suffered consistently in the transition between the fifth grade and the sixth grade. The students who left achieved considerably higher scores in the state assessment, and the loss of those students affected the campus achievement and, in turn, the district.

<div align="center">Statement of Hypotheses</div>

This section shows how the research results impacted the research questions:

To what degree, if any, does mobility impact student achievement data in math between the fifth- and sixth-grade test scores?

To answer the first question of the research, careful consideration was placed on the degree to which there was a difference in the student achievement results. In Cohort 1, when the group is separated into two parts, *the group that left performed at a greater passing rate than those who stayed* with the district. When this group mad the transition between grade 5 and grade 6, the group that stayed was able to recover and be above the district average; however, not to the degree that Group A had achieved.

Table 11 explains how mobility impacts student achievement data in reading between the fifth- and sixth-grade test scores.

Table 11. Summary: Loss of Group A Impacts Transition from Grade 5 to 6

	Cohort 1		Cohort 2		Cohort 3	
	Math	Reading	Math	Reading	Math	Reading
Group A	A by 11.9	A by 2.5	B by 25.2	B by 11.7	A by 9.4	A by 9.5
Group B	B by 1.6	B by 4.1	A by 4.9	A by 6.7	B by 4.5	B by 3.3
Group C 2003 Standard	A by 5.6	B by 5.0	A by 6.1	A by 9.2	B by 17.6	B by 5.6
Group C 2004 Standard	A by 2.1	B by 6.8	A by 10.7	A by 10.2	B by 18.8	B by 4.6

A = above district average   B = below district average

Cohort 2 experienced results parallel with Cohort 1 by continuing to perform above the district mean. The loss of Group A in Cohort 2 was those students who were performing far below the district average. The loss of Group A in Cohort 2 positively impacted the student. Cohort 3 suffered greatly as Group A left the population of the cohort. The students in Cohort 3 declined in their achievement between the transition years from fifth grade to sixth grade. Therefore, for research question 1, the impact of the mobility of Group A in math for Cohort 1 appeared as a 9.8 negative differential between Group A and Group C against the 2004 standard. The impact of the mobility of Group A in math for Cohort 2 presented a positive 35.9 differential points when Group A was compared to Group C against the 2004 standard. Cohort 3 suffered the greatest negative

impact with a differential of 28.2 points when Group A and Group C are compared against the 2004 standard.

These conclusions prove there is a high degree of impact to student achievement in math when students leave.

The second question pursues the impact of mobility in reading. In Cohort 1, Group A performed just slightly above the district average while those students who stayed with the district performed below the district average. Group B in Cohort 1 failed to recover from the loss of Group A. In Cohort 2, Group A performed lower than the district average as compared to those students in Group B. Group B was able to increase its gains in the transition year between the fifth and sixth grade. Cohort 3 suffered from the loss of Group A, as those students performed above the district average and Group B failed to recover. Therefore, to answer research question 2, the impact of mobility of Group A results with a negative 9.5 differential in Cohort 1. The impact of the loss of Group A in Cohort 2 resulted in a positive differential of 21.9 points. The impact of the loss of Group A in Cohort 3 presented a 14.1 negative differential when Group A was compared to Group C against the 2004 standard.

The null hypothesis presents the following:

There is no significant difference in the student achievement data in the TAKS between fifth and sixth grades in a student group that is highly mobile.

Based on the findings and summary of the data, it is concluded that there is a significant difference in the student achievement data in the TAKS between fifth and sixth grades in a student group that is highly mobile. The null hypothesis is proved false.

Chapter 5

Summary, Conclusion, and Recommendations

Summary

Chapter 1. Chapter 1 introduced the problems of high-stakes testing with the low socioeconomic populations and the effects of the No Child Left Behind Act. Also, the chapter examined the Texas laws that affect the students in the classroom. Both the federal and state regulations are dictating to the schools and school districts what to teach and how to test it with an objective-driven curriculum. The regulations pose a problem for the public school environment in the United States.

Chapter 2. Chapter 2 explained how the United States plays a global role and how the education system must be the best in the world. It also showed how the legislative roles could easily tie to tax money in the public education system as a result of the high public demand for success. It also explained how the tax education money is allowed, but only with high regulation. It also outlined how the legislative generation of policy for monies for public education can be regulated because of political bias. Further, the chapter covered studies by Natriello and Holman researching minorities and high-stakes testing.

Chapter 2 also presented Ruby Payne's concept of understanding poverty and John Ogbu's theory of how academic success of low socioeconomic status is explained by the embracing of the American culture.

Chapter 3. Chapter 3 explained the research design of a South-Central Title I school district intended to combine the theories of Holman, Payne, and Ogbu-Simons.

The design was to show if the mobility of students, or leaving a geographical area, affected the achievement scores of the district.

Chapter 4. Chapter 4 presented the methodology used in the study and provided a description and tables explaining the results.

Chapter 5. Chapter 5 summarizes the research findings, conclusions, and recommendations made from the data found in this study of economic effects on standardized scores.

Conclusions

The research design incorporated the grouping of the fifth-grade students into the following groups: A is the group that tested in Spring 2003 and left the district after graduating from the elementary school; B is the group of students that tested in 2003 and stayed in the district and became group C when they tested in Spring of 2004; group D was the students who showed in the district for testing in Spring 2004; however, this group was not utilized in the study.

The students graduated from 10 elementary schools that fed into three middle schools. For the purpose of the study, the three middle schools were named Cohort 1, Cohort 2, and Cohort 3. The study examined if there was any effect in the school scores when group A left. All three cohorts were researched for this comparison using the TAKS test scores of 2003 and 2004 in math and reading. The findings indicated that a group of 143 students left the district in the transition between the spring of the fifth grade in 2003 and spring of the sixth grade in 2004.

The study focused on whether the null hypothesis could be proved:

There is no significant difference in the student achievement data in the TAKS

between fifth and sixth grade in a student group that is highly mobile. The research shows the null hypothesis is proved false.

The following question was posed to help to organize the truth of the hypothesis: To what degree, if any, does mobility impact student achievement data in math and reading between the fifth- and sixth-grade test scores?

Cohort 1 showed that in math, after the loss of a group of students, the *test scores of the school fluctuated* (Cohort 1), but were still affected. Cohort 2 showed that in math, after the loss of a group of students, the test scores of the school were affected by *elevating the achievement scores* (Cohort 2). Cohort 3 showed that in math, after the loss of a group of students, the test scores of the school *suffered consistently* (Cohort 3).

Cohort 1 showed that in reading, after the loss of a group of students, the test scores of the school *suffered consistently* (Cohort 1). Cohort 2 showed that in reading, after the loss of a group of students, the school scores were *elevated consistently* (Cohort 2). Cohort 3 showed that in reading, after the loss of a group of students, the school scores *suffered consistently* (Cohort 3).

The above shows that the mobility of students affect certain cohorts. However, the effect depends on whether the mobile population had a high or low achievement mean score. Further, this study shows that the mobility of the students will affect the district negatively. In short, when high socioeconomic students leave a district (because they can), the school district success rate drops.

It could be argued that the students leaving Cohort 2 departed because the families could no longer afford to live in the higher-economic area. Or perhaps the group from Cohorts 2 and 3 left because the areas have experienced an economic flight, and the

families wished to go to a higher economic area as soon as they could afford it.

Still, the above findings and discussion demonstrate the common-sense conclusion that mobility greatly affects the achievement scores of the school district, and—by extension—all similar school districts.

Recommendations

Because of the demands of the high-stakes testing:

1. Superintendents should insist on having a demographic study on their school district to understand how the mobility of the students is going to affect the achievement scores of the district. This information should be communicated to the school principals and administrators to work as teams.

2. School administrators should train the staffs of all schools to work together and promote an environment of learners.

3. Further, the school district should make allowance for the other ways to teach children during an extended day, week, or school year.

4. School administrators must make sure the students, during class time, are using every available moment to learn.

5. School staffs should make a plan that will train the students to take the state standardized test efficiently.

The above recommendations should be taken seriously. The Texas Legislature is serious about the school ratings and the reconstitution of schools and school districts. All efforts should be made to provide an education for children in poor economic areas, an education that will allow learning *before* the student reaches school age. The attending community of schools should be brought together to work as a team in mentoring

students at school. Also, the district should, if money is available, establish a parent education program that will assist parents and guardians in parenting, child development, and adult literacy. This can be done to stimulate learning and modeling for the students.

Summary

The United States education system is under high-stakes pressure to achieve higher scores and to close the gaps in minority populations that encompass the economically disadvantaged. The high-stakes pressure encompasses the testing of students who arrive from outside the country speaking a native language other than English. These students under federal pressure must take the state standardized test in 1 year. (Texas continues to appeal its own standard of a 3-year extension.)

The high-stakes pressure also encompasses the testing of students from families that are economically disadvantaged. The census bureau estimated in 2002 there are 56 million immigrants in the United States with children that need to be educated (International Information Programs, 2002). These economically disadvantaged families move from area to area for economic reasons not tied to the school. However, since the school's scores are affected by the mobility of the students, as this study proves, the school and its district must consider how to combat the effects of student mobility. The mobility of large numbers of students in the United States may, in fact, cause the reconstitution of many school districts that have these economically disadvantaged populations.

REFERENCES

Aikin, W. (1942). *The story of the eight-year study*. New York: Harper.

Bartlett, D. L., & Steele, J. B. (2004). Who left the door open? *Time Magazine*, *164*(12), 51–66.

Beard, J. G. (1979). Minimum competency testing: A proponent's view. *Educational Horizons*, *58*(1), 9–13.

Berliner, D. C. (1992, October 10). Scapegoating schools nothing new. *The Oklahoma Observer*, p. 8.

Bobbitt, F. (1913). The supervision of city schools: Some general principles of management applied to the problems of city-school systems. *Twelfth yearbook of the national society for the study of education. Part I.* Bloomington, IL: Public School Publishing.

Bobbitt, F. (1918). *The curriculum*. Boston: Houghton.

Boyer, E. L. (1993, August 25). School reform in perspective. *The Oklahoma Observer*, p. 10.

Caplan, N., Choy, M., & Whitmore J. (1992). Indochinese refugee families and academic achievement. *Scientific American*, *266*, 36–42.

Coeyman, M. (2003, April 22). Twenty years after "a nation at risk." *The Christian Science Monitor*, p. 13.

Cohen, A., & Brawer, F.B. (1982). *The American community college*. San Francisco: Jossey-Bass.

Cohen, D. K., & Haney, W. (1980). Minimums, competency testing and social policy. In R. M. Jaeger & C. K. Tittle (Ed.), *Competency testing: Motives, models,*

measures, and consequences. Berkeley, CA: McCutchan.

Coleman, J. (1966). *Equality of educational opportunity*. Washington, DC: Office of Education, U.S. Dept. of Health, Education, and Welfare.

Conant, J. (1959). *The American high school today*. New York: McGraw-Hill.

Cremin, L. A. (1973). The free school movement: A perspective. *Notes on Education*, 63, Sept-Oct.

Cuban, L. (1992). What happens to reforms that last? The case of the junior high school. *American Educational Research Journal*, 29, 227–252.

Cubberley, E. (1947) *Public education in the United States*. Boston: Houghton Mifflin.

Darwin, C. (1859). *Origin of the species*. London: Oxford University Press.

Dewey, J. (1902). *The child and the curriculum*. Chicago: University of Chicago Press.

Dewey, J. (1916). *Democracy and education*. New York: The Macmillan Company.

Doolittle, P. E. (2001). Cognition, thought, and meaning: Integrating teaching, learning, and technology. Retrieved on December14, 2004, from http://edpsychserver.ed.vt.edu/resources/presentqatons/congnition.cfm

Eckland, B. (1980). *Sociodemographic implications of minimum competency testing*. Berkeley, CA: McCutchan.

Edin, K., & Lein, L. (1996). *Making ends meet: How single mothers survive welfare and low-wage work*. New York: Russell Sage Foundation.

Edmunds, R. (1979). Effective schools for the urban poor. *Educational Leadership*, *37*, 15.

Eggen, P., & Kauchak, D. (1997). *Metacognition, multiple intelligences and cooperative learning, theoretical framework*. Retrieved on April 4, 2006, from http://www.cet.edu/research/pdf/intelligences.pdf

Feds undercount illegal aliens. (2001). Retrieved on January 25, 2005, from

  http://www.newsmax.com/archives/articles/2001/3/15/202322.shtml(See APA for

  listing this source.)

Gardner, D. (1983). *A nation at risk: The imperative for educational reform. An open

  letter to the American people. A report to the nation and the secretary of

  education.* Washington, DC: National Commission on Excellence in Education.

Geisinger, K. F. (1992). Testing limited English proficient students for minimum

  competency and high school graduation. In *Proceedings of the Second National

  Research Symposium on Limited English Proficient Student \Issues: Focus on

  evaluation and measurement*. Obemla. Retrieved on January 17, 2005, from

  http://www.ncela.gwu.edu/pubs/symposia/second/vol2/test

Goodwin, W., & Driscoll, L. (1980). *Handbook for measurement and evaluation in early

  childhood education*. San Francisco: Jossey-Bass.

Grissmer, D., Kirby, S., Berends, M., & Williamson, S. (1994). *Student performance and

  the changing American family*. Santa Monica, CA: Rand/MR-535-LE Institute on

  Education and Training.

Harvard, G. A. (1999). Studies: "High stakes" tests are counterproductive to

  economically disadvantaged students. *Harvard Gazette*, retrieved January 8,

  2005, from http://www.hno.harvard.edu/gazette/2000/01.20/tests.html

Hiraoka, L. (2004). Charter school update. *Neatoday*, *23*,10.

Holman, L. (1995). Impact of ethnicity, class, and gender on achievement of border area

  students on a high-stakes examination. ERIC Document Reproduction Service

  No. 384627.

Holman, L., Gonzalez, M., & McNeil, K. (1993). Implications of high stakes testing in
U.S.-Mexico border areas. Presented at American Educational Research
Association meeting, April, Atlanta, GA.

International Information Programs. (2002). Retrieved on July 27, 2005, from U.S.
Census Bureau Reports 56 Million Immigrants and Children:
http://usinfo.state.gov/usa/diversity/census02.htm

Jaeger, R. (1989). *Certification of student competence*. New York: MacMillan.

Jaeger, R., & Tittle, C. K. (Eds.). (1980). *Minimum competency achievement testing:
Motives, models, measures, and consequences.* Berkeley, CA: McCutchan.

Jencks, C. (1972). *Inequality*. New York: Basic Books.

Kahlert, R. (2004). The development of high-stakes testing in education. *Texas Study*,
Fall, 31–34.

Kamin, L. (1974). *The science and politics of I.Q.* Potomac, MD: Lawrence Erlbaum.

Kindred, L. (1968). *The intermediate schools.* Englewood Cliffs, NJ: Prentice Hall.

Koretz, D. (1991). The effects of high-stakes testing on achievement: Preliminary
findings about generalization across tests. (Eric Document Information Service
No. ED340730)

LaCoste-Caputo, J. (2005). State stands with S.A. schools against feds. *San Antonio
Express and News*, p. A1.

Linn, R. L., Madaus, G. F., & Pedulla, J. J. (1982). Minimum competency testing:
Cautions on the state of the art. *American Journal of Education*, *91*, 1–35.

Luce, T. (1995). *Now or never: How we can save our public school?* Dallas, TX: Taylor.

Madaus, G. (1992). *The influence of testing on teaching math and science in grades 4–*

12. Boston: Chestnut Hill.

Madaus, G., & Kellagha, T. (1992). *Curriculum evaluation and assessment.* New York: Macmillan.

Mayer, R. (1996). Learning strategies for making sense out of expository text: The SOI model for guiding three cognitive processes in knowledge construction. *Educational Psychology Review*, 8, 357–371.(Letter designation.)

McNeil, L., & Valenzuela, A. (2000). The harmful impact of the TAAS system of testing in Texas: Beneath the accountability rhetoric. U.S. Department of Education: Educational Resources Information Center. (ERIC Document Reproduction Service No. ED443872)

Mead Project. (2006). Retrieved April 12, 2006, from http://spartan.ac.brocku.ca/~lward/Dewey/Dewey_1910a/Dewey_1910_a.html/

Meyers, J. (2001). University of Toronto website. Retrieved on April 12, 2006, from http://fcis.oise.utoronto.ca/~dschugurensky/assignment1/1922lippdew.html/

National Education Agency (2004). Report from the National Assessment Governing Board (NAGB)(. Retrieved on May 19, 2006, from http://www.nea.org/charter/index/html

Natriello, G., & Pallas, A. (1998). The development and impact of high stakes testing. (ERIC Document Reproduction Service No.ED443871)

Ogbu, J., & Simons, H. (1998). Voluntary and involuntary minorities: A cultural ecological theory of school performance with some implications for education. *Anthropology & Education Quarterly*, *29*(2).

Olson, S. (2004). The synapse reveals: The molecular details of this neural structure give

clues on perception, behavior, memory, and thinking. *HHMI Bulletin: The Howard Hughes Medical Institute*. Retrieved on December 22, 2004, from http://www.hhmi.org/bulletin/fall2004/synapses/

Ornstein, A., & Levine, L. (Eds.). (1993). *Foundation of education.* Boston: Houghton.

PBS On-line Newsletter. (1997, July-December). Space revisited. Retrieved April 11, 2006, from http://www.pbs.org/newshour/bb/science/july-dec97/sputnik_10-2.html

Paris, K. (1994). North central regional educational laboratory. Retrieved November 28, 2004, from Summary of Goals 2000: Educate America Act: http://www.ncrel.org/sdrs/areas/issues/envrnmnt/stw/sw0goals.htm

Payne, R. (1995). *A framework for understanding poverty.* Highlands, TX: AHA! Process Inc.

Posner, P. S. (1992). Data, crisis, and a controversial report. *Education Week*, *11*, 25.

Rhodes, J. P. (2002). Idea '97. Retrieved January 2, 2005, from The Individuals with Disabilities Education Act Amendments of 1997, U.S. Dept. of Ed. http://www.ed.gov/offices/OSERS/Policy/IDEA/index.html

Rickover, H., & Tanner, T. (1963). *American education: A national failure.* New York: Dutton.

Rogers, R. (1992, August 25). Public school teacher fires back. *The Oklahoma Observer*, p. 8.

Scherer, M. (2004). The cardinal principles of secondary education. Retrieved November 10, 2004, from University of Notre Dame: http://www.nd.edu/~rbarger/www7/cardprin.html

Schools history. (2006). Retrieved April 12, 2006 from

http://www.schoolshistory.org.uk/usa.htm

Schugurensky, D. (2004a). Elementary and secondary act, 1965. *History of Education,*

Selected Moments of the 20th Century. Department of Adult Education,

University of Toronto. Retrieved August 10, 2004, from

http://fcis.oise.utoronto.ca/~daniel_schugurensky/assignment1/1965elemsec.html

Schugurensky, D. (Ed) (2004b) Malcolm Knowles publishes "The Modern Practice of

Adult Education: Androgyny v. pedagogy." *History of Education, Selected*

moments of the 20th century. Department of Adult Education, University of

Toronto. Retrieved August 10, 2004, from

http://fcis.oise.utoronto.ca/~schugurensky/assignment1/1970knowles.html

Scott, G. (2003). Educationnews.org. retrieved December 27, 2004, from TEA Buries Its

"Devil" In The Texas Learning Index: http://www.educationnews.org

Serow, R. C. (1983). Current trends in states' graduation policies. *Integrated Education*,

*21,*1–6.

Serow, R. C. (1984). Effects of minimum competency testing for minority students: A

review of expectations and outcomes. *Urban Review*, *16*(2), 67–75.

Serow, R. C., & Davies, J.J. (1982). Resources and outcomes of minimum competency

testing as measures of equality of educational opportunity. *American Educational*

Research Journal, *19*(4), 529–539.

Sherman, R., & Jones, T. (2005). "Texas' journey from TABS to TAKS." Retrieved

November 10, 2005, from http://www.atpe.org/Publications/Fal_05oc.htm

Stake, R. (1991). Retrospective on "the countenance of educational evaluation." *National*

Society for the Study of Education, Evaluation and Education: At Quarter Century, Nineteenth Yearbook, II, 80.

Stevenson, H., & Newman (1986). Long-Term Prediction of Achievement and Attitude in Mathematics and Reading. *Child Development,* 57(3)n, p. 646-659, June. (Eric Document Reproduction Service No. EJ339229)

Tanner, D., & Tanner, L. (1995). *Curriculum development: Theory into practice* (3rd ed). Englewood Cliffs, NJ: Merrill.

Texas Classroom Teachers Association. (October 1, 2004). Eupdate. Retrieved on December 4, 2004, from: http://ww.tcta.org/pub/updates/eupdate041001.htm

Texas Education Agency. (2004a). Retrieved December, 22, 2004, from Timeline of Testing: http://www.tea.state.tx.us/

Texas Education Agency. (2004b). Retrieved December 25, 2004, from Chapter 11: Standards: http://www.tea.state.tx.us/

Texas Education Agency. (2004c). Retrieved January 2, 2005, from 2004 Accountability Manual: http://www.tea.state.tx.us/perfreport/account/2004/manual

The State of Texas Children 2005. Center for Public Policy Priorities, Austin, TX. Retrieved on May 189, 2006 from http:www.cppp.org/factbook05/data_book.php

Troy, F. (1992a, August 25). All those lies about public education—disinformation campaign. *The Oklahoma Observer*, p. 9.

Troy, F. (1992b, May 10). Buying political favors. *The Oklahoma Observer*, p. 1.

Troy, F. (1993, August 25). Sandia mystery finally solved. *The Oklahoma Observer*, p. 7.

Tyler, R. (1949). *Basic principles of curriculum and instruction.* Chicago: University of Chicago.

USA Today. (2003). Census: Hispanic population continues to surge. *USA Today (AP)*. Retrieved on January 9, 2005, from http://www.usatoday.com/news/natin2003-09-18-hispanic-growth_x.htm

Wildemuth, B. (1984). Alternatives to standardized tests. (ERIC Document Reproduction Service No. ED286938)

Wiley, E., Mathis, W., & Garcia, D. (2005). *The impact of the adequate yearly progress requirement of the federal "no child left behind" act on schools in the great lakes region*. Tempe, AZ: Great Lakes Center for Education Research and Practice.

Williams, A. (1989). Class, race, and gender in American education. (ERIC Document Reproduction Service No. ED344807)

Woodall, J. D. (1993). Perspectives on American education. *Journal of Educational Research*, *86*.