IDENTIFYING EARLY INDICATORS OF HIGH SCHOOL DROPOUTS

IN A DIVERSE URBAN SCHOOL DISTRICT IN TEXAS:

IMPLICATIONS FOR SCHOOL LEADERS

A Doctoral Thesis Presented to the
Faculty of the College of Education
University of Houston

In Partial Fulfillment
of the Requirements for the Degree

Doctor of Education
in Professional Leadership

by

Tracy L. Hoke

May, 2012

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DEDICATION

For Susan...

"If ever there is tomorrow when we're not together... there is something you must always remember, you are braver than you believe, stronger than you seem, and smarter than you think. But the most important thing is, even if we're apart... I'll always be with you."

― A.A. Milne

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ABSTRACT

The purpose of this study was to explore at-risk student indicators outlined in the Texas Education Code Section 29.031 to determine if any one indicator or combination of indicators is a better predictor of a student's likelihood of dropping out of school. The study also attempted to identify if there was a better alternative to funding at-risk student education than the current method of funding, which is based upon the average number of students classified as economically disadvantaged for a six month period.

This study utilized quantitative student information reported annually through the Public Education Information Management System (PEIMS) and addressed the following questions:

1. Is there a correlation between the 13 at-risk student indicators and the dropout indicator reported annually through the PEIMS?

2. Are certain at-risk indicators better predictors of dropout status than others?

3. Is there an alternative distribution methodology for at risk student funding which would better serve the state's most at risk students?

Participants in this study were 6,060 high school students included in the 2010 Cohort of District "A". Students in this cohort attended class in the district in the ninth-grade and either graduated from a high school in the district on time during the 2009-2010 school year, transferred to another school or chose to be homeschooled, died, or

should have graduated during the 2009-2010 year but did not graduate for a variety of reasons.

The study revealed that students who were male, African American, or Hispanic were more likely to drop out of school, as compared to their female and Anglo counterparts. In addition, this research found that students who failed two or more core courses in grades seven through nine were found to be more likely to drop out of school, as compared to students who did not fail core courses during these grades. Failure of core courses in grades ten through twelve was not found to be indicative of a student dropping out of school. And, lastly, students who were removed from the regular classroom setting to an alternative setting were also found to be more likely to drop out of school.

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CHAPTER ONE

INTRODUCTION

Introduction

The identification of reliable indicators of student achievement and completion
has never been more important to policymakers than at this juncture in American
education. This process is particularly salient when one considers that school districts
across the nation are reacting to the challenge of increasing numbers of dropouts coupled
with rapidly changing demographics and economic statuses of student populations.

Despite numerous federal mandates, public education, and the responsibility to
ensure students have the opportunity to graduate, remains primarily within the realm of
state responsibility (Crampton, 2007). Specifically, as stated in the tenth amendment to
the United States constitution: "…the powers not delegated to the United States by the
Constitution, nor prohibited by it to the States, are reserved to the States respectively, or
to the people" (Bill of Rights, 1789). As a result, the United States has not one system of
education; rather, it contains over 50 separate systems, which are shaped by their own
statutes and underlying policies for ensuring student success and completion.

Educational policies for measuring and tracking those students who choose to
drop out of school have historically varied from state to state. The standards for
measuring the percentage of dropouts have only recently been adopted at a national level
so that dropout data from various states and districts can be more easily compared.
Regardless of these various approaches, however, the issue of dropouts has persisted for
decades. The persistence of the issue carries on in spite of the fact that educational
leaders across the country continue to grapple with the problem by carefully studying

district benchmarks and best practice research. Such efforts are forged in the hopes of

identifying programs and approaches that may lead to a reduction in the numbers of

students who are not on track to graduate from high school in four years and may

potentially drop out of school. The funding methodologies and identified programs differ

from state to state, yet each approach supports the same basic premise – namely,

establishing programs that ensure student success and graduation.

Background of the Problem

      Education has always been an important part of the American society. Prior to

the penning of the Declaration of Independence and the subsequent Revolutionary War,

early colonists began to lay the foundation for a system of education maintained by

governmental authority.

      Recently, there are increasing numbers of those who believe that the inscription

on the internal pedestal of the Statute of Liberty – *"Give me your tired, your poor, your*

huddled masses" – is an ideal of another age. The rates of poverty in the United States

are extraordinarily high, as is the likelihood of remaining in poverty, in part due to an

increase in the numbers of students who do not complete high school. Furthermore, the

U.S. has experienced a recent decline in the numbers of European immigrants. These

families now feel that their public school systems are better funded and superior to those

in the United States, which is an interesting paradox considering that the amount of state

and local dollars spent on per-pupil educational funding has increased significantly over

the past decade (Alexander & Salmon, 2007). This phenomenon becomes even more

alarming when one considers the objective numbers: Per pupil spending on a nationwide

level exceeds $10,000/year per student, yet the dropout rate for inner-city students exceeds 40 percent (Chubb, 2011).

Presently, those immigrants arriving in significantly greater numbers derive increasingly from countries that maintain lower per-capita income than that found in the United States. Thus, the compounding weight of poverty places an increased burden on public schools as educational leaders work to ensure that all students are successful and able to graduate from high school (Alexander & Salmon).

The Impact of Changing Demographics and Educational Achievement

The ongoing academic success of our youth and the necessity of our society to achieve success in an increasingly specialized global economy are very real national issues. The process of managing decisions and solving social and scientific problems in contemporary democracies is growing more complex in an era where technology has enabled the world to become increasingly flat. For instance, at least 70 percent of jobs in the United States now require specialized knowledge and skills (compared to only five percent at the turn of the century) as the nature of work is changing at a rapid pace. Even though high school dropouts in the 21st century are unlikely to be able to secure meaningful employment, the graduation rate in the United States when compared to other industrialized nations has dropped from first in the world to the bottom half (Darling-Hammond, 2010).

Synthetic estimates of work-life earnings illustrate the differences that develop between workers of different educational levels over time. In 1999, for example, individuals who dropped out of high school had anticipated earnings of $1 million over a 40-year period, as compared to $2.1 million for workers who held only a bachelor's

degree. It is also important to note that the differences are compounded for individuals with higher levels of education and professional achievement primarily because of the disparate earnings trajectories, which occur between various levels of education (Day & Newburger, 2002).

Furthermore, due to the fact that the economy can no longer absorb as many unskilled workers at a meaningful wage as was possible at the beginning of the 20th century, the lack of education is also increasingly linked to crime and welfare dependency. The strong relationship between under-education, unemployment, and incarceration creates a vicious cycle as a lack of investment in education increases the need for resources to address unemployment and incarceration (Darling-Hammond). The associated long-term cost to the economy during the lifetime of an average high school dropout is estimated at $240,000 per individual – primarily due to lower overall tax contributions and a higher reliance on Medicaid, Medicare, and welfare (Chapman, Laird, & KewalRamani, 2010). In the aggregate, dropouts cost the United States more than $300 billion per year (Princiotta & Reyna, 2009).

The Dropout Problem in Texas

The changing demographics in Texas underscore the increased need to specifically address problems associated with students who are at risk of dropping out of school. In addition, addressing the heart of the issues related to student dropout rates are critically important for the long-term viability of the state's economy. According to the 2010 Census, Texas grew at a rate of 20.6 percent, or 4.3 million persons, over a 10-year period (U.S. Census Bureau, 2010). This trend is reflected in public school enrollment, which increased 830,000 students, or 20.9 percent, during the same period. Although

enrollment growth has kept pace with the growth in population overall, the growth in economically disadvantaged children or children who live in households that meet federal poverty guidelines has outpaced the change in total student population and increased more than 45.7 percent during the same period (Academic Excellence Indicator System, 2000-2010).

The growth in the economically disadvantaged student population is disconcerting and is reflected in the state demographer's long-term growth and income projections for the state of Texas. According to recent statistics, the percentage of the labor force in Texas without a high school diploma will rise to 30.1 percent by the year 2040, while another 28.7 percent of the population will possess only a high school diploma (Potter, 2010). The global economy of the future will place a greater emphasis on service trades, as well as the need for a postsecondary education as means to achieve economic success. The increasing numbers of dropouts, therefore, will potentially impact the state's long-term economic development and fiscal stability if an educated workforce is not available.

The increasing numbers of citizens who do not possess a high school education will cause an increased strain on the state's availability of resources for programs managed by the Health and Human Services Department, which is currently 33.6 percent of the state's overall budget (Legislative Budget Board, 2011), and the ability to maintain a highly-educated workforce capable of generating positive economic growth and stability. As the need for programs offered through the Health and Human Services Department increases, other areas of the budget, such as public and higher education, will be reduced and the ability to develop programs to respond to increased dropouts will likely be lessened.

Funding for Educating the At-Risk Student

Recognizing that the numbers of students who would potentially not complete school were on the rise and believing that the consequences of poverty to the nation was unacceptable, President Lyndon Johnson urged the development of the Elementary and Secondary Education Act (ESEA) in 1965. This intervention signaled the federal government's interest in improving public education for the nation's children, as well as the beginning of increased government intervention and direction of public education, which persists to this day (Thomas & Brady, 2005).

Since its introduction in 1965, the federal government has amended the ESEA on a number of different occasions. However, the most dramatic changes to the mandate came in 2001, with the implementation of the No Child Left Behind Act. This particular measure dramatically increased the accountability requirements of states and individual school districts by requiring that all students learn essential skills and knowledge through a series of grade-level standards and benchmarks (Jorgensen & Hoffman, 2003). In accordance with the provisions of No Child Left Behind, districts and campuses are assigned individual federal accountability ratings based both upon academic achievement and secondary student completion rates.

In addition to federal funding for at-risk programs, states also provide funds to school districts for the programs required to ensure graduation. State education funding has been shaped largely by three decades of equity litigation – beginning with the 1970s U.S. Supreme Court rulings which established that basic education funding is primarily a responsibility of states, giving rise to a variety of means intended to equalize or augment basic education funding across districts.

All states utilize some form of basic funding system for education and then augment that with any number of funded programs, services, or special allocations that deploy additional funds to districts. In Texas and Ohio, for example, a substantial portion of basic funding is based on dollars per student, while Washington and North Carolina base their allocations on numbers of staff employed.

The state role in funding services for different student needs has not been clearly defined by the courts. Therefore, state allocation policies that fund services for various educational needs differ enormously across state lines in both the funding mechanisms utilized and the manner in which students are targeted. Distribution mechanisms for students in poverty – or at-risk – also differ widely among states. For instance, the state of Texas attempts to allocate more dollars to districts with a higher concentration of students in poverty. By comparison, North Carolina specifically allocates funding for alternative schools that serve high proportions of at-risk students. In contrast to these states, Washington's poverty allocation requires that funds be used only for select schools yet does not provide direction on the expenditure of these funds (Roza, Guin, & Davis, 2008).

Growth in the Economically Disadvantaged Population in Texas

In 2010, fifty-nine percent of students in Texas qualified for free and reduced lunch, and were identified as economically disadvantaged, as compared to 47.2 percent of students who were identified as at-risk through the application of the 13 broad indicators of a student's risk status found in the Texas Education Code. The proportions of students identified as at-risk of dropping out of school has remained consistent, increasing only 3.6 percent, from the 2005-2006 year to the 2009-2010 year, as compared to an increase

of 12.08 percent in the number students identified as economically disadvantaged during the same period.

In District A, the large suburban district in Southwest Houston used as a study sample, the discrepancies between economically disadvantaged and at-risk students are more significant in that the number of economically disadvantaged children in 2009-2010 increased by approximately 18.8 percent, while the number of at-risk students increased by only 10.3 percent.

A variety of factors may cause a district's student population demographics to fluctuate and change over time. Yet, in comparison with the lower overall state averages, the primary reason for District A's significant increase can be attributed to a large influx of economically disadvantaged and at-risk students, which occurred immediately following Hurricane Katrina in 2005-2006. Subsequently, the district's student population grew by five percent during this time, yet the economically disadvantaged and at-risk student population grew by 13.04 and 15.7 percent respectively (Academic Excellence Indicator System, 2000-2010).

Federal Accountability Measures

For the 2009-2010 academic year, the Academic Educational Indicator Status (AEIS) student data report illustrates that the number of students enrolled in the twelfth-grade across the state of Texas was 28.3 percent lower than the number of students who were enrolled in the ninth-grade four years earlier. In District A, the disparity is 19.3 percent (or approximately 1,200 students) for the same period (see Table 1.1 below) (Academic Excellence Indicator System, 2000-2010).

Table 1.1

Comparison of 2005 Ninth-Grade Enrollment and 2010 Graduates for District A

and the State of Texas

	Ninth-Grade Enrollment (2006-07)	Twelfth-Grade Enrollment (2009-10)	Percentage Difference
District A	6,072	4,901	(19.3%)
State of Texas	396,028	283,624	(28.3%)

While the table above does not represent the same "cohort" of students, it highlights the decline in overall enrollment from 9th through 12th grades. Note that this decline in enrollment may be partially due to retention and students moving out of state or choosing to attend private or home school.

The wide disparity between the ninth- and twelfth-grade is indicative of an underlying problem regarding the proper identification of those students who do not complete public school within the required time period and the need to ensure that all students have an opportunity to graduate. Research shows that the transition to high school is a defining moment for both students and schools. Faced with new social and academic challenges, many students struggle to stay on track. The success with which they navigate these challenges often determines their achievement levels and likelihood of graduating (Horwitz & Snipes, 2008).

Even though there is nearly a universal recognition that graduating from high school is a key milestone in a young person's life, and that this transition has a powerful impact on a person's economic and social health, obtaining accurate statistical reporting

on graduation and dropout rates has not been a national priority until recently

(Bridgeland, Dilulio, & Morison, 2006).

In 2008, the No Child Left Behind Act was amended to require school districts to

be held accountable for the numbers of children who drop out of school. Hence, rather

than allowing states to establish their own measures of student success and completion,

the United States Department of Education enacted new rules that required states to adopt

a common system to monitor dropouts. This novel approach arose primarily in response

to criticism that schools were "pushing out" struggling students by allowing them to drop

out of school before their failing test scores could affect individual campus and district

ratings (Kingsbury, 2008).

Purpose of Study

Changing demographic characteristics in districts across the country are marked

by an increase in the number and percentage of students classified as economically

disadvantaged. In addition, this issue has also been compounded by two equally

disturbing trends where in as dropout numbers continue to rise few students graduate

from high school. Therefore, the current educational situation in Texas presents a

significant long-term economic risk. A further study of indicators for those students at-

risk of failing to graduate from high school is certainly warranted given the economic and

societal implications brought on by an increased number of dropouts. The purpose of this

study is to attain a better understanding of the available alternatives for identifying

students at-risk, which are critically important for the mitigation of the aforementioned

societal and economic impact factors. Furthermore, it is the researcher's intention that

the findings of the present study may lead to both educational and program-specific alternatives for students at greatest risk of academic failure within the state of Texas.

Research Questions

This study is aimed at identifying at-risk factors that appear to be most related to determining whether or not a student will graduate. The primary research question in this study investigates whether or not there are similarities with regard to at-risk academic factors and characteristics for students who drop out of school in Texas. The study is designed to explore the at-risk indicators present when a student drops out of school. Subsequently, through the utilization of the 2010 student cohort graduation and dropout data for District A, the study will attempt to identify indicators that might be predictive of a student's propensity to drop out of school.

The following research questions will be addressed in the present study:

1. Is there a correlation between the 13 at risk student indicators and the dropout indicator reported annually through the PEIMS?

2. Are certain at risk indicators better predictors of dropout status than others?

3. Is there an alternative distribution methodology for at risk student funding which would better serve the state's most at-risk students?

Definition of Terms

In order to discuss the issue of at-risk students and dropouts, a few conceptual definitions are necessary. This section will provide operational definitions for key concepts described in the paper. An expanded discussion of each concept is included in the literature review that follows in Chapter Two.

At-Risk Students: These are students who are identified as at-risk of dropping out of school as defined in the Texas Education Code Section 29.081(d). Students must meet one or more of thirteen individual indicators specifically identified in order to be identified as risk.

Average Freshman Graduation Rate: This classification is the estimate of the proportion of public high school freshmen who graduate with a regular diploma four years after starting grade nine.

Cohort Dropout Rate: This item measures the proportion of students in a defined cohort who dropped out of school in a defined period of time.

Compensatory Education: This form of education is characterized by programs and/or services designed to supplement the regular education program for students identified as at risk of dropping out of school.

Economically Disadvantaged Students: This classification describes those students who qualify for free or reduced-price lunch and whose family income and size reflect the federal policy guidelines.

Event Dropout Rate: This item represents the percentage of high school students who have left high school between the beginning of one school year and the beginning of the next without earning a high school diploma or an alternative credential such as a General Educational Development (GED) certificate.

General Educational Development (GED) Test: This assessment is a standardized test for adults who do not have a high school diploma so that they may receive a high school equivalency certificate upon successful passage of the test.

Leaver: The state of Texas utilizes this definition to identify those students who have left the district before the end of the school year; who did not return in the same year; and who did not return to the district in the fall (in the school-start window). This definition does, however, include an exemption for those students who have enrolled in other Texas public school districts, who earned GED certificates, or were accounted for through other state reconciliation processes.

Limited English Proficient (LEP): The students identified under this particular classification are those students aged 3 through 21, enrolled or preparing to enroll in an elementary school or secondary school, who were not born in the United States, or whose native language is one other than English, and who comes from an environment where a language other than English is dominant and whose difficulties speaking, reading, writing, or understanding the English language may be sufficient to deny the individual the ability to meet a proficient level of achievement on state assessments.

Longitudinal Rate: This item reflects the percentages of students from a class of beginning ninth-graders who, by the fall following their anticipated graduation date, graduate, remain enrolled, receive a GED Certificate or drop out.

National Assessment of Educational Progress (NAEP): This group is the largest nationally representative and continuing assessment of students' knowledge in various subject areas.

No Child Left Behind (NCLB): This federally-based educational mandate was signed into law by President George W. Bush in January, 2001, and amended the Elementary and Secondary Education Act in support of a standards based education reform.

Organization for Economic Co-operation and Development (OECD): This group organized in 1961 and provides a forum for governments to work together to share experiences and seek solutions to common problems for the improvement of economic and social well-being.

Public Education Information Management System (PEIMS): This information database is utilized in the state of Texas to report on student and financial data across 1,000 plus school districts and charter schools.

Status Dropout Rate: This item measures the proportion of a population that has dropped out of school, regardless of when they last attended school.

Status Completion Rate: This item represents the percentage of individuals in a given age range who are not in high school and who have earned a high school diploma or an alternative credential, irrespective of when the credential was earned.

Significance of the Study

Students who drop out of school have a long-term economic impact on their society; yet, the dropout rate has stagnated and not changed significantly over time. As resources become more limited, school districts across the nation must begin to search for ways to maximize budgetary allocations to achieve the greatest educational benefits possible. Through the identification of at-risk indicators that are most indicative of a student's failure to complete school, districts can develop targeted programs to ensure their success and ability to graduate.

Limitations of the Study

The majority of at-risk student indicators required to be tracked by Texas Education Code Section 29.081 can be derived from annual student achievement records,

which are available electronically and reported through the PEIMS system. However, the state does not automatically attach an at-risk indicator to a student's record. Instead, the district is tasked with the responsibility to mark the student record with the appropriate indicator code. In District A, for example, at-risk indicator codes are manually inputted into students' records annually by the district's counselors and registrars. This process, therefore, creates the potential to cause the student data to be affected by human interpretation and/or error during the data input process.

There are various methodologies utilized by states and research organizations that present conflicting data regarding the percentage of dropouts of an entity based upon both the calculation and the composition of the population from which the data are drawn for the calculation of the rate. This doctoral thesis focuses only upon a specific cohort and the propensity of the at-risk indicators present for students who did not graduate with their peers.

Organization of the Study

This discussion began by providing background for the issue of student dropouts and the overall potential impact on the economic outlook of the state. Chapter One stated the problem, defined the purpose of the present study, described the research questions to be explored, as well as the limitations imposed by the study design. Chapter Two provides a review of the literature related to student dropouts, at risk characteristics, and the economic impact of dropouts to the economy. Following the review of the relevant literature, Chapter Three describes the methodological approach using data analysis of the at-risk criteria. The data analyses, findings, and interpretations are reported in Chapter Four. Chapter Five discusses the implications of the findings in terms of the

research question, including not only results of the analyses, but also the implications for

the study design and the future of at risk program development.

CHAPTER TWO

REVIEW OF THE LITERATURE

A review of the literature and relevant sources of data concerning the calculation of the dropout rate, the factors that contribute to a student's failure to graduate, as well as the subsequent potential impact to the state's economy provided the background for this study.

Impact of High School Drop Outs

When compared to other industrialized nations, Americans from the age of 55 and older rank first in the world on high school graduation. However, the rate of high school graduation in the United States peaked in the 1960s at around 80 percent. Currently, an estimated 4.9 million individuals between the ages of 18 and 24 lack a high school diploma, as approximately one in every five drop out of school. In addition, each year another million students fail to complete high school in four years, which further magnifies the problem of a growing population of undereducated citizens.

According to data gathered by the Organisation for Economic Co-Operation and Development (OECD), as student dropout rates have continued to increase, graduation rates in the U.S. have fallen from first in the world of industrialized countries to 20th out of 28 countries. Furthermore, according to statistics over the past ten years, as attainment rates across the U.S. have either stagnated or declined, these indicators have, in fact, risen in every country where OECD has compiled data (Princiotta & Reyna).

Research continues to illustrate that the economic consequences of dropping out of school are particularly severe – both for the individual, as well as the state in which they live. For instance, the earlier a student drops out of school, the less likely they are to

pursue and receive a GED (Stearns & Glennie, 2006). More than 17 percent of high

school dropouts are unemployed, which is three times the rate of unemployment for

students with a postsecondary degree (Princiotta & Reyna). In 1970, forty-six percent of

student dropouts were members of the American middle class. By 2007, however, the

number of student dropouts within the middle class had risen to thirty-three percent.

During the same time period, individuals with college degrees have either remained in the

middle class or have moved upward into a higher income group (Carnevale, Smith, &

Strohl, 2010).

      The Bureau of Labor Statistics classifies individuals working 27 weeks or more in

the labor force, and who remain below the poverty level, as the working poor. A 2009

survey reaffirms the belief that achieving higher levels of education greatly reduces the

incidence of living in poverty. The survey found that of all the people in the labor force

for 27 weeks or more in 2009, those with less than a high school diploma had a higher

working-poor rate (20.3 percent) than did high school graduates with no college degree

(8.8 percent). Workers with an associate's or bachelor's degree or higher had the lowest

working-poor rates of 4.7 percent and 2.1 percent, respectively. Moreover, an

individual's racial status also proved to be a compounding factor with regard to the

classification of the working poor. For example, at nearly all levels of educational

attainment, African Americans and Hispanics were more likely to be among the working

poor than were their white or Asian counterparts (U.S. Department of Labor, 2011).

      Since the present United States economy is unable to absorb as many unskilled

workers, the lack of education is often linked to crime and welfare dependency. Women

who have not finished high school are much more likely than others to be on welfare,

while men are much more likely to be in prison – as a large portion of prison inmates are comprised of high school dropouts (Darling-Hammond).

Given the increasing globalization of the world's economy, the economic prospects for dropouts are likely to worsen over time. For instance, since many low-skill jobs have either been automated or sent overseas, employment options within the current market continue to narrow. An estimated 90 percent of jobs created by the 2009 economic stimulus package required a minimum of a high school diploma. Additionally, by 2012, it is estimated that 63 percent of jobs in the workforce will require some level of postsecondary education, which serves to further narrow potential prospects for high school dropouts (Princiotta & Reyna). Other studies suggest that, by 2014, the United States can expect to have more chief executives than machine tool operators, and more lawyers than farm workers (Cetron & Davies, 2010). Therefore, the nature of the current economic shift within the United States further underscores the declining opportunities available for an undereducated population.

Overall, it is estimated that taxpayers could save $45 billion annually if the number of high school dropouts were reduced by 50 percent. Incremental changes to the dropout rate can have a significant impact on a state's economy by reducing crime rates, the need for public assistance, as well as improving a given state's economic development, especially considering that companies generally demand a pool of highly-skilled applicants when choosing to expand or relocate to an area (Princiotta & Reyna). As reflected in a recent OECD study, the impact of improving graduation rates on economic development is significant. Specifically, this study found that for every year

the average schooling level of the population is raised, there is a corresponding increase

of 3.7% in long-term economic growth (Darling-Hammond).

The negative impact of an increased dropout rate is not only felt monetarily by

communities across the country, but also by the citizens of the communities in which

they live. Dropouts are not as likely to vote or volunteer within their individual

communities, which translates into additional burdens on communities as they are forced

to search for volunteers who may serve in leadership roles in both governance and service

areas (Princiotta & Reyna).

Economic impact to the state of Texas. According to the U.S. Department of

Education, Texas schools educate about 10 percent of the nation's children. In addition,

Hispanic school children in Texas comprise 22 percent of all Hispanic school children in

the United States. The impact of the successes and failures in the state's educational

system reaches far beyond the state borders, and is critical to both the state and national

economy (Lesley, 2010).

A 2008 survey of the state of the Texas economy found that the state's economy

ranked tenth in the world when compared to other states and nations (Combs, 2008).

However, Texas has an increasingly larger share of low wage jobs with one of every

three jobs paying below the four-person household poverty level (as defined by the U.S.

Census). This growing trend is reflective of the increasing numbers of students who also

qualify for free and reduced school lunch. Further complicating the rising numbers of

households in poverty, Texas also ranks last in the United States with regard to an adult

population holding a high school degree. Thus, the conditions within the state make it

difficult to minimize the growing numbers of households living in poverty. Only one-

third of Texans ages 25 to 54 have an associate's degree or higher – ranking Texas 40th
among states for the percentage of the adult population with postsecondary training
(Center for Public Policy Priorities, 2011).

Funding Methodologies Utilized by the State of Texas

The state of Texas first addressed the issue of students at-risk of dropping out of
school in 1975 with the passage of House Bill 1126, which established a compensatory
state funding stream to be utilized for the most at risk students. The issue of
compensatory funding has been addressed many times during subsequent legislative
sessions in the ensuing 35-year period.

HB 1126 provided a state compensatory education allotment, which was titled
Support for Educationally Disadvantaged Pupils, to those districts eligible for federal
funds under the ESEA program. In addition, school districts were required to submit a
consolidated application to the Texas Education Agency (TEA) on their coordinated use
of federal ESEA funds and state compensatory education allotments. Since
compensatory funds were identified as supplemental funds to federal and state programs,
districts were directed to spend the compensatory allotment only on students who
qualified for participation in the Title I program.

Subsequently, in 1977, the legislature repealed portions of the HB 1126, and
further refined the goal of the compensatory education funding program by directing
districts to specifically utilize the funds to bring students at-risk of dropping out of school
up to grade level with respect to their basic academic skills.

Then, in 1979, the legislature redirected the focus of compensatory education
programing and amended the allocation methodology once again in order to ensure that

the state support of programs for students identified as at-risk of academic failure was available for all students. The state of Texas began a process of allocating funds for at-risk programming to districts based upon a weighted calculation of the highest six months' student participation in the National School Lunch Program, and also developed a methodology to hold districts accountable for their use of the funds.

Since 1979 there have been a number of reforms to the Texas compensatory education program, along with an increase in the allocation of funds for the program, which include the passage of House Bill 72 in 1984. This particular reform increased the allocation of funding from $50 million per year to more than $300 million, and required districts to design and implement instructional programs for secondary students who were identified as at risk of failure.

Section 29.081 of the Texas Education Code (TEC) governs the use of compensatory funding by requiring districts to utilize student performance data from state assessment tests to design and implement accelerated instructional services for students that enable them to be performing at grade level at the conclusion of the next school year. Districts are specifically required to provide accelerated instruction to students who have failed an end-of-course assessment or who are at-risk of dropping out of school.

A district's compensatory education allotment is calculated in conjunction with the school finance formula and is part of a district's Tier I state funding allocation. Districts are directed to expend 55 percent of their compensatory allotment on specific programs and services for students identified as at-risk. The remaining 45 percent of the allotment, however, may be expended on indirect costs associated with the program. The increase in the numbers of students qualifying for free and reduced- lunch has caused the

amount of allotment by the state to increase, and is reflected by the increase in

compensatory education allotments of $1.7 billion since 2007 (Texas Education Agency,

2010). It should be noted that the state funding formula distributes funds to various

student groups – including compensatory education students – through a series of

complex funding formulas based upon an adjusted basic student allocation, which is

established each biennium by the legislature. Furthermore, the overall per pupil funding

for students has remained largely flat since 2006, and was recently reduced for the 2011

biennium due to state budgetary constraints.

Although compensatory funds are distributed to districts based upon the average

number of students who qualify for free and reduced-lunch, economic status is not an

indicator of a student's failure in the state of Texas. The definition of at-risk student

status was added by the legislature in 1987 and can be found in section 29.081 of the

TEC, which identifies a student's at-risk status based upon 13 broad indicators that

generally relate to educational success, family situation, or discipline.

Trends in High School Dropout and Completion Rates

Until recently, the process of accurately determining dropout rate numbers across

states and school districts has been complicated by differences in data collection policies

and practices, as well as the lack of a nationally-standardized operational definition of

dropouts (Christle, Jolivette, & Nelson, 2007).

In conjunction with implementation of No Child Left Behind, the U.S.

Department of Education conducted an assessment of graduation rates across the nation

and found an average of a nine percentage-point gap between the dropout rates reported

by various states (Balfanz et al., 2010). Subsequently, in recognition of the growing

problem, the need to transparently identify and track dropouts, along with the need for

increased federal oversight measures, all 50 state governors signed the Graduation Counts

Compact on State High School Graduation Data in 2005 (Princotta & Reyna). This

nationally-driven initiative included a specific provision aimed at aligning the definition

of attainment – namely, it incorporated a common calculation of high school graduation

rates across the country.

In the state of Texas, the term "dropout" was first defined in statute from 1987 as

a student in Grades 7-12 who did not hold a high school diploma or the equivalent and

who was absent from school for 30 or more consecutive days with no evidence of being

enrolled in another public or private school (Texas Education Code §11.205, 1988). As

implemented by the State Board of Education, students with approved excuses were

excluded from the dropout definition, as were students who returned to school the

following semester or school year (Title 19 of the Texas Administrative Code [TAC]

§61.64, 1988).

In conjunction with a set of overall reforms passed by the Texas legislature in

1986, the Texas Department of Community Affairs was directed to assess the state's

dropout problem and its effect on the Texas economy. The subsequent report to the 69th

legislature portrayed a disheartening picture of the state's dropout problem. While the

dropout rates for African Americans and Hispanic students were notably higher than

those of Anglo students, few Texas school districts reported having dropout prevention

programs or evaluation data. In response to this report, as well as the growing concern

about dropouts in general, the legislature adopted House Bill 1010 in 1987, which

substantially increased both state and local responsibilities for collecting information

regarding dropouts (Texas Education Agency, 2011).

The state of Texas has passed a series of educational reform measures since the

1980s in an attempt to address the changing student population and to address problems

related to the falling graduation rates among Texas students. Section 39.053 of the Texas

Education Code requires that the accountability system performance indicators include

dropout and completion rates of secondary students to ensure that all public schools are

held accountable for establishing programs to ensure that students are successful in their

academic progress and able to graduate.

The Texas Education Agency began a process of using student-level data for

reporting purposes in 1987 and, subsequently, began publishing district performance

indicators through the Academic Excellence Indicator System (AEIS) in 1990. The latter

included annual graduation counts and dropout rates disaggregated by student ethnicity,

sex, limited English proficiency (LEP), special education, and economic status. As a key

element of AEIS, annual dropout rates and longitudinal graduation, completion, and

dropout rates play an important role in a district's accountability ratings. Together with

Texas Assessment of Knowledge and Skills (TAKS) performance, dropout rates and

completion rates are used to rate the performance of each campus and district as

Exemplary, Recognized, Academically Acceptable, or *Academically Unacceptable*.

The U.S. Department of Education National Center for Education Statistics

(NCES) is the federal entity with the primary responsibility for collecting and analyzing

education-related data in the United States. In 2003, the 78th Texas Legislature passed

legislation requiring that dropout rates be computed according to the NCES dropout definition (Texas Education Code [TEC] §39.051, 2004).

Consequently, Texas school districts began collecting data consistent with the NCES definition in the 2005-2006 academic year. A dropout is defined as a student who is enrolled in public school in Grades 7-12, does not return to public school the following fall, is not expelled, and does not: graduate, receive a GED, continue school outside the public school system, begin college, or die. Therefore, longitudinal rates for the classes of 2009 and 2010 are comparable to one another. Rates for classes in which the national dropout definition was phased in (i.e., classes of 2006, 2007, and 2008) are not comparable from one class to another, nor are they comparable to rates for prior or later classes.

Since the annual dropout rate only utilizes one year's data for dropout reporting purposes, the calculation can be utilized for any secondary campus in the state, and can be easily disaggregated by grade level. However, the low rate of dropouts that the calculation produces may not reflect the true number of dropouts for a campus or student group. This phenomenon is due to the fact that the student population measured also includes student transfers and withdrawals, and does not accurately portray the results of an academic cohort of students.

Districts are held accountable for those students in grades 7-12 who did not graduate but did not return to school for a variety of reasons, such as withdrawing to attend home school, private school, another school outside of Texas, or college. As a result of major changes in leaver reporting following the adoption of the national dropout

definition in 2005-2006, underreported student rates for 2004-2005 and prior school years

are not comparable to rates for 2005-2006 and beyond.

TEA calculates two longitudinal completion rates for campuses and districts.

Completion II consists of students who, four years after beginning Grade 9, have

graduated, continued in high school the fall after graduation was expected, or received

GED certificates. Completion I, which is much more rigorous, consists of students who

have graduated or continued in high school. Class of 2010 ninth grade longitudinal,

completion, and dropout rates for the state of Texas and District A are reflected in Table

2.1 below.

Table 2.1

Ninth-Grade Longitudinal Graduation, Completion, and Dropout Rates for Class of 2010

	Graduated	Continued	Received GED	Dropped Out	Completion I	Completion II
District A	90.3%	3.8%	0.5%	5.5%	94.1%	94.7%
State of Texas	84.3%	7.2%	1.3%	7.3%	91.4%	92.7%

The completion rate produces a more stable rate over time but may not accurately

reflect program improvements for several years after their implementation as they may

not be accounted for completely within the methodology until years after they dropout.

Districts submit individual student attendance records as part of the PEIMS data

collection which allows the Texas Education Agency to compute cumulative enrollment

by analyzing students in attendance in grades seven through twelve at any time during the

school year. Cumulative enrollment more closely parallels the required reporting of

dropouts, which covers students who drop out at any time during the school year and

includes students who enroll after the fall enrollment snapshot. Cumulative enrollment also provides the most consistent data for comparisons of dropout rates between districts and campuses with differing mobility rates where the population of a campus changes continuously throughout the year (Texas Education Agency, 2011).

When analyzing the dropout data further, students who are classified as at risk, economically disadvantaged, Limited English Proficient or are a minority have a higher dropout rate when compared to all students as reflected in Table 2.2.

Table 2.2

Ninth-Grade Longitudinal Graduation, Completion, and Dropout Rates:

Disaggregation by Student Characteristics for Class of 2010

Characteristics	Dropped Out	Completion I	Completion II
All Students	5.50%	94.10%	94.50%
African American	7.9%	91.5%	92.1%
Hispanic	10.4%	89.1%	89.6%
White	2.2%	97.4%	97.8%
Asian/Pacific Islander	1.3%	98.5%	98.7%
Economically Disadvantaged	6.7%	92.7%	93.3%
LEP	21.8%	77.2%	78.2%
At-Risk	8.9%	90.5%	91.1%

Note: LEP = Limited English Proficiency.

Why Students Choose to Drop Out of School

Students who eventually drop out of high school exhibit strong predictive warning signs of dropping out that more accurately predict their choices than do those socioeconomic factors which may be present in their lives (Balfanz et al.). Dropping out of school is best understood as a gradual process of disengagement and academic shortcoming that often plays out across multiple years of a student's high school career, rather than as a single catastrophic event that leads to immediate withdrawal from school (Meyer, Carl, & Cheng, 2010).

A 19-year longitudinal study found that dropping out of high school is determined by multiple factors, with early influences beginning in childhood that involve family as well as individual factors. The study specifically found that cumulative individual and family stressors, together with lower sixth-grade school performance, lower high school achievement and motivation, and drug use, were associated with a higher probability of dropping out of school. As the risk factors a student is exposed to accumulate, the likelihood of them dropping out of school increases (Christle et al., 2007).

In addition to family and environmental risk factors, a student's attitude towards school also impacts their desire to graduate. High schools are often larger and more bureaucratic than elementary and middle schools, which may lead to a sense of depersonalization and a weaker support network of teachers and administrators. Along with the growing social pressures of adolescence and peer acceptance, these challenges often create feelings of frustration and discouragement that lead students to emotionally withdraw from their teachers, schoolwork, and the school environment itself (Horwitz & Snipes).

A 2005 survey commissioned by the Gates Foundation found that almost half of students who choose to drop out of school (47 percent) cited uninteresting classes as the reason they chose to drop out. Many of the students surveyed had average grades of a C or more and would have been likely to graduate had the school system responded to their waning interest. Sixty-nine percent of the students surveyed said they were not motivated or inspired to work hard with 80 percent of the students doing one hour or less of homework each day (Bridgeland et al., 2006).

Over the past decade, school districts and states have developed sophisticated data collection systems to track student progress and identify potential areas of concern. The early warning indicator and intervention systems are utilized to focus on student outcomes, to identify students who are on track to graduate, and to pinpoint those who are falling behind far enough in advance to provide appropriate interventions (Bruce, Bridgeland, Fox & Balfanz, 2011).

Although not all predictors of a student's desire to drop out of school are easily measured, the state of Texas captures early warning indicators of a student's potential failure to complete high school by utilizing 13 specific risk indicators. These indicators are also attached to the student's academic record and reported annually through the PEIMS system in accordance with Texas Education Code 29.081 (as illustrated in Table 2.3).

Table 2.3

State of Texas At-Risk Student Indicators

Indicator	Criteria
1	Is in prekindergarten, kindergarten, or grade 1, 2, or 3 and did not perform satisfactorily on a readiness test or assessment instrument administered during the current school year
2	Is in grade 7, 8, 9, 10, 11, or 12, and did not maintain an average equivalent to 70 on a scale of 100 in two or more subjects in the foundation curriculum during a semester in the preceding or current school year or is not maintaining such an average in two or more subjects in the foundation curriculum in the current semester
3	Was not advanced from one grade level to the next for one or more school years
4	Did not perform satisfactorily on an assessment instrument administered to the student under Subchapter B, Chapter 39, and who has not in the previous or current school year subsequently performed on that instrument or another appropriate instrument at a level equal to at least 110 percent of the level of satisfactory performance on that instrument
5	Is pregnant or is a parent
6	Has been placed in an alternative education program in accordance with Section 37.006 during the preceding or current school year
7	Has been expelled in accordance with Section 37.007 during the preceding or current school year
8	Is currently on parole, probation, deferred prosecution, or other conditional release
9	Was previously reported through the Public Education Information Management System (PEIMS) to have dropped out of school
10	Is a student of limited English proficiency
11	Is in the custody or care of the Department of Protective and Regulatory Services or has, during the current school year, been referred to the department by a school official, officer of the juvenile court, or law enforcement official
12	Is homeless, as defined by 42 U.S.C. Section 11302, and its subsequent amendments
13	Resided in the preceding school year or resides in the current school year in a residential placement facility in the district, including a detention facility, substance abuse treatment facility, emergency shelter, psychiatric hospital, halfway house, or foster group home

The Texas Education Agency only holds a district accountable for the completion and dropout rates of its students based upon a limited number of indicators including ethnicity and economic status. Therefore, school districts are not held accountable for completion rates based upon the 13 individual at-risk indicators included in the Texas Education Code.

A study by the National Dropout Prevention Network found that there is no single risk factor that can be used to accurately predict who is at risk of dropping out; rather, there exist factors across multiple domains and the complex interactions that may occur between the indicators studied. Many subgroups of students can be identified based on the combination of risk factors that emerge and the influence of the indicators on them (Hammond, Linton, Smink, & Drew, 2007).

State of Texas at-risk indicators. Analyzing the thirteen at-risk indicators tracked by the state of Texas through the Public Education Information System in conjunction with other predictors of academic failure, such as attendance and ethnicity, should provide districts with a methodology to better predict for those students who are likely to drop out of school. Subsequently, this multilayered approach will allow educators at the local level to assign appropriate intervention strategies in an effort to save students most at-risk of exiting the school system.

Indicator #1: Failure to perform satisfactorily on a readiness test administered to grades pre-kindergarten through third-grade. Students are tested on a variety of skills – particularly in the areas of reading and math – when they first enter school so that districts can measure and assess their specific abilities. Failure on an assessment administered in the early grades can signal that a student is not as

academically prepared as their peers, and that additional interventions may be necessary to ensure that the student's academic skills progress along with their peers.

Children's perceptions of themselves as readers and learners may be critically damaged if they fail to experience success in learning to read. Research shows that a major cause of academic retention is often the student's failure to master the content needed to progress on time with other students in their class – phenomenon often resultant of not being able to read proficiently as early as the fourth grade. In a 2009 survey, more than 90 percent of low-income students failed to score proficiently on national reading exams, and half of all low-income fourth-graders did not even reach the basic level (Balfanz et al.).

In a survey of NAEP results of 4,000 students over a 12-year period, researchers found that 42 percent of Anglo students read at the proficient level in the fourth grade, as compared to 16 and 17 percent for African American and Hispanic students. In addition, the data revealed that approximately 25 percent of the African American and Hispanic students in the survey who were not reading proficiently by the third-grade did not graduate from high school, as compared to 13 percent of other students (Hernandez, 2011).

Underlining the importance of early number sense to school success, researchers found that the level of performance on a test of number sense in kindergarten, as well as rate of growth between kindergarten and first-grade, accounted for 66 percent of the variance in mathematics learning at the end of first-grade. The level of number sense in kindergarten is highly predictive of future mathematics success in first- through third-grades, as well as into students' later school years (National Research Council, 2009).

Indicator #2: Student is in seventh- through twelfth-grade and did not maintain an average equivalent to 70% in two or more subjects. A study of the Milwaukee Public Schools conducted by the Senior Urban Education Research Fellowship found that students who eventually dropped out of high school had substantially lower academic performance in the core subjects of reading, math, social studies and science in their first year as ninth-graders, and also failed a much higher percentage of core subject courses than their graduate counterparts (Meyer et al.). Poor academic performance is one of the most consistent predictors of dropout, whether measured through grades, test scores, or course failure. This particular indicator has been found to impact dropouts beginning in the first-grade and continuing throughout a student's school career (Hammond et al.).

Given that course failure is typically a sign that students are generally struggling in school, researchers in the Chicago Public School System studied the extent to which students were thrown off-track by course failure – both for students who were on-track to graduate *and* for those who were not. Their research showed that generally off-track students were struggling in all of the courses they were enrolled in. In addition, the research revealed that students who were on-track to graduate but had a course failure also had relatively low grade point averages. Off-track students who failed two or more semester courses had grade point averages of 2.0 (C average) or lower in the courses for which they did pass, and an overall grade point average of 1.5 (D+ average). Students who were identified as being on-track to graduate but also failed a course, typically had grade point averages of less than 3.0 (B average), and typically held course grades averaging 2.0 (grade C) or lower (Allensworth & Easton, 2007).

Poor academic performance was also reported as one of the major reasons why dropouts left school before graduation. In three surveys studied by Hammond et al. (2007) for the National Dropout Prevention Center/Network, at least one-third of dropouts surveyed reported the following as primary reasons for dropping out: *"Got poor grades", "was failing in school," or "couldn't keep up with schoolwork"*.

Numerous studies suggest that students who appear to be academically prepared for high school often face considerable challenges when transitioning to their ninth-grade. A recent study in Chicago Public Schools found that nearly one-quarter of students in the top quartile of their eighth-grade class were off-track by the end of their ninth-grade. This finding suggests that among students who are on grade level in terms of measured prior achievement, many lack the essential learning skills, attitudes, and orientation necessary to succeed in high school (Horwitz & Snipes).

Indicator #3: Student has not advanced from one grade level to the next. Students fail courses for a variety of reasons, such as lack of preparation in previous coursework, poor teacher performance, undiagnosed learning disabilities, and disinterest in school. In addition, failure in a core course may lead to retention and make it difficult for a student to complete all the graduation requirements in four years, which may eventually lead to frustration due to the lack the resources and support necessary for students to get back on track (Princiotta & Reyna).

Recent studies indicate that boys are more likely than girls to repeat a grade in school. Moreover, ethnic minorities are more likely to be retained in comparison to their Anglo counterparts. Serving to complicate the issues related to retention is the finding that boys are more likely than girls to be diagnosed with learning disabilities, as are

African American and Hispanic students. Minority students who are diagnosed as

learning disabled are also more likely to be placed in a restrictive educational

environment where they are isolated from regular classrooms and their nondisabled peers,

which can cause a subsequent increase in the numbers of minorities and male students

who choose to leave school directly due to their inability to interact with students in their

grade level (Stearns & Glennie).

Overall retention rates in 2009-2010 for Texas school districts were 3.6 percent.

As illustrated in Table 2.4 below, however, the retention rates for certain student groups

in the state were much higher by comparison.

Table 2.4

Grade Level Retention by Race/Ethnicity and Economic Status: Texas

Public Schools (2009-10)

Student Group	Percentage of Students Retained
African American	4.70%
American Indian	4.0%
Asian	1.6%
Hispanic	4.4%
Pacific Islander	3.2%
Anglo	2.2%
Multi-Racial	2.3%
Economically Disadvantaged	3.9%

Source: Grade-Level Retention in Texas Public Schools (2009-10)

Since 1995, Texas statute has stipulated that a student can only be promoted on the basis of academic achievement or demonstrated proficiency of the subject matter of the course or grade level (Texas Education Code, §28.021, 1996). Specific provisions linking test performance, promotion, and instruction were later added in 1999 (Texas Education Code, §28.0211), and the administrative code was revised to include the following various items: (a) the requirement that students in the third-grade must pass the state reading test in order to advance to their four-grade, and (b) that students in grades five and eight pass both the reading and math state assessment before being advanced to the next grade level (Texas Administrative Code, §101.2001, 2004).

Studies indicate that the reported academic gains from repeating a grade disappear within several years, and that the student will eventually fall behind and become more likely to drop out of school (Stearns & Glennie, 2006). In one particular study tracking students in Baltimore area schools over a 12-year period, researchers found that retention during the middle school years is a particularly strong indicator of a student's propensity to drop out of school (Alexander, Entwisle, & Kabbani, 2001).

*Indicator #4: Failure to perform satisfactorily on an assessment instrumen*t. Students who fail the state assessment and do not score 110 percent above the minimum passing standard on the subsequent year's test are classified as at-risk by the Texas Education Code. Historically, some schools and districts have required students to pass a minimum competency exam before graduation. More recently, however, many states have now instituted more rigorous high school exit exams that test students' proficiency in a number of state-mandated, academic standards for graduation.

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Yet, a number of surveys have provided mixed results on the value of utilizing standardized testing as a predictor of a student's likelihood of completing school.

The National Dropout Prevention Center/Network identified seven studies that examined the relationship between high school exit exams and high school dropout rates. The studies differed with regard to the data and methods utilized, and the time periods examined, and the findings were mixed as a direct result. On the other hand, some studies found that the requirement for an exit exam actually increased the likelihood of dropping out, while others found no impact whatsoever. Other studies noted differential effects from an assessment test – with one study finding that assessment tests only impacted the dropout rates of the better students and another finding that the test increased dropout rates among the students with the lowest abilities. More recent data seem to indicate that high school exit exams have lowered high school completion rates (National Dropout Prevention Center/Network , 2007).

The inherent difficulty in utilizing proficiency of middle school students on standardized tests was also noted in studies of students in the large urban school districts of Milwaukee, Philadelphia, and Chicago Public Schools. In particular, these studies noted that students who achieved high standardized test scores in eighth-grade were not guaranteed to be on-track for graduation (Meyer et al.).

Indictor #5: Student is pregnant or is a parent. An individual's non-school experiences have also been found to impact their propensity to drop out. When adolescents are forced to take on adult responsibilities, the likelihood they will stay in school until graduation decreases (Hammond et al.). Many students face a number of situations in the home which lead to an increased at-risk status and contribute to the

likelihood that the student will drop out of school. The transition to adulthood influences teens differently depending upon their age, gender and ethnicity. In addition to legal requirements for specific transitions to adulthood, there are normative social standards for the sequence in which these events occur, such as the completion of school, acquisition of the first full time job, first marriage, and first child. Departing from this order of events can result in negative consequences and cause a teen to decide to drop out of school.

Teen pregnancy is associated with lower educational aspirations and educational attainment – particularly among Anglo girls, even though childbirth before marriage is more common among African American females than whites. Furthermore, teens who are struggling academically may not expect to attend college and, therefore, not perceive a high opportunity cost to early parenthood. Instead, childbirth provides young adults with an alternative pathway to adulthood and perceived freedoms from school (Stearns and Glennie).

Indicator #6: Student has been placed in alternative education setting. Educational research also links early antisocial behavior, such as violence and substance use, which can often result in a student's placement into an alternative education setting, to one's dropping out of school. Moreover, even having close friends who are involved in antisocial behavior, or who have simply dropped out, increases the subsequent risk that a youth will also drop out. Such peers may argue that school is not worthwhile, and are more likely to distract students' attention away from their academic pursuits (Hammond et al., 2007).

Indicator #7: Student has been expelled during the preceding or current school year. A student's misbehavior in school – particularly if such behavior results in repeated suspensions or expulsions – can increase a student's alienation from the school environment overall. Discipline problems in both middle and high school have been consistently linked to an increased likelihood of dropping out of school (National Dropout Prevention Center/Network, 2011).

Indicator #8: Student is currently on parole or probation. A relationship between deviant behavior and increased dropout rates has consistently been reported. In addition, both prior delinquency and drug use have been found to predict a student's likelihood of dropping out of school (Battin-Pearson & Hawkins, 2000). High school success is particularly difficult for court-involved youth. The longer schools wait to re-enroll students who are involved in the criminal system, the more difficult it is for them to return to school. Although research shows that recidivism rates can be decreased by up to 29 percent for delinquent students who return to an engaging school environment, there is often a great deal of confusion between the juvenile offender programs and the student's home school district as to the responsibility for re-enrolling the offender in school (Princiotta & Reyna).

Indicator #9: Student was previously reported as a dropout. Limited research was available regarding students who had previously dropped out of school. However, some findings indicate that students who are suspended from school demonstrate a long-term pattern of dropping out, returning to school, and dropping out again (Ormrod, 2011).

Indicator #10: Student has limited English proficiency. A 2003 survey by the U.S. Department of Education indicated that LEP students commonly scored below grade level in English reading and math. Further study by the U.S. Office of Civil Rights found that only one-third of LEP students had passed state required tests in the year 2000 (Vesely, Crampton, Obiakor, & Sapp, 2008).

Limited English Learners present a particular challenge because students are typically at varying levels of English proficiency and may not be sufficiently proficient in English to demonstrate proficiency in academic content areas. And, since LEP students must learn English and academic content simultaneously, they typically do not meet the proficient level in academic subjects, and the academic gap between the group and the non-LEP population is considerable (National Academy of Science, 2011).

Indicator #11: Student is in the custody or care of the Department of Protective and Regulatory Services. A recent study published by the National Governor's Association found that 70 percent of the students in Philadelphia, Pennsylvania who were placed in foster care or had a substantiated case of abuse or neglect during high school subsequently dropped out of school; thus, highlighting the need for targeted interventions and programs for the displaced youth (Princotta and Reyna).

Indicator #12: Student is homeless. Stable housing is a critically important protective factor in the lives of teenagers. Research has linked mobility and the likelihood of dropping out. National statistics have shown that, in comparison to those students of other racial and ethnic groups, the persistently higher mobility rates among Hispanic students leads to an increased incidence of dropouts (Weissbourd, 2009).

Other research has shown the negative effects of mobility on student outcomes,

particularly for those students who are making non-scheduled school changes as students.

Many students – especially Hispanic students – may lack the social ties necessary to

buffer them from the effects of the moves, which may eventually result in the student

choosing to leave school altogether (Stearns & Glennie).

Indicator #13: Student is residing in a residential placement facility.

Research indicates that students with cognitive disabilities face an increased risk of

dropping out of school. However, students with emotional disabilities, such as those who

are often referred for residential placement, report dropout rates of as high as 53 percent

(Christle et al.).

Other student indicators. Various other student indicators, such as discipline,

attendance, ethnicity, and sex are also tracked using the PEIMS system. Thus, when

considered in combination with the at-risk indicators discussed above, educators can

utilize a multilayered approach to paint a more accurate overall picture of a given

student's risk factors for dropping out or failure in school.

Discipline issues. At-risk indicators utilized by the state of Texas are

focused on those young involved in court proceedings. A considerable body of literature,

however, has documented that boys and ethnic minorities are the primary focus of school

disciplinary policies. For instance, schools with a high concentration of poor or minority

students may be more likely to have zero-tolerance policies in place, which often serve to

increase the likelihood that specific student's will drop out of school.

Studies also indicate that, when compared with teens of other racial and ethnic

groups, African American students are more likely to engage in some behaviors that

break school rules and norms, such as acting out in class, arriving late, and skipping school. Ninth graders and students aged 16 and younger are also more likely than advanced and older students to leave school for disciplinary reasons (Stearns & Glennie).

Absenteeism. Dropouts themselves often cite disinterest in school as a key reason for missing classes and, ultimately, leaving school all together. Almost half of the dropouts surveyed in a national poll indicated that the reason they did not attend school was because their classes were uninteresting. Subsequently, as students' absences increase, they are more likely to fall behind on their coursework and become socially separated from their classmates. These factors may cause the student to feel disengaged, lost with regard to course content, and may drive them to leave school permanently (Princiotta & Reyna).

There is evidence to suggest that a student's number of school absences impacts his or her likelihood of dropping out. In fact, this particular trend starts in the first grade and continues to be a factor throughout a student's school career; with some evidence that patterns of absenteeism are consistent across grade levels, at least for students with disabilities. Missing too many days and having trouble catching up was the second most reported reason for dropping out of school in a recent survey of dropouts around the U.S. (National Dropout Prevention Center/Network, 2011).

Researchers in the Milwaukee Schools found that absence rates (reported on a monthly and annual basis) of eventual dropouts were much higher than those of eventual graduates (Meyer et al.). Researchers in the Chicago Public School system found that freshman students who had even moderate levels of absences, such as one to two weeks per semester, substantially reduced their probability of graduation. Students who had

marginal attendance rates (i.e., missing one month or more of school) had less than a 10 percent chance of graduating from school (Allensworth & Easton). Further research has also shown that ninth-grade absences have been found to be eight times more predictive of course failure in the freshman year and twenty times more predictive of eventual graduation than eighth-grade test scores (Horwitz & Snipes).

       Impact of poverty. Poverty continues to be the most consistent predictor of academic failure, with the concentration of poverty at the school level exacerbating the problem (Vesely, Crampton, Obiakor, & Sapp, 2008). In 2008, the event dropout rate of students living in low-income families was about four- and one-half times greater than the rate of their peers from high-income families (Chapman et al.*,* 2011). Overall, 22 percent of children who have lived in poverty do not graduate from high school, *as* compared to six percent of those who have never been poor. Sadly, for students spending more than half of their childhood in poverty, this statistic rises to 32 percent (Hernandez, 2011). These findings are particularly disconcerting to the state of Texas, especially considering that the number of students classified as economically disadvantaged over a 10-year period has increased by 45.5 percent. In other terms, this increase translates to approximately 910,000 additional students identified as being economically disadvantaged in 2010-11 compared to 2000-01. Across various racial/ethnic groups in 2010-11, the percentage of individual group enrollment in Texas accounted for by economically disadvantaged students was largest for Hispanics (77.4%) followed by African Americans (71.6%) (Texas Education Agency, 2011).

    Research suggests that the specific conditions of a lower class existence may contribute to inadequate school performance. For example, low income children often

lack consistent routines, as well as preventative medical, dental, or optometric care. Each

of these factors typically results in increased school absence due to illness and/or an

inability to see well enough in order to read. Also, children from low income families are

usually more prone to asthma, which, if left untreated, can result in sleeplessness, lack of

exercise, and overall poor attendance in school.

Individuals living at the poverty line also change jobs more frequently, or are

forced to find more affordable housing, which creates a higher degree of mobility for the

students. Children from lower income households are often not regularly exposed to the

complex use of language and large vocabularies simply due to the fact that their parents

hold multiple jobs. Such family living conditions and contexts mean that parents may not

have the time available to read aloud to their children, or the resources to create/offer

opportunities through which their child could be exposed to situations that stimulate

vocabulary development (Wilder, Allgood, & Rothstein, 2008).

Furthermore, communities with high concentrations of poverty are typically

plagued by schools with low graduation rates. Children in these communities often face

safety, environmental, and health hazards, and have fewer opportunities for learning in

placed outside the traditional classroom, such as museums and summer camps (Princiotta

& Reyna).

Sex and Ethnicity. Research compiled by the KIDS COUNT initiative

found that Hispanic students were most likely to drop out of school. Hispanic students

were more than twice as likely to drop out of school (at a rate of 12 percent) when

compared to their Anglo counterparts (who dropped out of school at the rate of five

percent). The disparity in the graduation rates of minorities persists when compared to

their African American counterparts who dropped out of school at the rate of eight percent (2009).

A study of dropouts in North Carolina found that boys were more likely to drop out of the ninth-grade than subsequent grades, while girls had relatively constant dropout rates in the 9th, 10th, and 11th grades. Moreover, older male students are more likely than younger males to leave school for employment, while female students typically leave school because of family responsibilities, including family formation and the care of siblings and elders. Given their larger family structures, research also suggests that African American and Hispanic girls may be more subject to family care responsibilities (Stearns & Glennie).

CHAPTER THREE

METHODOLOGY

Study Method

Participants in this study will be 6,060 high school students included in District "A" 2010 cohort of graduates. District "A" is a large metropolitan school district located in southwest Houston, Texas. Students in this cohort attended class in the district in the ninth-grade and either graduated from a high school in the district on time during the 2009-2010 school year, transferred to another school or chose to be homeschooled, died, or should have graduated during the 2009-2010 year but did not graduate for a variety of reasons. Specific student information and completion status will be obtained from the Accountability Reports issued by the Texas Education Agency through their secure access portal.

Membership in a cohort is determined by the year a student starts ninth-grade for the first time. Students are included in this cohort regardless of whether they transferred out to another school before graduation or transferred into the district after the beginning of the ninth grade. As long as these students began ninth-grade in the fall of 2006, were enrolled in the district for at least one day, and their expected on-time graduation was during the 2009-2010 school year, they are included in this cohort of students. Students who transfer into the class after the ninth grade are included at the appropriate grade level and counted for accountability purposes.

Students included in the 2010 class are those students who graduated, enrolled in school during the subsequent school year, received a General Educational Development (GED), or dropped out. Final student status is determined in the fall of each school year

following a student's expected graduation. Official leavers do not have any of the four final statuses that qualify for inclusion in a class and are not included in student status rates.

Students who are members of the cohort but are not members of the class of 2010 due to the fact that they were not enrolled and did not graduate are assigned a leaver code which indicates that the student has transferred to another district; that they have been withdrawn to be homeschooled; or that their whereabouts are unknown by the district. Students who cannot be located by the district may possibly be considered a dropout.

The vast majority of data analyzed in this study is drawn from students who have already graduated, transferred, or dropped out of school and are no longer enrolled in the district. Of the 6,060 students included in the 2010 cohort, a total of 5,258 students were members of the 2010 class of students. Using completion rate data, slightly more than ninety percent (90.3%) of the students included in the class of 2010 graduated within the expected time period, another 3.8 percent subsequently enrolled in the 2010-2011 year as a fifth year student, 5.5 percent dropped out, and another .5 percent received their GED.

Students classified as at risk in the class had a completion rate of 84.3 percent and graduated within the expected time period, 6.2 percent subsequently enrolled in the 2010-2011 year as a fifth year student, and 8.9 percent dropped out of school.

Variables

Official school data for this study will be obtained from the school district's student system, annual Public Education Information Management System (PEIMS) submissions, accountability data as reported through the state of Texas, and the Academic Excellence Indicator System (AEIS). The PEIMS data collection system, which is

managed by the state of Texas, accumulates student demographic and academic

information along with personnel, financial and organizational information for all school

districts and charter schools and is the source of official data for the state. The AEIS is

issued by the Texas Education Agency in the fall of each year and utilizes information

reported by districts through the PEIMS system along with state assessment data. The

AEIS reports a wide range of information regarding the performance of students in each

school and district and is widely used by governing bodies and the public.

Data Collection

All student identification information (i.e., name and unique identification

number) will be masked so that it is not identifiable by the researcher. Data will be

collected from all students in this cohort. General student demographic data including

gender, race, special education, and economic status will be collected for this cohort. In

addition, the following thirteen individual at-risk indicators as outlined by statute will be

included in conjunction with this demographic data: (1) failure of student in Pre-K to

grade three to perform satisfactorily on readiness test; (2) failure of student in grade

seven through twelve to maintain an average of 70 in the foundation curriculum on two

or more subjects; (3) student was not advanced from one grade level to the next for one

or more school years; (4) student did not perform satisfactorily on TAKS and did not

subsequently perform at 110 percent of the level of satisfactory performance; (5) student

is pregnant or a parent; (6) student has been placed in an alternative education program;

(7) student has been expelled; (8) student is currently on parole; (9) student was

previously reported to have dropped out of school; (10) student is of limited English

proficiency; (11) student is in the custody or care of the Department of Protective and

Regulatory Services or has been referred to the department by a school official, juvenile court, or law enforcement official; (12) student is homeless; and, (13) student resided in the preceding school year or resides in the current year in a residential placement facility.

Other school data will be collected for students in this cohort as available. Information such as ethnicity and economically disadvantaged, bilingual/Limited English Proficient (LEP) or special education status will be included in the dataset.

Performance on the Texas Assessment of Knowledge and Skills (TAKS) during the four year period will also be collected. The TAKS is a statewide student assessment program administered to all students in Texas and is designed to be accessible by students regardless of special programs including special education or bilingual/English as a Second Language. The test provides a snapshot of the degree to which students are learning the required Texas Essential Knowledge and Skills (TEKS). As a result of this snapshot, students can receive the additional help they need to strengthen their knowledge and skills in core academic areas; and districts and campuses can evaluate the effectiveness of their instructional programs.

Procedures

After general demographic data is acquired for the graduates and dropouts, a factorial analysis of the various student variables with the primary independent variable being the completion or drop out status of students will be performed. Descriptive statistics will be used to summarize variables in the dataset. A multiple regression analysis will be conducted to understand the relationship between various at risk predictors of student failure and the subsequent completion of school.

Summary

Students who drop out of school have a long-term economic impact on their immediate communities, as well as their society as a whole. Regrettably, however, the state's dropout rate has stagnated and has not changed significantly over time. The purpose of this study will be to determine the at-risk indicators which are most likely to predict students' likelihood of dropping out of school in a large school district in the greater Houston area. Additionally, this study will attempt to construct a funding system based on these findings that can more appropriately target and mitigate the issue of student dropouts.

Currently, at-risk student funding in the state of Texas is distributed to districts based upon the numbers of students who qualify for free and reduced-lunch during a six-month period. However, a student's economic status is not considered to be an indicator of a student's at-risk status and may not be the most appropriate method upon which to distribute funding. Analyzing retrospective, longitudinal student data for District "A" may allow educators to better predict and identify potential dropouts and intervene appropriately.

Research Questions and Hypotheses

The following research questions and hypotheses were proposed for this study:

Question 1: Is there a correlation between the 13 at-risk student indicators and the dropout indicator reported annually through the Public Education Information Management System (PEIMS)?

Hypothesis 1: Based upon research, certain combinations of at-risk student indicators will better predict a student dropping out of school.

Question 2: Are certain at-risk indicators better predictors of dropout status than others?

Hypothesis 2: Based upon research, certain indicators will be a better predictor of a student's failure to complete school than others.

Question 3: Are there alternative distribution methodologies for at-risk student funding that would better serve the state's most at-risk students?

Hypothesis 3: Based upon the research completed, an alternative distribution of funding, along with requirements for directed expenditures, could provide at-risk students additional educational opportunities that would enable them to graduate.

Findings from these research questions may enable instructional leaders to identify student indicators that are most likely to result in a student failing to complete school and allow districts to construct budgetary models to most effectively distribute funding within the district campuses for students most at risk of dropping out. Such research may also lead to the development of an alternative funding structure for at risk student funding.

Limitations of the Study

The majority of the student at-risk indicators required to be tracked by Texas Education Code Section 29.081 can be derived from annual student achievement records which are available electronically and reported through the PEIMS system. However, the state does not automatically attach an at-risk indicator to a student's record. Rather, the district is tasked with the responsibility of marking the student record with the appropriate indicator code. In District "A", for instance, student at-risk indicator codes are manually entered into the student's record annually by the district's counselors and registrars. Hence, this very process increases the potent risk that the student data may be subject to human interpretation and/or error during the data input process.

Several of the at-risk indicators utilized by the state may also be masked over time in the student record. For example, a student's failure to adequately perform well on an assessment test in the Pre-kindergarten to third-grade may not be reflected in their electronic student record at graduation. Attempts will be made by the researcher to ensure that all data is appropriately collected for this study; nonetheless, early indicators of failure may be missing from the cohort of students, or the student may have dropped out of school before cohort data was identified.

There are various methodologies utilized by states and research organizations that present conflicting data on the percentage of dropouts of an entity based upon both the calculation and the composition of the population from which the data are drawn for the calculation of the rate. This doctoral thesis focuses only upon a specific cohort and the propensity of the at-risk indicators present for students who did not graduate with their peers.

CHAPTER FOUR

RESULTS

The present research study was undertaken in an effort to more accurately identify which at-risk student indicator codes (as utilized by the state of Texas) most accurately predict the likelihood of a student dropping out of school. The researcher will attempt to correlate the failure of students to graduate to specific at-risk indicators utilized by school districts within the state.

At-risk indicator codes are outlined in Texas statute, and the programs that direct the identification of at-risk students, as well as the eligible uses of funds for educating at-risk youth, are detailed within the state's administrative code. Campus and district personnel at the local level are charged with identifying students as "at-risk" by utilizing one of 13 unique indicator codes prescribed by the Texas Education Agency. These codes are summarized at the state level through the simply use of a "yes" or "no" indicator. Hence, the student is or is not identified as at-risk on an annual basis by way of the Public Education Information Management System (PEIMS) process, whereby student information is uploaded for reporting purposes. It is also important to note that these individual at-risk indicator codes are not transmitted to the state level for reporting purposes.

Since at-risk indicator data are summarized at the state level, the data for the study was retrieved both from the Texas Education Agency accountability system report of the 2010 cohort of students, and through the District "A" student system records. The 2010 cohort of students is comprised of students who first entered the ninth-grade in 2006, as this is the group of students who are expected to graduate in 2010. Moreover,

this group was first identified through the district PEIMS submission in 2006. In addition to the individual at risk indicators, other general demographic student information was also gathered for the study from District "A" student records, which included a variety of individual data, such as student gender, ethnicity, socio-economic, and special education status.

The researcher attempted to answer the following three basic questions with regard to the success of at-risk students:

1. Is there a correlation between the 13 at-risk student indicators and the dropout indicator reported annually through the PEIMS?

2. Are certain at-risk indicators better predictors of dropout status than others?

3. Is there an alternative distribution methodology for at-risk student funding which would better serve the state's most at-risk students?

Research Methodology

With regard to the 2010 cohort, students' final graduation/dropout status (i.e., the study's dependent variable) was retrieved from the state accountability system. Those students who appeared on the record as graduated from high school or dropped out from high school were coded as either "graduated" or "dropped out". Students who left District "A" in order to attend school in another district, or to be homeschooled, were coded as "leavers" due to the fact that school officials cannot definitively say whether the student graduated or completed school on time. Students who did not graduate or receive their GED, or who did not continue high school after their planned graduation date, were coded as "not on-time graduation" (i.e., dropouts).

Furthermore, due to mismatched student identification numbers and missing coded data, a small number of students included in the cohort analysis by the Texas Education Agency (TEA) could not be located in the district's student accounting records. For instance, there were 56 students identified by the TEA as members of the cohort. Yet, the District "A" student system did not include the student identification number and/or names indicated; therefore, given that an exact match could not be established, the students were excluded from the report analysis (see "Unable to Locate" in Table 4.1). The following table shows the percentages of different groups among the cohort students:

Table 4.1

Cohort Student Status - District "A"

Student Code Identification	Percentage
Graduated	78.1%
Not On Time Graduation*	3.6%
Dropped Out	4.7%
Other Leaver	12.7%
Unable to Locate	0.9%

Note: Not on time graduation=Student that either
continued high school or received a GED.

Each of the independent (predictor) variables utilized in this study were extracted from the district's student information system records. The independent variables include student demographic variables, such as gender, ethnicity, socio-economic, limited

English proficiency, and special education status, as well as the 13 at-risk factors tracked for PEIMS purposes by school districts in Texas.

The 13 at-risk indicators accounted for by the district, and required by statute, are as follows: (1) failure of a student to successfully complete an assessment instrument in pre-kindergarten through third-grade; (2) failure of a student in grade seven through twelve to maintain an average of 70% in the foundation curriculum (in two or more subjects in a semester); (3) student was not advanced from one grade level to the next for one or more school years; (4) student did not perform satisfactorily on TAKS and did not subsequently perform at 110 percent of the level of satisfactory performance; (5) student is pregnant or a parent; (6) student has been placed in an alternative education program; (7) student has been expelled; (8) student is currently on parole; (9) student was previously reported to have dropped out of school; (10) student is of limited English proficiency; (11) student is in the custody or care of the Department of Protective and Regulatory Services or has been referred to the department by a school official, juvenile court, or law enforcement official; (12) student is homeless; and, (13) student resided in the preceding school year or resides in the current year in a residential placement facility.

The researcher also accessed district records to extract information regarding students' specific at-risk indicator code during their ninth-grade; their ninth-grade TAKS results and course failure information from seventh through twelfth grades; and various other general student demographic data mentioned above. The population demographics of the independent variables contained in the 2010 cohort are illustrated in the following table:

Table 4.2

Independent Variables of the 2010 Cohort

Variable		%
Gender		
	Female	49.2%
	Male	50.8%
Ethnicity		
	African American	33.0%
	Asian or Pacific Islander	20.8%
	Hispanic	20.4%
	Anglo	25.7%
	American Indian	0.1%
Economic Status		
	Not Economically Disadvantaged	78.7%
	Economically Disadvantaged	21.7%
Special Education Status		
	Not Special Education	92.8%
	Special Education	7.2%
LEP Status		
	Not LEP	86.4%
	LEP	13.6%
Failure to Advance*		
	Promoted	99.9%
	Not Promoted	0.1%

Table 4.2 (Cont.)

TAKS Failure	Passed TAKS	69.7%
	Failed TAKS	30.3%
Child Protective Services		
	Not in Custody	100.0%
Homeless		
	Not Homeless	99.5%
	Yes Homeless	0.5%
Reside in Residential		
	Not in Residential Facility	99.9%
	In Residential Facility	0.1%
Alternative Education		
	Not in Alternative Education	97.6%
	In Alternative Education	2.4%
Expulsion		
	Not Expelled	99.9%
	Expelled	0.1%
Placed on Parole		
	Not on Parole	99.8%
	On Parole	0.2%
Is a Parent		
	Not a Parent	100.0%
Failure to Maintain Passing**		
	Failing Two or More Courses	29.1%
	Not Failing Two or More Courses	70.8%

Note: * = Failure to Advance One Grade Level; ** = Failure to Maintain Passing Average (Grades 7-9)

Research Question #1

The researcher first attempted to determine if there was correlation between the 13 at-risk student indicators and the drop out indicator reported annually through the PEIMS. Utilizing the data gathered for the study, the researcher first used Pearson's Chi-Square Tests to determine if there was a correlation between each of the 13 at-risk student indicators and the dropout indicator reported annually through PEIMS.

Normally, Pearson's Product Moment Correlation would be used to analyze the correlation of two variables when the variables show continuous scores. Because the variables used in this study have categorical data, Pearson Chi-Square tests were used instead to examine the relationships between each independent variable (i.e., the demographic variables and the 13 at-risk factors) and the dependent variable (i.e., the students' final status). Since some independent variables and the dependent variables have more than two categories (e.g. other leaver, not on-time graduation, drop out, and graduation), the Cramer's V statistic was used to ascertain the correlation value. (The Phi statistic would be used when the contingency table is 2x2).

Specific results can be found in the appendixes that follow this report. However, the researcher noted that there was significant correlation between a student's final status and the independent variables of socio-economic status, gender, special education status, ethnicity, failure to advance from one grade level to the next, placement in an alternative education setting, being placed on parole, failure of two or more courses in a semester in grades seven through twelve or seven through nine. Nonetheless, the researcher could *not* identify a significant correlation between students' LEP status, TAKS passage,

identification as homeless, placement in a residential treatment facility, expulsion, or becoming a parent.

Research Question #2

The researcher then attempted to determine whether certain at-risk indicators were better predictors of dropout status than others by utilizing the information obtained through the correlation analysis. Rather than utilizing a multiple regression analysis, a logistic regression analysis was used to analyze the data because the dependent variable has nominal data (i.e., categories) rather than continuous data.

A multinomial logistic regression analysis was utilized because the dependent variable had more than two categories. If there had been only two categories in the dependent variable, a binary logistic regression analysis would have been utilized instead.

Before running the multinomial logistic regression analysis, the researcher verified the goodness-of-fit assumption to determine if it was violated by first using a cross-tabulation table as a means to examine the expected frequencies in each cell of the table. The goodness-of-fit assumption was met if the expected frequency in each cell of the table was greater than one and no more than 20 percent of the expected frequencies were less than five. Table 4.3 shows the expected frequencies of each independent variable using a cross-tabulation table.

Table 4.3

Multiple Logistic Regression Analysis (2010 Cohort)

| | Graduated | | Drop Out | |
	Expected	Actual	Expected	Actual
Special Education	339.8	289	20.5	31
Ethnicity				
American Indian	5.5	<5	.3	<5
Asian	985	1,123	59.6	15
African American	1,566.2	1,516	94.7	138
Hispanic	970.2	835	58.7	105
White	1,220.1	1,269	73.8	29
Gender				
Male	2,409.9	2,378	145.7	176
Female	2,337	2,369	141.3	111
Economically Disadvantaged	1,012.4	962	61.2	98
LEP Status	647.6	655	39.2	39
Not Promoted	3.9	<5	.2	<5
Fail TAKS	1,439.6	1,400	87	111
Homeless	25	20	1.5	<5
Resides in Residential Placement Facility	7	8	.4	<5

Table 4.3 (Cont.)

Placed in Alternative Education	115.6	71	7	27
Expelled	<5	<5	<5	<5
Parole	10.2	6	.6	<5
Parent	<5	<5	<5	<5
Failure Two or More Courses Grades 7-12	1,871.8	1,547	113.2	243
Failure Two or More Courses Grades 7-9	1,379.5	1,157	83.4	176

It should also be noted that several independent variables did not meet the goodness-of-fit assumption in the logistic regression analysis and were subsequently excluded from the multinomial logistic regression analysis. Specifically, the independent variables for students who were not promoted, were abused and in care of Department of Regulatory Services, were homeless, were assigned to a residential placement facility, were expelled or on parole, or were a parent were excluded from the next step of the analysis.

After running the multinomial logistic regression analysis, the researcher verified whether the model was a good fit. The Chi-Square Test statistic of 645.258 in the model-fitting information was significant ($p<.001$) indicating that the final model is a better fit than the original model.

Next, the researcher tested the fit of the model to the data. Both the Pearson and the deviance statistics are not significant (.344 and 1.0 respectively), which illustrates that the predicted values are not significantly different from the observed values. Thus, the model was determined to be a good fit. The Cox and Snell measure and the Nagerlkerke's adjusted value both show the effect size and are intended to measure the strength of association of the variables studied. The Cox and Snell value is .101 and the Nagelkerke's adjusted value is .129. The effect sizes from both measures are not extensively different and are relatively small, which further indicates that the model is a good fit.

The likelihood ratio tests show the significance of predictors to the model. The results show that several variables (i.e., ethnicity, gender, special education, TAKS failure, placement in an alternative education setting, and failure in grades seven, eight, and nine) have significant main effects in predicting the final status of students as illustrated in Table 4.4.

Table 4.4

Significant Predictors of Dropout Status

Variable	Chi-Square	Significance
Intercept	1,637.814	.000
Special Education Status	47.246	.000
Ethnicity	200.715	.000
Gender	12.462	.014
TAKS Failure	42.267	.000
Alternative Education Placement	45.261	.000
Failure Grades 7-9	194.763	.000

Finally, the parameter estimates show the paired comparisons between each outcome category (including other leaver, not on-time graduation, dropping out and graduation), with graduation as the reference category. What the researcher was most concerned about was the comparison of drop-out status compared to graduation as depicted in Table 4.5. The table shows the Beta (β) value, standard deviation, Wald statistic, significance test, Odds ratio (Exp (β)), and the lower bound and upper bound of the 95 percent confidence interval for Exp (β)).

Table 4.5

Results of Multinomial Logistic Regression Analysis

| | | 95% Confidence Level for Odds Ratio | | |
	B (SE)	Lower	Odds Ratio	Upper
Intercept	-1.928(.408)			
Special Education	-.278(.211)	.501	.757	1.145
American Indian	-14.636(4,581.316)	.000	4.401E-007	
Asian	-0.386(.327)	.358	.68	1.289
African American	1.140(.214)***	2.056	3.128	4.758
Hispanic	1.526(.232)***	2.921	4.599	7.240
Gender	-.313(.13)**	.567	.731	.942
Economic Status	-.045(.143)	.722	.956	1.265
LEP Status	.321(.208)	.917	1.378	2.072
TAKS Failure	.643(.148)***	1.422	1.902	2.543
Placed alternative education facility	-1.155(.25)***	.193	.315	.514
Failure in Grades 7-9	-1.526(.149)***	.162	.217	.291

Note: R^2= .101 (Cox & Snell), .129 (Nagelkerke). Model x^2 (44) = 645.258, $p<.001$. *$p<.05$, **$p<.01$, ***$p<.001$.

The parameter estimates show that whether students are labeled as special education or not does not significantly predict the drop-out status of students, b =-.278, Wald $\chi2(1)=22.307$, $\rho>.05$.

The parameter estimates also illustrate that a students' ethnicity significantly predicts their drop out status. Furthermore, whether students' ethnicity is African American or Hispanic significantly predicts the drop-out status of students. For African American students, b =1.14, Wald $\chi2(1)$=28.388, ρ<.001. For Hispanic students, b =1.526, Wald $\chi2(1)$=43.427, ρ<.001. The chances of African American students dropping out are 3.128 more likely as their non-African American students. For Hispanic students the chances of dropping out are more severe at 4.599 times more likely as compared to non-Hispanic students.

Parameter estimates also show that students' gender significantly predicts their drop out status, b =-.313, Wald $\chi2(1)$=5.842, ρ<.05. As gender changes from female to male, the change in the odds of dropping out compared to graduation is .731. In other words, the odds of male students dropping out compared to graduating is 1.368 times (1/.731=1.368) more likely than female students.

Parameter estimates indicate that whether students failed TAKS or not also significantly predicts students' drop-out status, b =.643, Wald $\chi2(1)$=18.822, ρ<.001. This result shows that for students who passed TAKS, the change in the odds of dropping out compared to graduation is 1.902. This result is somewhat surprising in that one would expect students who *failed* TAKS to be more likely to drop out of school. However, the results of the study indicate that students who pass TAKS in the ninth grade are more likely to drop out of school.

Parameter estimates indicate that whether students were placed in an alternative education placement setting (AEP) significantly predicts the dropout status of students, b =-.1.155, Wald $\chi2(1)$=21.357, ρ<.001. As students' statuses change from not being

placed in AEP to being placed in AEP, the odds of dropping out compared to graduation

is .315. In other words, the odds of students who were placed in AEP dropping out of

school compared to graduation are 3.175 times (1/.315=3.175) more than for those who

were not placed in AEP.

The factor of 7th, 8th, 9th grade students maintaining a 70 average score in two or

more core subjects significantly predicts their drop out status, b =-.1.526, Wald

$\chi2(1)$=105.040, ρ<.001. The researcher labeled students who were not able to maintain a

70 or above average score in two or more core subjects in their 7th, 8th and 9th grades as

not passing and the others as passing. As students' average scores change from passing

to non-passing, the odds of dropping out compared to graduation is .217. In other words,

the odds of students who did not pass dropping out compared to graduation are 4.608

times (1/.217=4.608) more than for those who passed.

Other factors studied were found not to have a significant impact on the

likelihood of a student dropping out of school such as a students' LEP status was not

found to predict their likelihood of dropping out of school. b =.321, Wald $\chi2(1)$=2.379,

ρ>.05.

A student's economic status was found not to have a significant impact on the

likelihood of a student dropping out of school. b =-045, Wald $\chi2(1)$=.1, ρ>.05.

Study Limitations

It is important to mention within the present study that some at-risk factors were

excluded from the multinomial logistic regression analysis because some data was

missing. Many of these students were enrolled in other school districts prior to entering

the ninth-grade in District "A". When a student enters District "A", their district data

typically begins at that point and any previous data from before they were enrolled in the district is "missing" from the database, particularly with respect to performance indicators which are not tracked at the state level, such as course failure, failure on early assessment at pre-kindergarten to third grade level, discipline referrals, etc.

Some data may also be missing due to human data entry error and/or errors of interpretation. The student database utilized at the time the 2010 cohort was created to be highly decentralized and maintained by each campus. Hence, in a large school district, there are many different people with varying skill levels inputting data at many different times. Individuals may be given different instructions or they may have interpreted instructions differently than others in the district performing the same function. Therefore, there existed no unified system at the central level to determine if data entered into the system was reasonable and that all data was present in 2006 when the cohort was identified.

For instance, only one student was identified as being pregnant or a parent within the 2010 cohort of students which does not correlate to the number of contact hours generated within the district for pregnancy related services during this time period. In the same manner, at-risk indicators for the failure on an assessment instrument in Pre-K through third-grade were missing from the district data base as this information was deleted as a student moved up in grade level. Therefore, it was impossible for the researcher to determine if failure at an early age was a predictor of a student dropping out of school. In the same manner, the district records did not contain information regarding students who may have previously dropped out of school, as this data was not tracked by District "A" through the at risk indicator process.

Therefore, due to the missing pre-kindergarten and dropout data, the final data set of at-risk indicators studied by the researcher included only 11 at-risk indicators, rather than the 13 indicators tracked by the state. Lastly, the issue of the missing data will be discussed in further detail in Chapter Five.

Research Question #3

The researcher next attempted to identify if there were alternative distribution methodologies for at-risk student funding that would better serve the state's most at-risk students – that is, as an alternative to the current funding model. The results of the study contradict the current methodology of funding at-risk education in the state of Texas in that funds are distributed to districts based upon the average number of students who qualify for free and reduced-lunch during a six-month period, which was not found to be a predictor of a students' failure to graduate.

Based upon the results of the study thus far, students are least likely to complete high school if they are placed in an alternative education setting; if they fail two or more core courses in a semester in grades seven to nine; or if they are Hispanic, African American or male students. Unfortunately, since student at-risk data are not disaggregated at the state level, the results identified do not lend itself to data modeling. Further discussion on the funding methodologies and the policy implications for program development which were identified during the study will occur in Chapter Five.

CHAPTER FIVE

DISCUSSION

This chapter provides a summary analysis of the research associated with students who drop out of school that is relevant to this study. Additionally, this chapter lays out the implications for policy and practice – both at the district and state level. In an increasingly competitive, global economy the consequences of dropping out of high school are devastating.

According to recent statistics, the percentage of the labor force in Texas without a high school diploma will rise to 30.1 percent by the year 2040, while another 28.7 percent of the population will possess only a high school diploma (Potter, 2010). The primary impetus behind the researcher's selection of this topic was drawn from an extremely pressing concern: The increasing numbers of dropouts will potentially impact the state's long-term economic development and fiscal stability if an educated workforce is not available.

Research Study

The state of Texas has identified 13 specific at-risk indicators which are utilized in order to identify students those students who are at-risk of failure in school (i.e., increased dropout risk). In addition, districts utilize these indicators to develop targeted programs for those struggling students. Yet, even though the state of Texas utilizes 13 specific indicators for at-risk identification of students, funding for at-risk educational programs is based upon the district's six-month average number of economically disadvantaged children, which has not been identified by the state as placing students at-risk of dropping out of school.

Using quantitative student information reported annually through the Public

Education Information Management System (PEIMS) the researcher attempted to address

the following three research questions in an effort to identify alternatives to the funding

formula for our state's at-risk children:

1. Is there a correlation between the 13 at-risk student indicators and the

   dropout indicator reported annually through the PEIMS?

2. Are certain at-risk indicators better predictors of dropout status than

   others?

3. Is there an alternative distribution methodology for at-risk student

   funding which would better serve the state's most at-risk students?

Official school data for this study was compiled from a large metropolitan school

district located in southwest Houston identified as District "A", which was comprised of

the 6,060 high school students included in the 2010 cohort of graduates. Students in this

cohort attended classes within the district during the ninth-grade and either graduated on

time from a high school in the district during the 2009-2010 school year, transferred to

another school or chose to be homeschooled, died, or should have graduated during the

2009-2010 year but did not graduate for a variety of reasons.

The 2010 cohort of students is comprised of students who first entered their ninth-

grade in 2006 – as this is the group of students who were expected to graduate in 2010.

Moreover, the group was first identified through the district PEIMS submission in 2006.

In addition to the individual at-risk indicators related to the overall purpose of this study,

general demographic student information, such as student gender, ethnicity, socio-

economic, and special education status, was also gathered from District "A" student records.

   Research Question #1. Is there a correlation between the 13 at-risk student indicators and the dropout indicator reported annually through the Public Education Information Management System (PEIMS)?

   Hypothesis 1. Based upon research, certain combinations of at-risk student indicators will better predict a student dropping out of school.

   Based upon the results of the analysis, the researcher noted that there was significant correlation between the variables listed in Table 5.1 (see below) and a student's final status (i.e., graduation or failure to graduate).

Table 5.1

Independent Variables contributing to a Student's Ability to Graduate

Indicator Variable	At-Risk Indicator
Ethnicity	No
Failure to Advance from One Grade Level to the Next	Yes
Failure Two or More Core Courses in a Semester Grades 7-12	Yes
Failure Two or More Core Courses in a Semester Grades 7-9	Yes
Gender	No
Placement in an Alternative Setting	Yes
Placement on Parole	Yes
Socio-economic Status	No
Special Education Status	No

Significant research exists with respect to each of the indicators identified above. For instance, previous research indicates that poverty is a consistent predictor of academic failure. Students identified as economically disadvantaged in District "A" had a dropout rate of 6.7 percent. However, earlier research suggests that, overall, 22 percent of children who have lived in poverty do not graduate from high school, as compared to six percent of those who have never been poor (Hernandez, 2011). Furthermore, research suggests that high concentrations of students living in poverty within a school environment increase the likelihood that students will choose to drop out of school (Vesely, Crampton, Obiakor, & Sapp, 2008).

Given that more than 40 percent of their population can be considered economically disadvantaged along with a number of elementary and middle school campuses, three of the eleven high school campuses in District "A" qualify for Title I. Poverty in the district is primarily concentrated on the eastern and western fringes of the district, while the central core of the district can primarily be considered as highly affluent. Further study is warranted in order to determine whether economically disadvantaged students who attend campuses where more than 40 percent of the student population is considered economically disadvantaged, as compared to economically disadvantaged students who attend campuses with lower concentrations of poverty within the district, are more or less likely to drop out of school.

Previous research suggests that the specific conditions of a lower class existence may contribute to inadequate school performance. For instance, low income children often lack consistent routines since their parents may have multiple jobs and may be away from home frequently for work. As such, parents may not have the time available

to read aloud to their children, or the resources to create/offer opportunities through which their child could be exposed to situations that stimulate vocabulary development, such as trips to the zoo or museum, which eventually contribute to a child beginning school at an academic disadvantage compared to their peers (Wilder, Allgood, & Rothstein, 2008).

Information regarding the failure of students in District "A" in the Pre-kindergarten through grade three was not available and has been identified as a limitation of this study. Further study of the academic progress of a cohort of District "A" students beginning in pre-kindergarten is warranted for future research to assist the district in evaluating the effectiveness of their programs for young learners. Many of the district pre-kindergarten campuses have long waiting lists for participation, and the district struggles with finding spaces for future students. Thus, performing an analysis of the long-term success of district students enrolled in the program would provide district leaders with the data needed to ascertain whether the program should be expanded to accommodate additional students.

The results of the research study showed that male students, along with African American and Hispanic students, were more likely to drop out of school. In particular, male students often leave school to seek employment, and they may be more involved in discipline issues, which can often lead to a desire to drop out of school. Research suggests that the ninth-grade year is a defining one for male students and their decisions regarding school attendance, while girls tend to consistently drop out of school over time.

The results of the present study also revealed that African American and Hispanic were found to drop out of school at rates greater than their Anglo and Asian counterparts.

These findings are consistent with a study of national graduation rates for 2001

performed by the Civil Rights Project and the Urban Institute (2004) as illustrated below:

Table 5.2

2001 High School Graduation Rates

Characteristics	Nation	Female	Male
American Indian	51.1%	51.4%	47%
Asian/Pacific Islander	76.8%	80%	72.6%
Hispanic	53.2%	58.5%	48%
African American	50.2%	56.2%	42.8%
Anglo	74.9%	77%	70.8%
All Students	68%	72%	64.1%

In a study of the 100 largest school districts in the country, researchers at Johns

Hopkins University found that in almost half of the schools sampled (317 of the 661),

twelfth-grade classes had shrunk by more than half from their ninth-grade inception class

four years earlier, and that in schools where 90% or more of the enrollment were students

of color, only 42% of the freshmen class advanced to grade 12 (Orfield, Losen, Wald &

Swanson, 2004).

Consistent with research in the area, the study indicated that the failure of a

student in either an individual course, or in a school year as evidenced by the student's

failure to advance from one grade level to the next, were also predictors of a student

dropping out of school. Students fail courses for a variety of reasons and the failure in a

core course may ultimately lead to academic retention (Alexander, Entwisle, & Kabbani, 2001).

Discipline and the associated consequences, such as assignment to an alternative education setting or participation in the criminal courts system, is a consistent predictor of a student choosing to drop out of school – specifically, this study's results reflected the very name pattern. Thus, students who do not have strongly established social connections with their peers may be more likely to drop out of school, especially since they do not feel an allegiance to their peers.

Research Question #2. Are certain at-risk indicators better predictors of dropout status than others?

Hypothesis 2. Based upon research, certain indicators will be a better predictor of a student's failure to complete school than others.

To prevent any underlying assumptions contained in the statistical analysis from invalidating the results of the study, a goodness-of-fit test was performed in the logistic regression analysis in order to identify whether any independent variables should be excluded from the multinomial logistic regression analysis because they were not a good fit for the model. Specifically, the independent variables outlined in Table 5.3 (see below) were excluded from the next step of the researcher's analysis due to data limitations of the sample.

Table 5.3

Variables Eliminated Due to Data Limitations

Indicator Variable	At-Risk Indicator
Failure to Advance from One Grade Level to the Next	Yes
Student was Abused	Yes
Student was Homeless	Yes
Student was Assigned to a Residential Placement Facility	Yes
Student was Expelled or Placed on Parole	Yes
Student was a Parent	Yes

The results of the statistical analysis showed that several variables (ethnicity, gender, special education, TAKS failure, placement in an alternative education setting, and failure in grades seven, eight, and nine) can significantly predict whether a student will graduate from high school.

The results of the study found that being labeled as a special education student did not have a significant impact on the drop out status of students; thus, contradicting literature reviewed in preparation for the study of at-risk students attending District "A". A wide variety of research also exists to suggest that the dropout rate for special education students is twice as much as the dropout rate for non-special education students (Thurlow, Sinclair, & Johnson, 2002). However, further study is needed in this area to determine what makes District "A" unique with respect to the success rate of its disadvantaged students.

The estimates analyzed by the researcher did indicate that a student's ethnicity and gender significantly predicted their drop out status – namely, African American and Hispanic students were found to drop out of school 3.128 and 4.599 times more often as

their non-African American and Hispanic counterparts, respectively. In addition, male students were predicted to drop out of school 1.368 times more often than their female counterparts.

Research previously compiled by the KIDS COUNT initiative has found that Hispanic students drop out of school at more than twice the rate of their Anglo counterparts (i.e., 12 percent as compared to 5 percent in the group studied). The dropout rates for Hispanic students in District "A" are even more startling (10.4 percent compared to 2.2 percent for their Anglo counterparts). The disparity in graduation rates of African American students (7.9 percent) in District "A" is consistent with research in this area, and represents an area for further study necessary to determine specifically why minority students drop out of school at higher rates, and to determine if specific programs should be developed to address the needs of the minority and male students in particular.

Districts have tackled the on-going problem of minority dropouts by implementing mentor programs with businesses in the community, developing a homogenous campus environment, etc., and further research is warranted to determine if these types of programs could assist the district in improving the graduation rates of their struggling minority and male students.

Furthermore, research related to at-risk students and standardized testing has been mixed. With respect to the students in the 2010 cohort of students for District "A", students who failed TAKS in the ninth-grade were less likely to drop out of school than their counterparts who were able to successfully pass the test. The National Dropout Prevention Center/Network has identified seven studies that examined the relationship between high school exit exams and high school dropout rates and could find no

correlation between the results of each study as the results produced differing conclusions (National Dropout Prevention Center/Network, 2007).

Standardized tests are often perceived as a barrier to graduation for struggling students; however, gifted students who do not have trouble succeeding on standardized tests may become bored in school and choose to drop out. In essence, in these cases, school does not represent a meaningful challenge. Further study in the area of testing is warranted given the change to the testing model for the state of Texas, which will require current freshman to successfully complete a series of end of course exams to graduate. Additional studies are also needed to ensure that the staff of District "A" is able to address any unintended consequences associated with additional testing of students.

Consistent with previous research, students in District "A" who were placed in an alternative education setting dropped out of school at a higher rate (3.175) than that of their peers who were not placed in an alternative setting. Research performed by the National Dropout Center (2011) found that a student's misbehavior in school can increase a student's alienation from the school environment overall. Educational research also links early antisocial behavior, such as violence and substance use, which can often result in a student's placement into an alternative education setting and, subsequently, to one's dropping out of school (Hammond et al.).

A specific analysis was conducted of student failures in grades seven through nine and grades seven through twelve. The results of this analysis indicated that failure in grades seven through nine was a strong predictor of a student dropping out of school (4.608 times more likely), while failure after grade nine in a core subject was not. These findings are also consistent with research performed in both the Milwaukee and Chicago

Public School systems, which found that students who dropped out of high school had substantially lower academic performance in core subjects in the ninth-grade than their peers who graduated (Meyer et al.; Allensworth & Easton, 2007).

Given that students in the 2011 cohort and beyond are now required to successfully complete four years of course work in all core content areas, additional research should be conducted in this area. The additional requirements in the areas of math and science may limit a student's ability to graduate with their peers. Indeed, passing rates for the 2010 algebra end of course exam – which did not count for graduation purposes and was for field testing purposes only – varied widely for economically disadvantaged and at risk students (45 and 26 percent respectively), as compared to their peers who were not economically disadvantaged or at-risk (70 and 75 percent) (Moak, Casey, 2012).

Research Question #3: Are there alternative distribution methodologies for at-risk student funding that would better serve the state's most at-risk students?

Hypothesis 3: Based upon the research completed, an alternative distribution of funding, along with requirements for directed expenditures, could provide at-risk students additional educational opportunities that would enable them to graduate.

Due to data limitations within this study, however, identifying an alternative funding system for at-risk education was particularly difficult for the researcher. While research supports the potential failure of African American, Hispanic and male students and certainly districts are measured on the academic success of minority students, developing a system of directed funding for a particular minority group or sex could be viewed as discriminatory and could raise potential legal issues and challenges.

District "A" develops campus budgets based upon a per pupil allocation and allocates additional funding for gifted, bilingual, and at-risk programs based upon the number of students identified in the previous year's PEIMS submission. In addition, funding for alternative school campuses is zero-based and not subject to the district budgetary guidelines. Based upon the results of the research study, District "A" should consider allocating funds for middle school students identified as at-risk at a higher per pupil rate than that allocated to other campuses in the district so that programs can be developed to ensure that students successfully master core subjects so that they are able to successfully transition to high school.

Other states have studied the issue of funding for at-risk education. In 2002, The Maryland Commission on Education Finance, Equity, and Excellence found that the weight for low-income students should be more than twice the resources of their non-disadvantaged counterparts and recommended that the state fund at-risk education at the rate of 1.1 times the regular student allotment. The state of Colorado conducted a similar study and found that the weight for low income children should range from .2 (for districts with enrollments less than 250 students) to .58 compared to Texas' weight of .2 for at-risk students. The same study found that limited English proficient students should receive an additional weight of .5 compared to Texas' weight of .1 for bilingual education (Moak, Casey).

Due to the data limitations noted by the researcher previously (i.e., failure to accurately identify students in the 2010 cohort of students who failed an assessment instrument in Pre-kindergarten through third-grade) identification of a limited number of

students who were parents, or who were homeless, further research and data gathering is needed prior to forming a definitive conclusion of alternative funding methodologies.

Implications for Policy and Practice

   Student attendance accounting. The practice of identifying students as at-risk in a district's student accounting system is primarily managed by district attendance clerks, registrars, and counselors. Much of the data which identifies a student as at-risk exists in information submitted annually through the PEIMS system or other data sources.

   District "A" does not have a system in place to ensure that the data entered into the student accounting system is an accurate representation of a student's status. For instance, the 2010 cohort of student data identified only one student as being pregnant or a parent even though records existed within the Department of Student Services indicating that there were additional student parents within the cohort. Furthermore, the software system utilized in 2006 was campus-based, and little attempt was made at the district level to thoroughly analyze student data programmatically prior to its submission to PEIMS. An attendance review of the district's student accounting records by the Regional Service Center in 2010 revealed additional problems with the district's data collection processes which caused the district to adopt more stringent review of student accounting records.

   The district continues to rely on manual input of the individual at-risk indicator status code by district personnel. Since the majority of the at-risk indicators can be found within data electronically captured by the district, processes should be established within the district to ensure that the at-risk identifier data are uploaded automatically to the student attendance accounting system through the sources of data indicated in Table 5.4,

rather than relying on manual data entry by school personnel which can lead to

misclassification of students. A further long-term consideration would be the creation of

a statewide student accounting and data warehouse system which is maintained by the

Texas Education Agency and regularly populated with PEIMS student data and student

information from other sources which may not be readily available to district personnel.

Table 5.4

Data Sources for At-Risk Student Criteria

Indicator Variable	Source
Student did not perform well on an early readiness test	State data collection of district reading assessments performed in kindergarten and grade one which are uploaded to the Texas Education Agency each fall and spring. Third grade state assessment results
Student did not maintain an average of 70 in two or more core courses in grades 7, 8, 9, 10, 11, or 12	District student course completion records, the results of which are uploaded to PEIMS each summer
Student failed to advance from one grade level to the next	District student records which are uploaded to PEIMS each summer
Student did not perform satisfactorily on an assessment instrument administered under Subchapter B, Chapter 39	District TAKS results which are reported electronically to the district after each major administration
Student is pregnant or is a parent	District counseling records (manual data entry process)
Student has been placed in an alternative education program	District student discipline records, which are uploaded to PEIMS each summer
Student has been expelled	District student discipline records, which are uploaded to PEIMS each summer

Table 5.4 (Cont.)

Student is currently on parole, probation, deferred prosecution, or other conditional release	Establishment of a Memorandum of Understanding (MOU) between TEA and the Department of Protective and Regulatory Services (DPRS) for receipt of data
Student was previously reported as a dropout through PEIMS	District PEIMS submissions or analysis of student leaver records through the TEA transcript process
Student is classified as LEP	District counseling records (manual data entry process)
Student is in the custody or care of the Department of Protective and Regulatory Services, etc.	Establishment of a MOU between TEA and DPRS for receipt of data
Student is homeless	District counseling records (manual data entry process)
Student resided in residential placement facility	Establishment of a MOU between TEA and DPRS for receipt of data

Rather than relying on district personnel to input student data into the attendance accounting system, the district should upload student at-risk indicators from existing data sources where possible. This would limit the potential for errors in the classification of students, which can be caused by the inaccurate interpretation of a student's status or error in data entry by district personnel. Since some of the risk factors are sensitive, access to the data behind the at-risk indicator "flag" can be limited through use of security profiles tailored to the specific user groups.

Data warehouse systems. The practice of systematically gathering longitudinal, student-level data covering a variety of indicators in order to generate accurate graduate/dropout data, as well as to determine early warning risk factors, has become quite prevalent. Longitudinal data assists educators in tracking and evaluating students'

experiences before dropping out – that is, the data improve the accuracy of various risk factor "flags". Hence, schools and districts can now follow a cohort of students throughout their school career; they can gather relevant data or simply rely on a retrospective; and they can conduct longitudinal analyses of student patterns to determine factors associated with past student graduates and dropouts.

This study faced several limitations that could have been overcome through the use of a district and/or statewide longitudinal database of student indicators. For instance, since the data were not available within the district's database, the researcher was unable to study the impact of early literacy via test scores on an early assessment. Each year, the counselors, registrars, and data entry clerks routinely update the at-risk indicators to reflect the current statuses of the students – all historical information is overwritten to accommodate the student's current indicators of at-risk status.

Longitudinal student databases are made up of historical data routinely collected by schools, such as race, gender, age, economic status as gauged by eligibility for Free and Reduced-Price Meals, and limited English proficiency; as well as special education statuses, enrollment information, historical school attendance records, transcript information, such as core course grades, grade point average (GPA), and credits accumulated; and, finally, standardized test scores, and discipline information. Analyses can be initiated to determine the significance of different potential contributors to at-risk status that are common to that local school's context. From a long list of potential indicators, a smaller list of high-yield risk factors or indicators can be identified for that particular school context (as was the case for this research study). Once these high-yield indicators are identified, they can help educators build an early warning system to assist

in identifying and predicting with high probability which students are most likely to drop out of school (Bridgeland et al.).

An example of a successful database of student information can be found in the Chicago Public Schools, which has been tracking students for more than ten years through an early warning system designed to determine (within the ninth-grade) whether a student is on-track or off-track for graduation. The system has an 85 percent success rate of successfully predicting dropouts (Allensworth & Easton).

District "A" program directors maintain individual student data for their specific programs manually or on spreadsheets maintained within their department. Programmatic leaders may not collaborate with other program or campus leaders so that they may discern other relevant data regarding the success or failures of students enrolled in their particular program. Implementing a data warehouse system that contains dashboard indicators available to all district leaders would allow leaders to collectively analyze student data and define how district leaders might best determine how to meet the needs of its students in the most effective manner.

Currently, the Texas Education Agency is developing a new data collection process for PEIMS and student data. Software vendors have been identified for participation in the project and they have been charged with not only developing a student attendance accounting and PEIMS system, but also with developing a process for districts to voluntarily upload student information into a data warehouse. This particular data bank will be created in order for districts to chart a student's/campus's progress for internal reporting purposes. Rather than focusing narrowly on the development of a district-based student attendance accounting system to be managed by the state, the state

of Texas should consider implementing a mandatory student accounting system that is accessible by all districts.

Students within the state of Texas are highly mobile. Therefore, several campuses in District "A" have mobility percentages in excess of 20 percent. The high mobility rate of students in the state underscores the need for a central statewide data warehouse of student data for district's to access. Currently, when a student moves from one district to another, their transcript is uploaded via an electronic system (TREx) for transfer to the receiving school district. However, only basic student information, such as academic grades, teachers of record, assessment results, graduation plan, immunization information and demographic indicators, is included in the electronic record. A student's historical student record is lost and may or may not be transferred via a manual process. Allowing district personnel to have access to a student's historical school record, which include all academic, attendance and discipline information, affords the district and individual instructors the capacity to design instruction that best meets individual student needs; thus, mitigating the gaps in a student's instruction which can occur when a child moves from one district to another.

Student expulsion/referral to alternative settings. District "A" has made a concerted effort to limit the number of days that a student may be expelled from school. However, campus principals at all levels continue to expel students for minor infractions for one to three days. Even though a student may only be expelled for three days, the student may cumulatively miss more than 30 days due to repeated expulsions.

Research has proven that alienating students further from their peers will lead to a greater tendency for the student to drop out of school as they feel disconnected and

unwelcome from the school setting. However, many campuses in the district continue to practice a zero-tolerance philosophy with regard to discipline infractions. Furthermore, student discipline is typically managed by campus assistant principals who may be new to the position. Further study of district discipline referrals is needed to ascertain both the reason a student is being disciplined, as well as the punishment given, so that a consistent method of discipline may be implemented within the district through a concentrated, cohesive training effort.

The Texas Appleseed Project has noted that more than 80 percent of Texas prison inmates are high school dropouts. The study found that an inmate's involvement in the criminal justice system can be viewed as a continuum of entry from various points in their life such as early school-based behavior problems, which may range from suspensions, expulsions, or Disciplinary Alternative Education Program (DAEP) placements to more serious law breaking and probation violations. Further study by the Texas A&M University's Public Policy Research Institute (2005) concluded that, among the "risk factors" commonly associated with future involvement in the juvenile justice system, the single most important predictor is a history of disciplinary referrals at school.

District "A" has implemented a Character Links program which promotes character development and anti-bullying within the school community and was recently recognized nationally for their successful program. The district should continue the implementation of the Character Links program in conjunction with a standardized discipline plan to limit the numbers of students who are expelled and/or referred to alternative education settings to mitigate the numbers of dropouts from the district.

Struggling student learners. Students who fail one or more of their core academic courses in grades seven through nine were found to be more likely to drop out of school. District "A" operates an alternative campus program for students to attend in the event that they fall behind in school. Students remain enrolled in their home campus but attend school in an alternative instructional setting until they are able to catch up to their peers, at which time they are returned to their home campus. The district also offers classes at night that students may enroll in for a fee or students may accelerate their learning by utilizing a third party software program which has been in use by the district for two years. Enrollment in the alternative campus is limited and is often below 100 students.

Enrollment in the evening program is limited and is offered only for students who have failed a course. Rather than requiring that students pay for the course, the district should consider a flexible schedule whereby instructors report later in the day so that the evening school course is part of their regular schedule. Students could then enroll in the course without penalty and receive the necessary credit to graduate.

The district has only recently begun utilizing an automated software program for instruction in core courses at the secondary level. This program has proven successful, yet the number of "seats" available is limited due to budgetary and time constraints. A thorough study of the success of students in the program should be completed in order to determine whether the number of discipline referrals is limited for the participants, and whether the students manage to stay on track to graduate, etc., to ascertain if the district should expand the funds available for the program.

The alternative campus affords students who do not like to attend school in the traditional setting the opportunity to continue their education. However, the district only offers one bell schedule for students and does not allow them to attend school at the campus as an alternative to their home campus.

Offering students the opportunity to attend school in an alternative setting with the option to graduate would likely encourage additional students to consider the alternative campus setting rather than choosing to drop out of school. Further, affording students the ability to come to school later in the day by offering multiple bell schedules for students to choose from would allow students who feel forced to choose between work and school the ability to complete school while continuing to work and provide for their family.

Future funding methodologies. Currently the state of Texas bases at-risk student funding on the highest six-month average number of economically disadvantaged children enrolled in a district which is not considered an indication of a student's at-risk status. The thirteen at-risk indicators utilized by the state are summarized into a single at-risk indicator through the statewide student reporting system. This makes it difficult for the state to recognize definitively the concentrations of students in each at-risk category.

Other states have performed research in the area of at-risk education and have developed methodologies to provide specific student weights for the concentration of students in a particular category in a school district, or have tied the weight for at-risk education to a research base related to the cost of providing an appropriate level of educational interventions. Future funding methodologies in the state should include a component whereby different types of at-risk statuses are incorporated into the funding

stream. In order for the state to develop the most efficient program possible, the data submission processes should be changed to require that districts submit individual at-risk indicators directly to the state.

Implications for Future Research

To fully understand why a student drops out of school, comprehensive research should be conducted in relation to a student's academic success and failures beginning in pre-kindergarten. Certain at-risk indicators and demographic information, such as failure of an early assessment instrument, limited English proficient status, or the failure of one or more core courses in secondary school, affect large populations of students. While individual student indicators provide educators with valuable information needed to ensure student success, certain indicators should be studied on a statewide and district-wide basis to track and measure the effectiveness of instructional programs.

Conclusion

The researcher began this study with a genuine interest in identifying alternative funding methodologies for at-risk education at the statewide level. Given that the school funding formula has not changed significantly since 1982, it is in desperate need of updating to ensure an equitable distribution of funding to school districts throughout the state. During the course of this study, the researcher also developed a sense of appreciation with regard to the difficulty faced when proposing changes in the distribution of state funding for education as there are definite "winners" and "losers" in the process. I have learned a tremendous amount about at-risk education which can, in turn, be applied to my own district's budget. More importantly, I have learned the importance of sound scientific research. Too often educators want to implement the next

great thing but do not do adequate research to determine if the product is the most

appropriate tool to utilize to meet the needs of the student. The tools I have learned

throughout this research study will enable me to guide the budgetary discussions in such

a manner that district resources are utilized efficiently.

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APPENDIX A

STATEWIDE STUDENT DEMOGRAPHIC CHARACTERISTICS

Statewide Student Demographic Characteristics

Ten Year Period Ending August 31, 2010

Year Ended	African Amer. %	Hispanic %	White %	Asian/ Pacific Islander %	Econ-mically Disad-vantaged %	LEP %	At Risk %
2010	14.0%	48.6%	33.3%	3.7%	59.0%	16.9%	47.2%
2009	14.2%	47.9%	34.0%	3.6%	56.7%	16.9%	48.3%
2008	14.3%	47.2%	34.8%	3.4%	55.3%	16.7%	48.4%
2007	14.4%	46.3%	35.7%	3.3%	55.5%	16.0%	48.3%
2006	14.7%	45.3%	36.5%	3.1%	55.6%	15.8%	48.7%
2005	14.2%	44.7%	37.7%	3.0%	54.6%	15.6%	45.8%
2004	14.3%	43.8%	38.7%	2.9%	52.8%	15.3%	n/a
2003	14.3%	42.7%	39.8%	2.9%	51.9%	14.9%	n/a
2002	14.4%	41.7%	40.9%	2.8%	50.5%	14.5%	n/a
2001	14.4%	40.6%	42.0%	2.7%	49.3%	14.1%	n/a

APPENDIX B

DISTRICT A STUDENT DEMOGRAPHIC CHARACTERISTICS

District A Student Demographic Characteristics

Ten Year Period Ending August 31, 2010

Year Ended	African Amer. %	Hispanic %	White %	Asian/ Pacific Islander %	Econ- mically Disad- vantaged %	LEP %	At Risk %
2010	31.3%	24.1%	22.5%	21.9%	35.2%	13.4%	43.6%
2009	31.5%	23.7%	23.1%	21.5%	30.9%	13.1%	43.4%
2008	31.8%	23.0%	24.3%	20.6%	30.6%	12.4%	41.5%
2007	32.2%	22.4%	25.5%	19.7%	31.1%	11.1%	40.7%
2006	32.3%	21.2%	27.1%	19.1%	31.0%	10.7%	40.9%
2005	30.6%	21.0%	29.5%	18.7%	28.8%	10.4%	37.2%
2004	29.8%	20.2%	31.6%	18.3%	26.2%	10.2%	n/a
2003	29.2%	19.3%	33.6%	17.8%	23.7%	9.6%	n/a
2002	28.3%	18.7%	35.8%	17.1%	23.4%	8.6%	n/a
2001	28.0%	18.0%	37.8%	16.0%	20.3%	8.6%	n/a

APPENDIX C

COMPARISON STATEWIDE AND DISTRICT

TOTAL STUDENT POPULATION CHANGE

Comparison Statewide and District A

Total Student Population Change

Ten Year Period Ending August 31, 2010

| Year | Statewide | | District A | |
	Student Population	% Change	Student Population	% Change
2010	4,824,778	2.0%	69,066	.8%
2009	4,728,204	1.6%	68,507	1.1%
2008	4,651,516	1.6%	67,780	1.5%
2007	4,576,933	1.6%	66,792	1.3%
2006	4,505,572	2.7%	65,927	5.0%
2005	4,383,871	1.7%	62,657	2.6%
2004	4,311,502	1.7%	61,011	2.9%
2003	4,239,911	2.2%	59,217	5.3%
2002	4,146,653	2.1%	56,059	3.7%
2001	4,059,619		53,999	

APPENDIX D

COMPARISON STATEWIDE AND DISTRICT A

ECONOMICALLY DISADVANTAGED STUDENT POPULATION CHANGE

Comparison Statewide and District A

Economically Disadvantaged Student Population Change

Ten Year Period Ending August 31, 2010

Year	Statewide		District A	
	Student Population	% Change	Student Population	% Change
2010	2,909,554	2.1%	24,577	1.2%
2009	2,848,067	9.7%	24,285	11.1%
2008	2,572,093	1.2%	21,584	3.8%
2007	2,540,888	1.5%	20,769	1.6%
2006	2,503,755	4.4%	20,427	11.5%
2005	2,394,001	4.8%	18,070	(.7%)
2004	2,277,901	3.4%	18,198	22.7%
2003	2,201,534	4.9%	14,062	6.8%
2002	2,093,511	4.4%	13,100	16.4%
2001	2,001,697		10,952	

APPENDIX E

COMPARISON STATEWIDE AND DISTRICT A

AT-RISK STUDENT POPULATION CHANGE

Comparison Statewide and District A

At-Risk Student Population Change

Ten Year Period Ending August 31, 2010

Year	Statewide		District A	
	Student Population	% Change	Student Population	% Change
2010	2,275,179	.0%	28,401	(5.9%)
2009	2,275,895	1.1%	30,088	6.5%
2008	2,251,000	1.8%	28,125	3.3%
2007	2,209,538	.6%	27,204	.8%
2006	2,195,942	8.7%	26,993	13.6%
2005	2,005,807		23,334	
2004	n/a		n/a	
2003	n/a		n/a	
2002	n/a		n/a	
2001	n/a		n/a	

APPENDIX F

CORRELATION OF THE INDEPENDENT VARIABLE TO THE

DEPENDENT VARIABLE OF STUDENT'S FINAL STATUS

Correlation of the Independent Variable

to the Dependent Variable of Student's Final Status

Independent Variable	Chi-Square Test	Probability	Cramer's V Statistic
Socio-economic status	$X^2(4) = 49.100$	$p<.001$	.090
Gender	$X^2(4) = 21.227$	$p<.001$	.059
Special education status	$X^2(4) = 93.108$	$p<.001$	.124
Ethnicity	$X^2(16) = 282.059$	$p<.001$	.108
Failure to advance from one grade to next	$X^2(4) = 56.442$	$p<.001$	.096
Placement in alternative education facility	$X^2(4) = 122.960$	$p<.001$	.142
Placement on parole	$X^2(4) = 22.117$	$p<.001$	.060
Failure of two or more courses in grades 7-12	$X^2(4) = 523.479$	$p<.001$	.293
Failure of two or more courses in grades 7-9	$X^2(4) = 298.173$	$p<.001$	.222
Limited English Proficient status	$X^2(4) = .951$	$p>.05$	.013
TAKS passage	$X^2(4) = 16.827$	$p>.05$	.053
Homeless status	$X^2(4) = 5.572$	$p>.05$	.030
Placement in residential facility	$X^2(4) = 2.460$	$p>.05$	.020
Expulsion	$X^2(4) = 5.176$	$p>.05$	.029
Student is a parent	$X^2(4) = 6.893$	$p>.05$	.034

APPENDIX G

INSTITUTION REVIEW BOARD APPLICATION APPROVAL

UNIVERSITY OF HOUSTON
Division of Research
Institutional Review Board Application

Generated at: 4/25/2012
9:06:02 AM

UNIVERSITY OF HOUSTON

Learning. Leading.

Institutional Review Board
Application ID :

12132-EX - (929)

Title :

Identifying Early Indicators of High School Dropouts in a Diverse
Urban School District in Texas: Implications for School Leaders

Approval details for the Application Id: 929

	Decision	Approver Name	Date	Comment
PI signature	Approved	Hoke, Tracy Ms.	04/24/2012	

University of Houston

Division of Research

Application Data for Application ID: 929

Title	Identifying Early Indicators of High School Dropouts in a Diverse Urban School District in Texas: Implications for School Leaders
Application Type	New
Review Type	Exempt
Expedite Code	Not Applicable
Exemption Code	4: Research involving the collection/study of data
Research Reason	Doctoral Dissertation

Investigator Data for Application ID: 929

PI Name	Is Pricipal?	Is Co-Investigator?	Is External?	Other Personnel Type?	Is Student?	Faculty Sponsor Name
Hoke, Tracy Ms.	Yes		No		Yes	Warner, Allen R. Dr.
Emerson, Michael Dr.			No	Thesis Committe Member	No	Not Applicable
Busch, Steve Mr.			No	Thesis Committe Member	No	Not Applicable
Amine, Rayyan Ms.			No	Thesis Committe Member	No	Not Applicable

Project Review Summary Data for Application ID: 929

Question	Answer
4) State the specific research hypotheses or questions to be addressed in this study	The Texas Education Agency (TEA) tracks 13 individual at risk indicators for students annually, this research will attempt to identify if any of these indicators is a better predictor of a student choosing to drop out of school
5) What is the importance/significance of the knowledge that may result?	Currently, TEA funds at risk education based upon the number of free and reduced students present in the district. A student's economic status is not an identified indicator fro at risk student status. If it is determined that one of the 13 indicators provides a better prediction of a student dropping out of school, alternative funding streams can be developed to better ensure funds are targeted to districts and schools with the greatest number of students identified as at risk of failure.
6) Type of Subject Population (check all that are appropriate)	Children or minors (<18 in Texas and most states)
6.01) Expected maximum number of participants	6,500
6.02) Age of proposed subject(s) (check all that apply)	Adolescents (15yrs-17yrs)
6.03) Inclusion Criteria:	Study of the 2010 cohort of graduates, using archival data available through the Public Education Information Management System (PEIMS)
6.04) Exclusion Criteria:	Archival information will not be pulled for students who are not a member of the 2010 cohort of graduates
6.05) Justification:	Student and parent permission is not required for archival data

6.06) Determination:	Archival data will be studied to identify at risk indicator trends
7) If this study proposes to include children, this inclusion must meet one of the following criterion for risk/benefits assessment according to the federal regulations (45 CFR 46, subpart D). Check the appropriate box:	(404) Minimal Risk
8) If the research involves any of the following, check all that are appropriate:	
9) Location(s) of Research Activities:	Other (Explain) :FBISD administrative offices
10) Informed Consent of Subjects: Your study protocol must clearly address one of the following areas:	No Informed Consent. You may request a waiver of informed consent with Appendix B - Request for Waiver/Modification of Informed Consent. If applicable, a copy of the modified consent document is required. ATTACH APPENDIX B.

Research Protocol Data for Application ID: 929

Question	Answer
11) Describe the research study design. (Describe the research methods to be employed and the variables to be studied. Include a description of the data collection techniques and/or the statistical methods to be employed.)	I will be performing a factor analysis of the various student variables with the primary dependent variable being the completion or drop out status of students. Descriptive statistics will be used to summarize variables in the data set. A multiple regression analysis will be conducted to understand the relationship between various predictors (at risk criteria and economic status) and an outcome measure (dropout).
12) Describe each task subjects will be asked to perform.	n/a - only archival data will be used
13) Describe how potential subjects will be identified and recruited? (Attach a script or outline of all information that will be provided to potential subjects. Include a copy of all written solicitation, recruitment ad, and/or outline for oral presentation.)	n/a - only archival data will be used
14) Describe the process for obtaining informed consent and/or assent. How will investigators ensure that each subjects participation will be voluntary (i.e., free of direct or implied coercion)?	n/a - only archival data will be used
15) Briefly describe each measurement instrument to be used in this study (e.g., questionnaires, surveys, tests, interview questions, observational procedures, or other instruments) AND attach to the application a copy of each (appropriately labeled and collated). If any are omitted, please explain.	n/a - only archival data will be used
16) Describe the setting and mode for administering any materials listed in question 15 (e.g., telephone, one-on-one, group). Include the duration, intervals of administration, and amount of time required for each survey/procedure. Also describe how you plan to maintain privacy and confidentiality during the administration.	n/a - only archival data will be used

17) Approximately how much time will be required of each subject? Provide both a total time commitment as well as a time commitment for each visit/session.	n/a - only archival data will be used
18) Will Subjects experience any possible risks involved with participation in this project?	
18.01) Risk of Physical Discomfort or Harm	No:
18.02) Risk of Psychological Harm (including stress/discomfort)	No:
18.03) Risk of Legal Actions (such as criminal prosecution or civil sanctions)	No:
18.04) Risk of Harm to Social Status (such as loss of friendship)	No:
18.05) Risk of Harm to Employment Status	No:
18.06) Other Risks	No:
19) Does the research involve any of these possible risks or harms to subjects? Check all that apply.	
20) What benefits, if any, can the subject expect from their participation?	Only archival data is being used. It is hoped that the school district (Fort Bend ISD) will have a better understanding of student at risk characteristics which lead to drop out
21) What inducements or rewards (e.g., financial compensation, extra credit, and other incentives), if any, will be offered to potential subjects for their participation?	n/a - utilizing archival data

Research Data for Application ID: 929

Question	Answer
22) Will you record any direct identifiers, names, social security numbers, addresses, telephone numbers, patient or student ID numbers, etc.?	No: :Only archival data will be used. Data files will be encrypted and will be maintained within the district in a secure data folder which is password protected. Personal student information will be de-identified within the sample.
23) Will you retain a link between study code numbers and direct identifiers after the data collection is complete?	No:
24) Will anyone outside the research team have access to the links or identifiers?	No:
25) Where, how long, and in what format (such as paper, digital or electronic media, video, audio or photographic) will data be kept? In addition, describe what security provisions will be taken to protect these data (password protection, encryption, etc.). [Note: University of Houston policy on data retention requires that research data be maintained for a minimum of 3 years after completion of the project. All research data collected during this project is subject to the	Data files will be encrypted and personal student information will be de-identified. Information will be secured at the University of Houston for the required three-year period.

University of Houston data retention policy found at http://www.research.uh.edu/Home/Division-of-Research/Research-Services/Research-Policies/Access-to-and-Retention-of-Research-Data.aspx]	

Appendix B Data for Application ID: 929

Question	Answer
27) Does the proposed research, in its entirety, involve greater than minimal risk? (Minimal risk is defined as the probability and magnitude of harm or discomfort anticipated in the research which are not greater in and of themselves than those ordinarily encountered in daily life or during the performance of routine physical or psychological examinations or tests.) (If yes, your study is ineligible for waiver of informed consent under 45 CFR 46.116(d).)	No:
28) Could the proposed research be practically carried out without the waiver? (If yes, your study is ineligible for waiver of informed consent. OR If no, please explain)	No: :Only archival data is being used
29) Will the requested waiver of informed consent affect the rights and welfare of the subjects? (If yes, your study is ineligible for waiver of informed consent. OR If no, please explain)	No:
30) If applicable, will pertinent information be provided to subjects later? (If yes, please explain OR If no, your study is ineligible for waiver of informed consent)	No:

University of Houston

Division of Research

APPENDIX H

LETTER OF COOPERATION

FBISD
A Global Tomorrow

July 12, 2011

Dear Ms. Hoke,

Your research application titled **"Identifying Early Indicators of Dropouts in a Diverse Urban School District in Texas:** *Implications for School Leaders*" **(Application No. 2011-15)** has been approved by Fort Bend ISD. You can have access to the Annual Dropout Summary Report which includes the 2009/10 dropout data. You could access the data from July 12, 2011 to June 30, 2012.

When you complete your research, please submit the Data Collection Completion Notification Form (available on FBISD research website) and share with us your findings in a summary.

We wish you good luck in your research efforts. If you have any further question, please let us know.

Sincerely,

Jan Moore, Ed.D.
Director, Department of Accountability and Program Evaluation
Fort Bend Independent School District

APPENDIX I

COMMITTEES FOR THE PROTECTION OF HUMAN SUBJECTS

LETTER OF EXEMPTION

UNIVERSITY of **HOUSTON**

DIVISION OF RESEARCH

December 5, 2011

Ms. Tracy Hoke
c/o Dr. Allen R. Warner
Educational Leadership & Cultural Studies

Dear Ms. Tracy Hoke,

Based upon your request for exempt status, an administrative review of your research proposal entitled "Identifying Early Indicators of Dropouts in a Diverse Urban School District in Texas: Implications for School Leaders" was conducted on November 18, 2011.

In accordance with institutional guidelines, your project is exempt under **Category 4**, contingent upon the following:
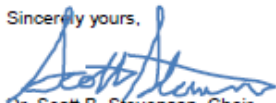
- Letters of approval from all participating schools and school districts must be submitted to the CPHS prior to research initiation.

- The response to question 11 of the application, the investigator should correct statistical analysis to FACTOR ANALYSIS.

- The response to question 11 of the application, the investigator should correct identification of variables. As presented in the first sentence, the independent variable is incorrect (dropout vs. graduation). Clarification is required.

- The response to question 22 of the application must indicate how the data will be secured during the study.

- The response to question 25 of the application must confirm all study data will be retained secured at UH for a minimum of three (3) years after completion of the study.

The required revisions to your application must be submitted online via the Research Administration Management Portal (RAMP), by January 2, 1012 or the Committee's sanction may be revoked. To expedite review; please highlight the changes made for all revised documents that will be uploaded.

As long as you continue using procedures described in this project, you do not have to reapply for review.
* Any modification of this approved protocol will require review and approval by the Committee.

If you have any questions, please contact Alicia Vargas at (713) 743-9215.

Sincerely yours,

Dr. Scott B. Stevenson, Chair
Committee for the Protection of Human Subjects (1)

Protocol Number: 12132-EX

316 E. Cullen Building   Houston, TX 77204-2015   (713) 743-9204   Fax: (713) 743-9577
COMMITTEES FOR THE PROTECTION OF HUMAN SUBJECTS